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WILLIAM HOMER SPENCER, *Editor*
Hobart W. Williams Distinguished Service Professor of Government and Business
The School of Business
The University of Chicago

ECONOMIC HISTORY OF THE UNITED STATES

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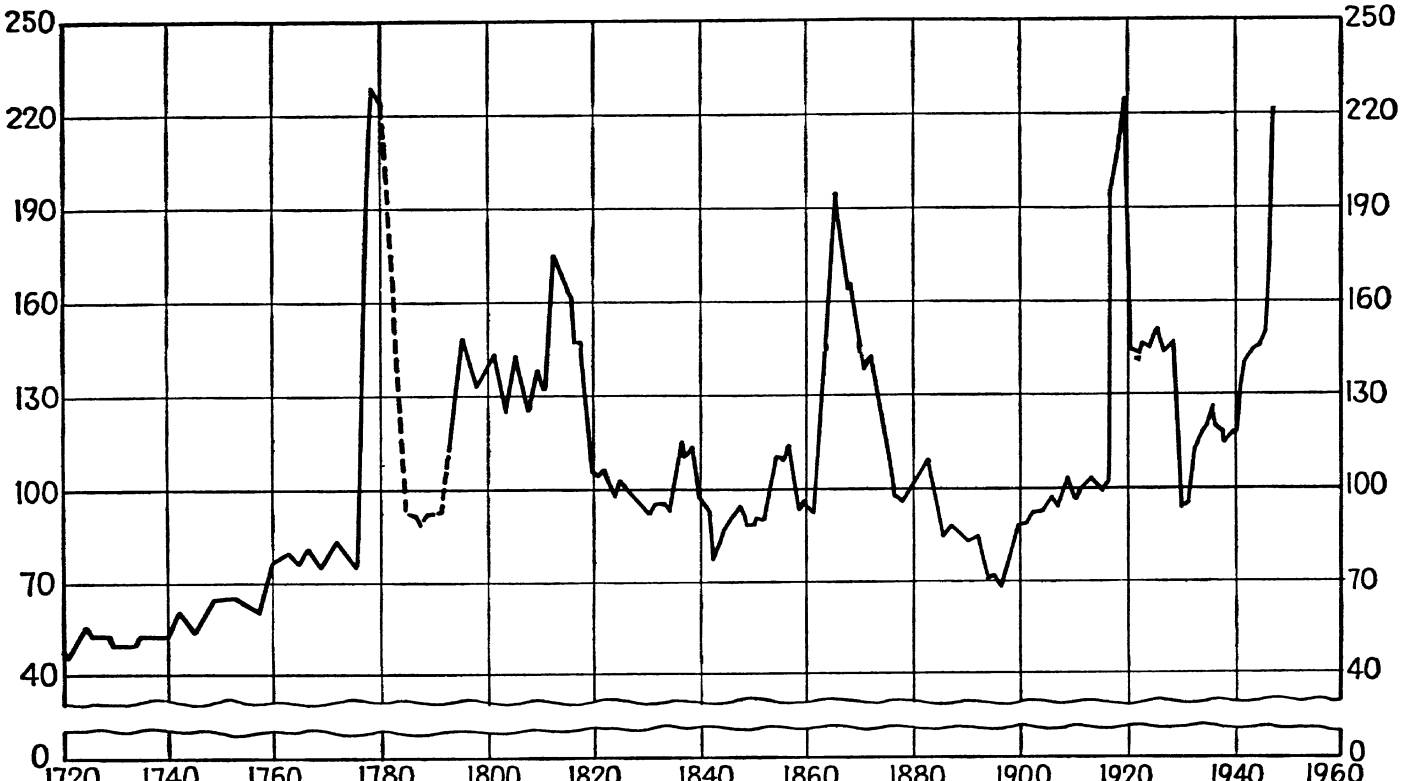

Index numbers of wholesale prices 1720–1948 (base 100 = 1910–1914). Prices in current money except 1776–1781 when specie equivalent is used. (Based on wholesale prices in Philadelphia, 1720–1774, and thereafter on Warren and Pearson's and Bureau of Labor Statistics' figures.)

ECONOMIC HISTORY

OF THE

UNITED STATES

BY

CHESTER WHITNEY WRIGHT

Professor of Economics, University of Chicago

SECOND EDITION

McGRAW-HILL BOOK COMPANY, INC.

NEW YORK TORONTO LONDON

1949

ECONOMIC HISTORY OF THE UNITED STATES

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To My Wife

PREFACE TO THE SECOND EDITION

In preparing a revised edition, which in general character is the same as the first edition, there have been two specific purposes. The first was to bring the history up to date by adding a chapter on the Second World War, since the reactions of that war on the national economy were momentous and must be understood in order to comprehend many of the economic problems that the country will face for some years to come. The second was to meet a quite frequently expressed desire for a somewhat shorter text. To condense and at the same time maintain the proper balance, it was necessary to re-write every chapter but the second. Elimination has been limited to the less important details. Advantage has been taken of the chance to incorporate corrections, additions, and changes based on the suggestions of others, personal research, and literature published since the first edition appeared. Though the general revision was completed in the spring of 1947, some delay in publication has made it possible to bring the history down to the middle of 1948.

CHESTER WHITNEY WRIGHT

CHICAGO, ILL.
July, 1948

PREFACE TO THE FIRST EDITION

Of the more general objectives to be served by the study of a nation's economic history, which are discussed in the introductory chapter, there are two that have largely dominated the writings of those who have undertaken to present a historical account of a country's economic development. This is responsible for the fact that the writing of such history has commonly been undertaken by two groups, each approaching the subject with a primary interest in one or the other of these objectives and with a different background of general training.

One group, consisting chiefly of political historians who have come to recognize the important part played by economic conditions and interests in shaping history, has had as its primary objective the wish to provide the economic background that was deemed necessary for explaining and interpreting political or social history. In such cases, although the economic consequences of the historical developments are not ignored, they tend to take a secondary place and there is apt to be little effort at economic analysis for the purpose of explaining those developments or trying to find out what can be learned from them to promote economic progress in the future.

The second group is made up of economists whose primary objective is to study the historical development of the economic life of a country for the purpose of analyzing and understanding the forces and conditions that have been responsible for the successes or failures in the efforts of the people to raise their standard of living, to increase the economic strength of the nation, and so to promote its survival in the international struggle for existence. The economist clearly recognizes that economic goods and services are only means to the more ultimate ends set up as its objectives by any civilization. But as long as those objectives require an increasing amount of economic goods and services for their support, the economists' chief service in promoting the attainment of these ultimate objectives is to suggest what can be learned from the past that will further the efforts to obtain a more efficiently functioning economic order.

The approach to the study of economic history that dominates the presentation of the subject in this volume is that of the economist whose immediate and primary function is to study the production and distribution of wealth with the objective of learning how the nation's economic progress can be promoted and its standard of living advanced. It can be called the functional approach to economic history. Although the narra-

tive should provide such knowledge of the general background of economic history as is needed for most purposes in the interpretation of political history, and has frequently been turned aside to indicate the reactions thus involved, this has been a secondary rather than a primary consideration in the selection and organization of the material. Some material has been included because it served certain of the other objectives mentioned in the introductory chapter, though for the most part these objectives are served also by the material primarily of significance in relation to the major objective.

Among the topics often omitted or receiving scant notice in similar volumes, the author has devoted special attention to the economic problems of war as exemplified in our four greatest wars, in the belief that the record shows much that had not been learned from sad experience and that the need for learning is urgent. Since the nation did not live in economic isolation and economic developments in the rest of the world were an important factor in shaping its economic growth, as well as one often overlooked, a summary survey of the most significant has here been attempted. The rise of modern capitalistic industry (about which some accounts tend to center) being only one factor in the problem, however important, the author has sought to make the narrative and analysis broad enough to provide a well-rounded picture of the various segments and general structure of the whole American economy during the different stages of its development. He has tried to give somewhat more attention to the reaction of noneconomic factors on the country's economic development than most; but this is an endlessly ramifying subject and between limitations of space and of vision the result falls much short of what might be desired.

The most serious gap is the lack of any real account of the developments in the physical and biological sciences and their applications, a factor of the utmost importance, as the subsequent analysis indicates, but entirely beyond the possibility of adequate treatment here. Since the effort to promote the economic well-being of the people has been made the central theme and unifying problem of the book, it is evident that the success achieved could be made clear only by an account of the advance in the standard of living. Hence, despite the meager data and lack of investigation in this topic, the author has been venturesome enough to attempt a summary—all the more essential since so few seem to realize the actual character of the gains that have been made.

Facts are the basis upon which the structure of history must be founded, even though their number may sometimes appall the reader. From the scientific point of view one of the fortunate characteristics of the facts of economic history is that so many are susceptible to statistical measurement

and a growing number have been so measured. This fortunate circumstance should be taken advantage of. Convinced that such quantity measurements are essential for an accurate evaluation of many data, the author has not hesitated to use considerable statistical material; though as far as seemed feasible he has substituted graphs for tables much more extensively than has been customary and, but for limitations of space, would have employed many more. Long experience has shown that graphs provide by far the easiest and most effective means for impressing upon a reader the important points in a statistical series.

Statistics have generally been given in approximate round numbers and, except where it seemed important for the purpose in hand, the author has not taken the great space that would be required to point out possible sources of error in their use. This will explain some of the apparent inconsistencies in the data presented; and it must always be remembered that the handling of statistical data is a treacherous undertaking. In view of its great current importance and value, the history of the period since 1860, and especially that since 1914, has been given in much more detail than that of the earlier periods.

Although facts are the basis of history, the history that ends with their mere narration is largely sterile. To give the facts significance and value their relationship to some human problem of importance must be made clear. This book endeavors to do so by making the struggle of the American people to raise their standard of living the central and unifying problem of this history and by pointing out, especially in the introductory chapter, the relationship of the mass of the factual material to this problem. Yet the full value of the facts—their value for the purpose of future guidance in both individual and social action—is attained only as the events and developments covered by the facts are interpreted and explained, and as the influence of the various factors that determine economic progress is made clear. Therefore, throughout, the book seeks above all to stress the analysis of the causes chiefly responsible for the results obtained by the American people in their attack on this fundamental economic problem.

A personal mastery of the huge mass of material that should be covered for such a history is far beyond the limitations of a single lifetime. Economic history requires a far wider range of knowledge than any other branch of economic research. Ideally the economic historian should possess most of the knowledge of a large and well-rounded Department of Economics, to say nothing of the desirable knowledge in the related social sciences. The impossibility of covering such a wide field must be the main excuse for such shortcomings as his work may disclose. The author's indebtedness throughout to the work of others will be patent to those familiar with the literature; and, though this is seldom indicated in footnote refer-

ences, the most used of these sources will be found listed in the bibliography. The greater portion of what might be claimed as original contribution consists in the selection and organization of the material presented and in its interpretation and analysis. In covering so wide a field the author cannot hope to have escaped errors of fact and he has not hesitated to express views on matters of opinion with which others may well disagree.

For encouragement and efforts to facilitate the writing of this book in its earlier stages the author is chiefly indebted to his former colleague, Dean L. C. Marshall. Of great benefit have been the suggestions of Prof. M. W. Jernegan, who read Chaps. IV–XII inclusive; those of Prof. Jacob Viner, who read Chap. XLIII; and those of Dr. F. H. Harbison, who read Chap. XXXVI. The responsibility for the views expressed therein is entirely the author's. Other colleagues have kindly helped on various points. Several National Youth Administration students have assisted in the typing of the manuscript and the preparation of charts.

For the kind permission to use certain statistical material and to reproduce a number of maps and charts the author is indebted to several sources. The American Geographical Society consented to the use of several maps taken from the "Atlas of the Historical Geography of the United States," which it published in cooperation with the Carnegie Institution of Washington. The use of statistical data and several charts, mainly drawn from its "Studies in Enterprise and Social Progress," was granted by the National Industrial Conference Board. For the use of the map of canals the author is indebted to the Carnegie Institution of Washington, for the chart on distribution to the Twentieth Century Fund, for the chart on division of income among major claimants to the Brookings Institution, and for the chart on the labor supply to the Committee on Social Security of the Social Science Research Council.

CHESTER WHITNEY WRIGHT

CHICAGO, ILL.
November, 1940

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EDITOR'S FOREWORD

In "Economic History of the United States," Professor Wright presents in a single volume a comprehensive and definitive treatment of the development of our national economic life. It is based upon careful and exhaustive research and has been tested for many years in classroom presentation at the University of Chicago.

Professor Wright traces the economic progress and achievements of the nation from the background and environment of the colonial period, in which it had its birth, through the Second World War and up to the middle of 1948. As would be expected, while he adequately treats the earlier economic history of the nation, he devotes his major attention to developments since the Civil War. His treatment provides an excellent chronological perspective of the main events affecting our national life from its foundation down to date. He likewise gives a penetrating analysis of some of our broader social and economic problems, such as transportation and communication; agriculture and other extractive industries; manufacturing; labor; domestic and foreign commerce; money, banking, and financial institutions; the government and economic life; and the national standard of living. Of particular interest are his careful analysis of the depression of 1929 and his objective evaluation of the experimentation of the New Deal in the period from 1933 to 1940. The author has brought to bear upon his materials the critical eye of a careful historian and a sound economist.

Needless to say, Professor Wright's treatise is indispensable to instructors engaged in the teaching of economics in colleges and universities. It is equally important to those engaged in the teaching of history. Schools of business, which have not placed the emphasis they should have upon the development of our national economic life, will find in this treatise a careful analysis of major movements affecting private business and the development of business institutions.

Business executives who are anxious—and rightly so—concerning the future of private business will find here an excellent basis for understanding and evaluating present-day trends in the changing relation between government and economic life.

"Economic History of the United States" is a volume in the series of Business and Economics Publications, which is sponsored by the University of Chicago Press and the McGraw-Hill Book Company, Inc., in cooperation. The fact that there are many other series in this field of study calls for a brief word of explanation.

During recent years programs of study of departments of economics and the curricula of schools of business have been undergoing fundamental changes. In departments of economics increasing emphasis is being laid upon the practical aspects of the problems with which those departments deal. In schools of business more emphasis than hitherto is being placed upon the theoretical background of their problems. Meanwhile business itself is undergoing profound changes. Government more and more intervenes in business. In these circumstances there is an increasing demand for studies which are prepared with these trends in mind.

The various titles in the series of Business and Economics Publications, in so far as there is need, emphasize the changing relation between government and economic life. Whether one agrees or disagrees with the flood of legislation that has swept over the nation during fifty years or more, the fact is that the legislation is here and that business must make its adjustments to it. Although much of this legislation may be revised as time goes on and some of it may be repealed in its entirety, it is safe to predict that the major portion of it will continue as a part of our national social policy. Students in the social sciences as well as businessmen should have an appreciation of the new standards of business conduct and the new administrative machinery which the government has set up, the operations of which profoundly condition modern business management.

Professor Wright's treatise is presented with the conviction that it recognizes the various trends to which reference has been made and represents the best in the tradition of scholarly research and writing.

WILLIAM H. SPENCER

CHICAGO, ILL.
July, 1948

Part I

THE COLONIAL PERIOD

CHAPTER I

INTRODUCTION: THE CHARACTER AND OBJECTIVES OF ECONOMIC HISTORY

The Character of Economic History. The study of history dates back to very early times and for many centuries was chiefly concerned with political events. The study of economic history, however, is of comparatively recent development; in fact it is only within the past century that it began to attract the serious attention of many scholars and it is only within the past half century that courses in this subject came to be a common feature in the curricula of educational institutions. This prompts us at the very outset to inquire as to the particular character of economic as distinct from other branches of history and as to the specific objectives to be served by such a study. This is important because it is only as one is perfectly clear concerning these points that he will understand the relative significance of the large mass of detailed facts presented in the narrative that follows or appreciate the broader and most vital aspects of the problems with which this narrative is concerned.

Economics or political economy has been defined as the science dealing with the activities of man in the processes of producing and distributing economic goods or getting a living. As it deals with the activities of men, both individually and collectively, it is a social science as distinguished from a natural science. The economic history of the United States, therefore, seeks to describe and to explain the methods and processes by which the people of this country have endeavored during the different stages of the country's development to supply their economic wants or get a living. Since the people were always striving, either as individuals or through group or governmental action, to devise better or more economical means for the production and distribution of economic goods and services so as to raise their standard of living, there was a constant change in the methods and

devices used and in the institutional framework of the economic order. Thus economic history deals with an evolutionary process directed toward the securing of an ever more efficiently functioning economic order.

We must first of all understand why it is so vitally important for society that this endeavor to supply our economic wants—to get a living—should be carried on in an efficient manner. It goes back to the fact that nature—our physical environment—does not freely provide enough things to satisfy man's wants. "In the sweat of thy brow shalt thou eat bread," the old Biblical phrase summarizes it; we must work for a living, even for our daily bread. For most of the human race this necessity for getting a living, owing to the lack of harmony between man's wants and the conditions of nature, is the ever-present and most absorbing problem of their lives and to it they have to devote most of their time and energy. Therefore anything that will lighten the burden of this work and provide more leisure for the enjoyment of life is of the greatest importance for human welfare.

One way by which this lack of harmony between man's wants and his physical environment can be in part overcome is to reduce the number of wants dependent upon scarce goods and services for their satisfaction. After all it is possible to maintain existence with but a small fraction of the economic goods and services that the average American consumes today. Such being the case, the advocates of the simple life, the ascetics, the Buddhists, those who believed that the original spirit of Christianity was opposed to seeking after worldly goods, insisted that man should abandon most of these unnecessary wants. They pointed out that a large proportion of the crimes, the wars, and other evils in the world was caused by this struggle to acquire material things. They urged that man, if once freed from the desire for most unnecessary material things, would find a higher joy and more enduring satisfactions in thought and contemplation—in a life more completely devoted to the things of the spirit.

The other way by which the problem can be attacked is to set to work and adapt our environment so that it will better supply our wants. This can be done by studying the resources in that environment and by learning the laws of nature. With such knowledge man can make far more use of the resources and forces of nature and so better adapt his environment to meet his wants. Essentially this is a process of cooperation between man and nature, but it is also furthered by cooperation between man and man wherever man does not lead the isolated life of a Robinson Crusoe. The life of primitive tribes illustrates the minimum of cooperation between man and his environment. As will be described in the next chapter, it was because the Indians in this country at about the time of Columbus knew so little about how to use the resources of their environment that it was impossible for them to provide even a wretched living for as many as a million people.

Today the same region supports over 145 million people enjoying the highest standard of living the world has ever known. By what means that achievement was attained is the main problem in the study of our economic history. As the subsequent narrative will show, man's success in learning how to cooperate more effectively with nature was the most important factor in the outcome.

Of the two ways for trying to solve the problem created by the lack of adjustment between man's wants and his natural environment, it is the latter—that of seeking a more effective cooperation between man and nature and man and man—which most of the world, especially that of our Western civilization, has chosen to adopt. The ideal of the simple life with wants dependent upon material goods reduced to the minimum has appealed to very few; the rest have chosen what they believed would prove a more active, a fuller, and a richer life with ever-expanding wants, most of which depended upon an ever-increasing supply of economic goods and services for their satisfaction. Whether this choice was right or wrong is a question concerning which there may be endless dispute, for the answer will depend upon one's philosophy of life, and that the economist must leave to be determined by the philosopher or the theologian. But the result of this choice was to make the study of economics and economic history vastly more important for the attainment of the objectives that man chose as his ideal.

It is often claimed that the result of this choice has been to make this a materialistic age. Americans in particular, it is charged, give far too much of their time to the pursuit of the almighty dollar and do not know how to use their money wisely when they get it, as is often illustrated by the newly rich. Similarly, some people are inclined to look down upon the study of economic life and activities as being concerned only with low materialistic objectives. It is of course true that the immediate objective of this study is a more abundant supplying of man's economic wants. However, nobody claims that economic goods are ever an end in themselves, unless the case of the miser is considered an exception; they are only means to the more ultimate ends of life. But whether the means that the economic order succeeds in providing to meet these ends are used in ways that promote the good life or not depends upon the civilization of the time.

That man cannot live by bread alone is a principle to which all may agree; but neither can man live without bread. It is equally obvious that the greater and cheaper the supply of food the more time and energy will be available to man for the pursuit of more cultural activities and the development of the higher ideals. The man living in an economic order so backward in its development that the most constant work from early youth till old age will yield barely enough to supply the absolute necessities

of existence has little chance for what we think of as cultural attainments. Even in that golden age of ancient Greece, the wonderful achievements of which we so much admire, we must not overlook the accompanying degradation and slavery of the masses or the tribute levied on other peoples. The cultural level of a society must be judged by the achievements and the well-being of all of its members, not of those of a small group. How to raise the great masses to a higher cultural level has been the chief problem confronting the social order throughout the centuries. But the ideals of culture that prevailed, when the simple life made slight appeal, generally required ever-increasing economic resources for their development and their attainment.

In the first place, economic resources must be sufficiently abundant so that man does not have to use all his energy and time to obtain the mere necessities of existence. The resulting leisure, it is true, may not be used for what are considered the pursuits of the higher culture, but without leisure the development of such cultural interests and pursuits is seldom possible. Education is basic to social and cultural progress, but it requires an ever-increasing amount of time and economic resources for its pursuit. The church and its activities, despite the worldly sacrifices that may be made by those who enter its service, cannot be carried on without vast economic resources. The fine arts—music, literature, the drama, painting, architecture, and sculpture—all require leisure to develop either an appreciation of them or the ability to pursue them, and require economic resources for their maintenance. Nor should we overlook in this enumeration the more indirect but most vital contribution to the higher life, to say nothing of general well-being, that is made by better provision for the more purely physical needs of man. How essential for the attainment of the best in life is the *mens sana in corpore sano* should need no elaboration. It is for this reason that the progress in medical sciences and medical care, together with the expanded opportunities for relaxation, amusement, or physical exercise, which have resulted in such a phenomenal decrease in human suffering and prolongation of human life during the past half century, is so important. Yet this could not have been obtained except for the wealth made available for scientific research and medical care. Even today the United States, the richest country in the world, seems to lack the wealth needed to apply fully in adequate medical care much of the knowledge already possessed. In a similar indirect manner, innumerable other advances made in providing for man's physical needs, such as the improvements in the home or in transportation and communication facilities, may be considered as contributing to cultural progress.

It is thus obvious that economics and economic history, though immediately concerned with what are considered materialistic ends—the more

abundant provision of goods and services—are studies that are absolutely essential for promoting the more ultimate ends set up as our ideal of the good life. General culture, as judged by Western civilization, is most widespread among the people in those countries which have attained the highest economic development. It may well be true that individuals or nations that have met with marked success in the accumulation of wealth do not always possess the knowledge or the ideals which result in their using that wealth in ways that yield the highest and most enduring satisfactions of life. After all, it requires leisure time, education, and training, which in turn require economic resources, for people to develop a proper sense of the real and permanent values of life. To ensure the development of such ideals is the task of the philosophers and the theologians, but both the development and the attainment of the ideals adopted by Western civilization depend very largely on the means made available by increasing the efficiency of the economic order. Moreover, even if the ideals chosen were those of the simple life and if material wants were reduced to the bare necessities for existence, it would still be true that an efficient economic order was very important, even if less vital, for the attainment of those ideals. Whatever man's ideals, there is no escape from the economic problem. To the extent that that problem can be made easier, the fulfillment of those ideals can be promoted. How the American people strove to meet that problem and thus raise their standard of living is the primary question with which the economic history of the United States is concerned.

Economic History and the Social Process. The economic order and its evolution, with which economic history deals, is not, it must be emphasized, an isolated segment of a nation's life. There are many wants and forms of activity other than the economic which go to make up that complex thing which we call life. All the instincts, the emotions, and the ideals that move mankind play a vital part, since they largely shape the ends for which the economic order simply strives to provide a portion of the necessary means. Purely economic objectives thus have a subordinate place. Religious, aesthetic, political, or moral ideals, not to mention those of a lower type, may dictate lines of action involving heavy economic losses, to say nothing of occasions when life itself is demanded and cheerfully sacrificed for the sake of such ideals. All these other forces react upon the economic life of a country just as the economic life in turn reacts upon them. Hence the study of the economic history of a nation cannot be completely separated into a distinct, airtight compartment independent of the rest of the life of the people if all the varied factors that have helped to shape its form and activities would be understood. The economic order, however important, is but one section of the complex social order; economic history deals with but one aspect of the whole social process. That social process

is concerned with all the various means—institutional, technological, etc.—by which human society in its manifold aspects has endeavored to attain a more complete satisfaction of man's instincts, emotions, wants, and ideals. The history of this process is the record of the progress of civilization.

Though neither the economic nor any other segment of this process can be thoroughly explained and understood without some knowledge of the whole social order in which it is set and of which it is a part, it is still found necessary for purposes of study to concentrate on some one phase or group of human activities instead of attempting to cover the whole range of man's endeavors. In this volume, attention is concentrated upon the economic phase of the history of American civilization. Yet it will be found that there is frequent need for noting the manner in which noneconomic institutions and ideals reacted upon economic history. The influence of religious motives will appear on various occasions; the nationalistic ideal directed toward the defense or expansion of the country and the aggrandizement of its power will be found to have exercised momentous reactions on the economic life of the people, particularly when it leads to war; the ideals of liberty, freedom, and democracy it will become plain had a widely ramifying influence on the evolution of the economic order. Although it is impossible within the limits of this volume to describe or explain all these other factors which react upon economic development—to do so would involve a history of the country's whole civilization—it is at least possible to lessen the dangers arising from the concentration on the economic life by indicating some of the most important of these other influences which reacted upon that life and by frankly recognizing that the greater portion will have to be omitted and that to this extent the narrative and analysis must remain incomplete.

There is, however, one other phase of the social process which is so constantly and vitally bound up with the economic development of the country that it must be given considerable attention. This is the governmental or political phase; it covers the ground commonly dealt with in the political histories of the country. The importance of some knowledge of that political history as an aid to the understanding of the country's economic history is due to several reasons. First of all, the very existence of anything like the economic order of civilized countries without government is impossible; so basic and so all-pervasive are the functions of government in economic life that this political institution might almost be thought of as an economic institution. These economic functions of government can be roughly classified into two groups, one dealing with the regulation and control of activities and the other of a more positive type providing goods and services. When we consider the endless scope of governmental regulation, Federal, state, and local, and also the fact that in recent years, even

in time of peace, government has come to absorb between an eighth and a quarter of the total national income for its purposes, it will be clear why this phase of the social process cannot be slighted in any study of economic history. In addition, the fact that the group with whose economic development this account is concerned is a political unit—a nation—results in political conditions and ideals playing a larger part in the record than might otherwise be the case.

This same intimate relationship between the economic and the political phases of the social process provides another reason for giving more attention to the political than to other noneconomic aspects of that process. This may be considered the converse of the reasons advanced in the preceding paragraph, for just as political developments reacted on the economic life of the country so the economic developments reacted on the political life; consequently a knowledge of the country's economic history is essential to an understanding of its political history. In the past, history as commonly written and taught dealt chiefly with the framework of government and the Constitution, political parties, statesmen, wars, and international relations; the economic, the religious, the social, and the more cultural activities and life of the people were given very scant attention. More recently, in the realization that only a small fraction of people's lives is devoted to political activities, and also that the character of these activities might be largely shaped by economic or other forces that had to be understood in order to explain political history, there has been a marked tendency to expand the scope of history.

The first step in this move was to give more attention to the economic background of political history; the next and more recent step was to broaden the account of general history to include other important phases of life so as to provide a history of a country's civilization. The first of these steps chiefly concerns us here.

The growing tendency to stress the importance of economic factors in shaping political history is commonly spoken of as the economic or materialistic interpretation of history. Although earlier writers had not entirely overlooked this view, it was due largely to Karl Marx and the socialist school of thought that it first began to receive appreciable attention, beginning about the middle of the nineteenth century. But it was not until about the opening of the twentieth century that academic political historians began to give much consideration to the economic interpretation of history. Socialist theory emphasized the economic as the basic, if not the only important, factor to be considered in explaining history, but relatively few would agree with this extreme monistic type of interpretation. On the other hand, few students of history today would deny any importance to the economic interpretation of history.

Just how important this economic factor is will doubtless provide endless subject for dispute, since there is no way by which we can segregate it and measure its influence in the infinitely complicated tangle of factors that shape the stream of history. It is, however, obvious that its importance may vary greatly from time to time within a given country, as well as between different countries. It should also be clear that acceptance of the economic interpretation as important does not inevitably preclude the recognition of other factors as also important. Other interpretations, in the sense of factors playing a vital and continuous role in history, are also possible, such as the geographic, the psychological, or the spiritual. It would be quite possible to formulate still others, such as a biochemical or an astrophysical, if it seemed worth while to stress the role of some different yet very basic factors. Fundamentally, the importance of the economic interpretation of history rests on the facts that in our civilization most of man's wants, both material and cultural or spiritual, depend upon economic means for their satisfaction so that much the largest portion of the active life of most people is devoted to the ceaseless struggle to earn a living. In consequence the reactions of people on a very large range of the problems of society are likely to be strongly influenced by economic conditions, interests, and motives.

The Objectives of the Study of Economic History. With this account of the content and character of economic history in mind, we can now turn to inquire as to the purposes that may be served by the study of such a subject in general and that of the United States in particular. An understanding of these objectives is of the utmost importance and, unless they are kept constantly in mind, the value and human significance of the facts and conclusions in the account of our economic history that follows will not be appreciated. The more important of these objectives can be listed as follows:

1. It has been pointed out that, just as economics is concerned with the problem of supplying man's economic wants more efficiently or raising the standard of living, so economic history is primarily concerned with the question how a given group or nation has proceeded over the course of time in the effort to raise its standard of living. The chief objective of such a study is to learn the lessons that history can teach us so that in the future we can act more intelligently in promoting changes in the economic order such as will enable us to supply our wants more efficiently and thus raise our standard of living.

A country's standard of living, except as affected by the free resources of its environment, depends first of all upon the total output of economic goods and services or the national real income per capita and upon the amount of time and energy left for leisure after producing this output.

Second, it depends upon the way in which this output and leisure are divided or distributed among the population, for a markedly unequal distribution will lower the general standard. Hence in reading the subsequent narrative with its account of inventions, new processes, endless laws, and evolving economic or other institutions, the two important questions that must ever be kept in mind are: How did this or that development affect the national income? and, How did it affect the distribution of that income among the people? Only thus can we understand the evolutionary process that has created the economic order of today or the problems that now confront us as a product of this change. Only by observing the mistakes of the past or the failures to do things that would have promoted greater economic progress and learning the reasons therefor can we hope to avoid similar errors in the future. For after all, as will appear in many instances, man, both individually and collectively, does many unwise things, even when his intentions are the best. Society seems blind and groping, lacking in foresight, and unwilling to follow intelligent leadership, even when this is available. The errors of the past are frequently repeated, and progress is often attained only at great and unnecessary cost. The lessons of experience—that is, those of history, since history in the broad sense covers the whole of man's experience—are those from which society has most to learn; but the saddest lesson to be gathered from history is that man seems to have learned so little from this past.

In a democracy in particular, it is of the utmost importance that these lessons of history should be widely known and acted upon. A totalitarian state, if it is intelligent, can overlook the ignorant or selfish action of the masses and apply the knowledge of the few to attain its ends. But in a democracy in the last analysis responsibility for political action and legislation rests upon every voter so that the economic, as well as the other, phases of the nation's progress depend upon the wisdom and the unselfish attitude of the citizens and those whom they choose to guide the affairs of state. To be sure, the rise in the standard of living of the American people that took place under a democratic type of government can scarcely be paralleled in any other great nation in history. But, as will subsequently appear, that achievement was the product of an unusual combination of favoring circumstances in which the wisdom, foresight, and public spirit of the voters and their chosen rulers comprised but one factor among many, and even that did not prevent many mistakes. It seems probable that in the future, to a greater extent than ever before, democracy will require all the intelligence and wisdom that the people can obtain to help solve the problems of the economic order. To learn and to apply the lessons of history will further the successful performance of the duties of citizenship.

2. Closely related to this first objective of raising the standard of living of a people is the second, which may be called the "nationalistic" objective. This looks to economic history for the lessons that it can impart concerning the economic factors that tend to augment the power of a country in the struggle for survival or aggrandizement among the nations of the world. In this struggle the economic factor, always important both in peace and in war, has had its significance vastly increased in modern times, chiefly through the very rapid advance in the mechanization of warfare. Mere man power available for the fighting forces counts less than ever before, for without the enormous equipment now required it is impotent, and that equipment depends upon the economic resources available and their effective mobilization. Modern warfare is basically a conflict of economic powers. Also, in international negotiations in times of peace, economic might may often prove a powerful factor in furthering the attainment of national objectives. Add to these facts the remarkable intensification of the spirit of nationalism which has swept the world in modern times and we can appreciate more clearly the importance to be attached to this objective in the study of economic history.

In the case of the nation, just as in the case of the individual, it must be understood that economic resources are not an end in themselves but only a means to the more ultimate ends which constitute the national ideals and for the attainment of which the maintenance and strengthening of the nation are deemed essential. Although it is true, generally speaking, that the conditions which promote an advance in a nation's standard of living will also augment its political power and chances for survival, there are numerous cases where the two objectives do not, or are believed not to, coincide; certainly not in the short run. The sacrifices in their current standard of living for the sake of various national objectives which the people of certain countries have been called upon to make in recent years, even in time of peace to say nothing of those in time of war, most clearly bring out this divergence; but the history of every nation will afford frequent illustrations of the point.

The subsequent narrative in this book will describe and attempt to explain how the United States rose from a relatively weak position among the countries of the world in 1783 till, by the opening of the twentieth century, it had become the greatest economic power on earth. But we cannot assume that the remarkably favorable combination of conditions which contributed so much to that success will continue in the future or that the preeminence in the economic world now attained will endure forever. The pages of history record the economic decline of too many of the great nations of the past. We must not assume that without effort we can escape the common fate. Whatever economic history can teach con-

cerning the factors that promote the power of the nation should be eagerly sought.

3. A third objective is to aid the individual in his struggle to earn a living. In whatever pursuit one engages, that struggle must be carried on in an environment which is largely shaped by economic history and in which the factors and trends that history depicts are certain to have important reactions upon the pursuit, and therefore should be understood to promote success.

Since it is with these broad factors and trends that general economic history is primarily concerned, it will throw relatively little light on the detailed problems connected with the internal organization and management of an enterprise; its main value consists in indicating the reactions of the external economic order and its endless change upon an enterprise or a pursuit. The individual's efforts to earn a living in the fields of agriculture, mining, manufacturing, trade, finance, or any other line will be affected by all the forces affecting the development of these activities; the same is true of the forces shaping the rise or decline of the locality, the region, or the nation where the individual lives, not to mention possible reactions from the rest of the world; the fluctuations in the business cycle, the impact of wars, and the consequences of endlessly changing laws are all things that the individual must take into consideration. Economic history, through its analysis of how such factors react upon different pursuits or activities and shape present-day trends, provides an understanding essential to successful guidance of the individual in future action.

Although this objective has been stated in terms of gain to the private individual rather than to society, as in the case of the first two objectives, it should also be noted that it may promote social ends as well. The existing economic order with its freedom of private enterprise is accepted on the basis of the assumption that in general the individual, motivated by the desire to increase his private gain, will act in a manner that tends to promote the economic advance of society. Where it was found that such a result was not likely to be secured, social control was instituted to limit the freedom of private action. It must be confessed that social control has fallen considerably short of accomplishing this purpose, so that individual action guided by the profit motive is far from certain to lead to economic progress. Yet we can still fairly assume that the individual guided by the desire for economic gain and seeking to learn from history how he can best direct his activities in his chosen pursuit for this purpose will usually at the same time promote the economic progress of society.

4. A fourth objective is to provide such a knowledge of economic conditions and forces as may be essential for the understanding of any phase or period in the civilization of a given people. The importance of this eco-

nomic background as an aid in explaining or interpreting history, particularly political history, has already been indicated as well as the fact that this importance varies from period to period and from nation to nation. But since the subsequent narrative is devoted to a single nation—the United States—we may well add certain reasons why the economic influences seem to have played a particularly important role in their reaction upon the political history of this country. Some of these reasons go back to conditions that accentuated the influence of the economic factor; others go back to conditions tending to make the influence of certain noneconomic factors relatively less important.

Foremost among the former group was the combination of circumstances that created in the country such unusually favorable conditions for getting a living and accumulating wealth. Basic among these circumstances were the vast, rich, and practically undeveloped natural resources; the comparatively sparse population; the remarkable progress in science and invention providing endless improved facilities for the development and use of these resources; and the resulting rapidity of the country's growth.

It was primarily to take advantage of these opportunities for getting a better living that the great majority of the immigrants were attracted to the country, though other motives, such as the religious or political, were often present and sometimes dominant. They were an energetic, ambitious group, but relatively poor. How to get a living was their main problem, and the unusual opportunities that they found for solving this problem absorbed most of their time and their attention. For over three hundred years a steadily rising stream of such immigrants was being added to the native-born element of the population. But the native-born element also—all descended from immigrants—were almost as much absorbed in making the best of these same opportunities. These conditions were an important factor in shaping the so-called "materialism" of the American people, which in turn is reflected in their history.[1]

Another factor intimately related to this was the existence in the country of a democratic type of government. Under such a government, the interests and wants of the masses will be more influential in shaping legislation, political developments, and the course of history. The masses, always confronted with the desperate struggle to earn a living, are likely first of all to press the government for action that will further their economic interests. Since large groups or sections, such as farmers, laborers, Westerners, or Southerners, have common interests upon which they can unite and control

[1] For a definition and more adequate explanation of this "materialism" see the author's article "American Materialism: An Economist's Interpretation" among a group of essays by different writers in the volume entitled "Facts and Factors in Economic History," Cambridge, 1932.

many votes which the politicians must seek to capture, their influence on political affairs is often predominant, as is constantly illustrated in American history. On the other hand, in a nation ruled by an absolute monarch, an aristocracy, or a totalitarian autocrat, though economic considerations will always be important, the more varied personal ideals, idiosyncrasies, or whims of the rulers are certain to play a much more prominent role in shaping the country's history.

Since the last of the eighteenth century another factor has tended to accentuate the reaction of economic forces upon political history. The remarkably rapid advance in scientific knowledge and inventions, gathering momentum in the period of the Industrial Revolution and continuing at an accelerated rate ever since, completely transformed the economic order and had the most widely ramifying reactions upon the whole social order. Though these changes brought great benefits, they also created endless problems and the necessity for a far greater degree of social control than ever before. This required a mass of new legislation, national, state, and local, so that issues having their origin in economic change came to play an increasingly important part in the political history of the period. This factor was not peculiar to the United States, since it operated wherever the economic revolution took place; but it was particularly influential there.

A second group of conditions, all noneconomic in their basis, had a tendency to increase the importance of economic factors in American history in a negative way, simply because they exercised a less important reaction upon political developments there than in many other countries and so left the economic factors more predominant.

Foremost among these, once the nation had attained independence, was the comparative freedom from dangerous and powerful neighboring nations such as was faced by all the countries of Europe. The geographic distance from the Old World, supplemented by the adoption of the policy enunciated in the Monroe Doctrine tending to check any extension of European power in the New World, greatly facilitated the general adherence to the policy of isolation and the avoidance of entangling alliances. Though international problems were seldom absent, they were never so numerous and rarely so pressing or important as those entering into the political life of the powers of Europe. The problem of national defense was a minor one, and for over a century the army and the navy were maintained at minimum levels. How great were the resulting advantages the country scarcely appreciated until they began to disappear in the twentieth century, and comparative isolation, both political and economic, seemed no longer possible. This change was due to the growing international economic interdependence and to technology's achievements in modifying the influence of distance, notably by the advent of the airplane.

Another factor of the same negative character is the relatively less important part played by religious strife in American history, though this is much less true of the colonial period than subsequently. This was due to the fact that the country was predominantly, and during most of the time overwhelmingly, Protestant in character; also to the comparative religious freedom that prevailed and to the eventual complete separation of church and state. In the colonies, chiefly those where there was an established church, religious strife and persecution were common; but subsequently, under toleration and the severance of the connection between church and state, the reactions of religious strife upon the country's political history were relatively slight. In the Old World countries, where the practice of maintaining a state church created an influential clerical caste, there were also the powerful military caste based on the large armies and the caste of the aristocracy based on nobility of birth, which latter also supplied many of the clergy and military officials. These castes with their varying interests exercised the greatest influence upon the history of most European countries, though their power has been greatly modified in recent times. In America, even in colonial times, their influence was much less marked, and it practically ended on the attainment of independence. This elimination of the castes, with interests less dominated by economic considerations, left the businessman and the masses greater power to shape the course of American political history.

5. A fifth objective would be a better understanding of ourselves, either as individuals or as a nation. We are all in part a product of the economic age in which we live, of the economic conditions in the country and section where we reside, of the economic class in which we are brought up, and of the pursuit whereby we strive to earn a living. Our aspirations, our ideals, and our attitude on problems of economic and social policy are inevitably in some measure shaped by these economic influences or by our reactions against them. One of the outstanding lessons to be gathered from the study of economic history is the extent and the power of such influences and the undesirable consequences of social action that is so frequently the outcome of the biased ideals and judgments that ensue therefrom, though these may be as sincere and honest as our convictions on most other issues. Probably nobody can entirely throw off the bias of environmental influences, but the person who is totally blind to them lacks the best basis for sound judgment and wise action. If we can understand these influences and then have the reason and the will to endeavor, as best we can, to counteract any bias resulting therefrom, we can do much to further economic and social progress.

6. A sixth objective will primarily appeal to those especially concerned with the study of economics and its advancement. Theory and history

provide the basic elements for that study. Theory formulates laws or principles, but their validity rests upon various assumptions as to the character of the economic order and its institutional framework. History describes this institutional framework and its evolution through time; it thus provides that sense of relativity essential in the use of theory, and it may suggest needed lines for the development of theory to adapt it for use in a different economic order. Moreover, history, since it covers all the facts of experience, provides the only laboratory in which the validity of theory can be tested. On the other hand, although theory alone is far from sufficient to provide an adequate explanation of history, it is quite impossible to explain much of economic history without the aid of theory; and unless the facts of history are explained so that the reasons for developments are understood, most of their value is lost. History and theory thus fructify one another.

Also, the study of the so-called "applied" problems of economics—those of labor, trusts, banking, etc.—really deals with little segments of recent economic history. To understand them it is necessary to know the evolutionary development that has created them and to appreciate their relationship to the whole economic order of today in which they are set. Economic history alone provides this broad background, since it includes a survey of both historical evolution and the whole of the economic order.

7. To this list of purposeful objectives there might be added a purely cultural one quite independent of social progress: the acquisition of such knowledge of economic history as may be considered essential in a well-rounded education. The important part played in human history by the economic factor, belatedly recognized, would appear to justify considering some knowledge of economic history, particularly that of one's own country, as a desirable part of one's cultural equipment.

If these various objectives are constantly kept in mind, it will greatly help to make clear the basic importance of the general developments described in the following narrative, and it will suggest the broader significance of many points of detail which otherwise might seem to have no reason for being noticed.

Fundamental Factors Determining the Standard of Living. As the main objective of the study of economic history is to learn how to raise the standard of living and most of the other objectives listed above are chiefly important as they contribute to this same end, it is essential at the start to have a clear understanding of the fundamental factors that determine that standard in any nation or group of people. Only thus will the relationship of the many factual details in the following narrative to this central problem be recognized.

In the last analysis, the actual standard of living of any group of people—and it is actual, not ideal, standards with which we are dealing—is deter-

mined by what they produce, plus what their environment provides freely, and by the time and energy which are required for this production and which determine the amount of their leisure time. If the group is not completely isolated but can trade its products or services with other groups that can produce some things at lower comparative costs, its standard may be raised by securing these through exchange, but the amount so secured will still be determined ultimately by the amount of its own products desired by the other groups and the terms of exchange. Thus the extent of the trade between one nation and the rest of the world may become an important factor in raising the standard of living of that nation, and the development of other countries may be very significant for its reactions upon that trade. The total amount of economic goods and services produced may be called the group or national real income. It consists of physical quantities of goods and services the economic value of which is measured in terms of the prevailing monetary unit.

This national income is determined (1) by the quantity and the quality of the four factors of production that are available and (2) by the way in which they are combined for purposes of production in the existing economic and social orders. Behind all is the motivating force based on the desire to raise the standard of living. The relation of the various factors that thus enter into the problem will be made clearer by the following summary:

I. The factors of production.

Production is a process of cooperation.

A. Between man and his environment, promoted by the increase in knowledge, science, invention, etc., and leading to a more complete and efficient use of the resources and forces of nature.

B. Between man and man, promoted by specialization, exchange, and similar cooperative action through the development of more efficient economic and other social institutions.

The economist commonly makes a further subdivision of the two factors, man and his physical environment, into the four factors of production:

1. Natural resources.
2. Labor.
3. Capital.
4. Entreprenеurship or business management.

Better cooperation between man and his environment and between man and man affects these four factors of production by

a. Increasing their quantity, economically considered.

b. Improving their quality, economically considered.

These results may be achieved in a great variety of ways. The physical supply of natural resources in a nation may remain relatively fixed except as depleted by use, but can be augmented by territorial expansion. The economically significant supply in any given area can be increased by exploration and discovery and by scientific advance which finds new uses for resources previously thought useless, or for those already used for other purposes. In a similar way, scientific or technological advance, by leading to better methods in mining, forestry, and agriculture or by providing better transportation facilities may increase the value of such resources. In the case of the factors labor and entrepreneurship, the quantity depends first of all on the population, but also upon how many work, how long they work, and how intensively. The quality of these factors is improved by education, technical, scientific, and business training, and whatever else may make them more efficient. The supply of capital depends on saving, and the quality of the capital goods in which it is embodied is improved by all scientific and technological advance that leads to better machines, plants, etc.

With given quantities and qualities of these four factors of production, the national income will be determined by the ways in which they are combined for purposes of production. This is decided immediately by all those in direct control of economic enterprise, such as corporation officials, partners, individual owners such as farmers, tradesmen, or professional men, and by the government. More fundamentally, however, it is determined by the character of the economic order and the institutional framework of the whole social order in which this economic order is set.

II. The social order or institutional framework.

For our purposes this social order may best be divided into three groups, each engaged in producing various kinds of goods and services:

A. The economic order, under private business.

B. The political order, under the state.

C. Other orders, under philanthropic, religious, social, and other control.

A. The main fields of private business are those

1. Creating chiefly form utilities:
   Extractive industries, manufacturing, construction, certain utilities, certain personal and professional services.
2. Creating chiefly time, place, and possession utilities:
   Transportation, communication, marketing, financing, risk taking, certain personal and professional services.

B. The main economic functions of state activity are those

1. Chiefly providing goods and services.
2. Chiefly regulating and controlling economic activities.

C. The main economic functions of the other groups in the social order are

1. The provision of goods and services.
2. The various reactions on the economic order.

Finally, it must be realized that there is constant and endless interaction between the factors of production and the elements that constitute the economic and the social orders.

Though the division of subject matter in the chapters of this book is in the main along the lines indicated by the preceding analysis of the chief factors that determine the amount of the national income rather than along those determining the distribution of that income (to be described shortly), it nonetheless diverges therefrom in many places. It will, therefore, help the reader to recognize the relationship of some of these scattered groups of detailed facts to the conditions determining the amount of the national income if they are briefly indicated at the start.

The developments affecting the economically significant supply of the factor, natural resources, will be found described chiefly in the chapters dealing with the public lands, the extractive industries, the westward movement of population, and transportation. Though population is the primary factor determining the supply of labor, the developments affecting its growth will be found discussed near the beginning of the account of each period rather than in the chapters devoted to labor where most of the other developments affecting the quantity and quality of this factor will be dealt with. In the case of the factor capital, most of the general developments affecting its quantity will be noted in the chapters dealing with financial institutions. On the other hand the developments improving the quality of capital goods through progress in science and invention will be found widely scattered in whatever fields of economic activity the new devices were applied. It is difficult to generalize about the factor entrepreneurship, and it therefore receives little attention as such aside from mention of a few general conditions affecting it in the chapters on labor. But the account of the varying ways in which entrepreneurs, as those immediately responsible for determining how the factors of production were combined and what business policies were pursued, acted in the various fields of economic activity is scattered throughout the book.

Since the division of subject matter in the chapters dealing with the chief fields of production, exchange, and distribution follows fairly closely along

lines indicated in those parts of the preceding outline, the relation of the developments described in those chapters to the problem of what determines the national income will be fairly obvious. It should be clearly understood that the essential contribution to the national income of such lines of economic activity as transportation, communication, trade, and finance is to further the process of specialization and division of labor in those lines of activity primarily engaged in producing form utilities, such as the extractive industries, manufacturing, and construction. This includes specialization of regions in the use of regional resources, specialization of labor and entrepreneurship, specialization of capital goods in the form of more specialized machines, plants, etc., and specialization of economic institutions. All this is furthered by increasing the mobility of labor, capital, and entrepreneurs as well as that of goods and services, thus increasing the likelihood that all these economic resources will be used at the time and the place where they can make their greatest contribution to the national income.

Among the noneconomic elements that make up the framework of the social order, only the governmental can be given much attention in this volume. The economic activities and functions of the state are so numerous and so fundamental that it can be looked upon as an economic institution almost as much as a political institution, and no study of economic history could leave this out of the picture. The broader aspects of the relations between government and industry will be noted in the chapters dealing with the state and the economic order. On the other hand, the ways in which government acted in its function either as a provider of economic goods and services or as a regulator and controller of private business will be found described in innumerable instances wherever there is mention of legislation.

The Distribution of National Income. What fixes the total amount of the national income per capita is the first and most important element to be considered in an analysis of what determines the standard of living, since this fixes the total that is available for distribution. This is the chief reason for adopting in this book an organization of the material that centers about the processes of production. It is also essential to know how this total is divided among the people of the nation and what the factors are that enter into the determination of that distribution.

How the national income is distributed is important for its bearing upon the standard of living, since it is commonly agreed that a very unequal distribution of that income will result in a lower average standard of living than could be obtained by a more equal distribution. This conclusion is based upon the principle of the diminishing utility of additional quantities of economic goods in satisfying the wants of any person. It should be noted,

however, that, since people vary in the amount of satisfaction derived from a given amount of economic goods—as the ascetic and the sybarite—and there is no way of measuring these differences, we cannot determine just what distribution of the national income between different people would yield the maximum of total satisfactions any more than we can assume that this would be secured by an equal distribution of income. Also, we should not overlook the fact that there are other social objectives besides the economic which may make too great inequalities in the distribution of income undesirable.

Since the division of the subject matter in this book is in the main along the lines suggested by the preceding analysis of the factors determining the national income and not to any appreciable extent along those determining the distribution of that income, it is the more important that we keep in mind just what the latter are in order that we may more clearly see the relation of the factual details to this problem of distribution. Hence we must inquire, What are the main factors that determine this distribution?

The institutions immediately determining this distribution can, for our purposes, be best classified into the same three groups used in the case of production: (1) the economic order, under private business, (2) the political order, under the state, (3) orders, under philanthropic, religious, and other control.

1. Since it is the conditions in the first field, private business, that determine the manner in which most of the national income is distributed, it is especially important to understand the main factors that operate in this field. As commonly classified, practically all income in this field is divided into four forms each representing the return to one of the four factors of production:

a. Rent, the return to natural resources.
b. Wages, the return to labor.
c. Interest, the return to capital.
d. Profit (or loss), the return to entrepreneurship.

The shares going to each factor are determined, in the absence of state regulations, in the market by the conditions governing the demand for, and the supply of, each of these factors, though in the case of profit there is also the element of return or loss due to chance or risk taking. In the existing economic order, the markets in which the law of demand and supply operates to determine these shares may be said to be fundamentally competitive in character. Actually what is considered to be a perfectly competitive market is seldom found, and most markets are better described as more or less competitive in character, merging into monopoly at the other extreme. The presence of monopolistic elements tends to alter values

and hence the distribution of income in favor of the monopolizer. Since every act of production and every development having an economic reaction will always affect demand or supply or the risk element, they will in consequence affect the return to one or more of these four factors of production and hence the distribution of the national income.

If, in reading the historical account of all the detailed developments that follow, one seeks to trace their relation to the distribution of the national income, it is only necessary to realize that all private business is a struggle on the part of everyone to secure a larger share in the distribution of that income. This struggle for income will appear more obvious in the efforts of powerful individuals, groups, or classes so to influence affairs as to augment their wealth and income. It is conspicuous in the conflicts between labor and employer, between capitalist and debtor, between landlord and tenant. There are also conflicts within these separate groups among different classes of laborers or of capitalists or landlords. Within a given industry there is a rivalry between different concerns, and various industries are in more or less rivalry with one another. There are conflicts between cities and between states as well as the conspicuous conflicts between sections and between nations. In fact the list of such conflicts would be almost endless for it might be said that there are as many different groups as there are families or even individuals, and each individual has economic interests that bind him to a wide range of groups.

2. The influence of the state upon distribution is exerted, just as in the case of production, by the activities that it assumes,

a. Chiefly as a provider of goods and services.
b. Chiefly as a regulator of economic activities, but also,
c. Through the fiscal system adopted to obtain the revenue to meet expenditures.

The effects of the first of these forms of state activity will be found described in scattered places though briefly summarized in the chapters dealing with the state and the economic order. The effects of the second type of state activity will be found widely scattered in every field where there is mention of legislation primarily designed to regulate or otherwise influence action in the field of private business. The third form of activity involving the fiscal system is for the most part described in the chapters dealing with the state and the economic order, the chief exception being the history of the tariff, which is dealt with in connection with manufacturing. The struggle between groups and classes as it takes place in the political arena in the effort to influence legislation affecting all three forms of the activities of the state will be in evidence everywhere. When it is realized that in recent years the state has taken between an eighth and a

quarter of the national income through taxation and used much the greater portion to provide goods and services for the people, for the most part freely, it will be evident how important a factor in the distribution of the national income its activities may become.

3. The activities of the third group—the philanthropic, religious, etc., not being a part of what is ordinarily considered the economic order and much the least important in their effects upon the distribution of the national income—will receive little notice. The distribution of such goods and services as is made by these groups is determined by their estimates of various social needs and is largely independent of the principles governing ordinary business transactions.

Having outlined the main factors entering into the determination of the amount of national income and its distribution as the basic elements that fix the standard of living, we may once more emphasize the great significance of the mass of detailed facts and developments described in the history that follows. Though, as indicated earlier in this chapter, the study of economic history has various objectives, such as helping to explain other phases of history or the economic factors making for national survival, its main objective, just as is true of the study of economics in general, is to raise the standard of living and thereby to promote the attainment of such other ideals as require economic means for their realization. Since the mode of living commonly chosen by most people along with those of the United States has involved an ever-increasing dependence on economic means for its support, the following history, which seeks to explain how and why the American people succeeded to a degree unparalleled in the world's history in their effort to supply their economic wants and also why failures and errors prevented still greater success, should in some measure provide the basis for the social guidance that might lead to a still higher standard of living in the future.

Chapter II

THE AMERICAN BACKGROUND: THE NATURAL RESOURCES AND THE INDIAN'S ECONOMY

The Natural Resources. The economic order, we have seen, is engaged in a process of using the forces and resources found in our natural environment for the purpose of supplying our wants; it is a process of cooperation between man and his environment. It is obvious therefore that the character and success of a given economic order will be greatly influenced by the natural environment in which it is located; for that reason some account of the outstanding characteristics of the conditions existing in the United States is essential to our study. Since we may assume that most Americans are fairly familiar with this natural environment, it will suffice simply to point out its most significant features and characteristics.

From the economic point of view the combined effects of the physiography of the country, its temperature, and rainfall may be said to separate the United States into two great divisions nearly equal in area, those east and west of a line roughly marked by the 100th meridian. The eastern section consists of comparatively level and low-lying plains broken by the Appalachian chain of mountains. The temperature of this section is moderate and the rainfall abundant and fairly evenly distributed throughout the year. The western region, on the other hand, is marked by a high altitude, except for the valleys on the Pacific coast, and is much more uneven, being traversed by two great mountain chains often reaching great heights. The temperature except along the coast is subject to somewhat greater extremes of heat and cold and, particularly important in its effects, the rainfall, except along parts of the coast, is insufficient for ordinary cultivation, besides having a very uneven seasonal distribution. The results of the combined effects of these conditions create a marked difference in the economic development and life of these two sections, as will appear later. Though these constitute the great divisions of the country, each of them is so large and marked with such variations within its own boundaries as to justify a more detailed description.

In the eastern great division we find, first, a coastal plain bordering on the Atlantic and extending to the series of mountain ranges which make up the Appalachian chain and stretch from northern New England to Georgia and Alabama. This coastal plain varies in width from 50 to 100

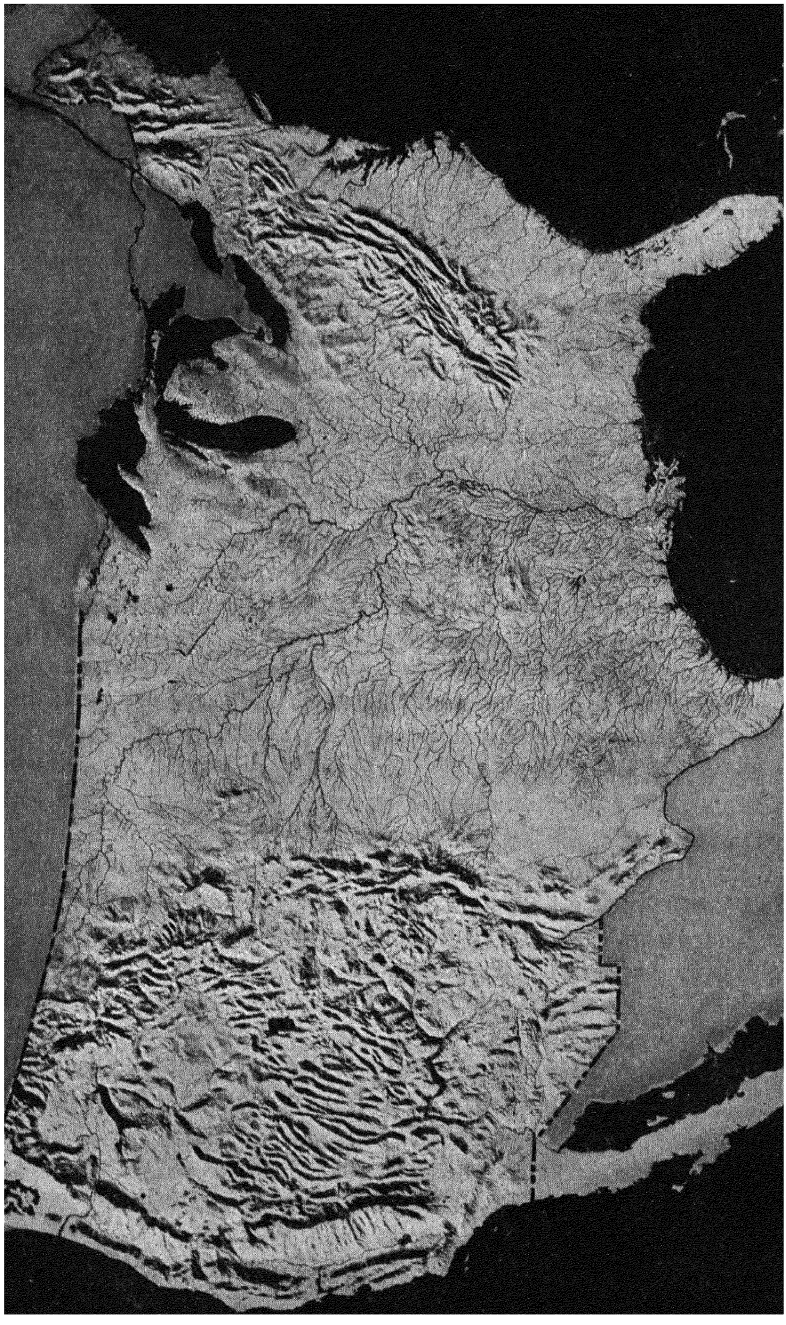


FIG. 1. Relief map of the United States. (*U.S. Geological Survey.*)

miles in the North to 200 or 250 miles in the South. It is traversed by numerous rivers which descend rapidly from the mountain ranges and afford abundant opportunities for the development of water power. Few of these rivers, except the Hudson and the Delaware, are navigable by boats of any size for an appreciable distance before the first falls are reached; a line connecting this series of falls on the different rivers constitutes what is called the "fall line." The coast is marked by numerous islands and bays and, from Chesapeake Bay north, a large number of excellent harbors.

The second region made up of the various parallel ranges which constitute the Appalachian chain is some 300 miles in breadth. Few of the peaks in these ranges rise much more than 3,000 feet above sea level, but they constitute a fairly continuous chain, some 1,300 miles in length, with but one break affording easy access to the West—that by way of the Hudson and Mohawk valleys where the highest point is less than 500 feet above sea level. To the south the easiest passes to the West are found leading from the upper waters of the Potomac or the James into western Pennsylvania, West Virginia, Kentucky, and Tennessee.

The third division is the vast Mississippi basin, one of the richest agricultural areas of its size in the world. For the most part it is a relatively level or rolling plain and, in the chain of the Great Lakes together with the St. Lawrence, Ohio, Missouri, and Mississippi rivers and their tributaries, possesses an important system of navigable waters and sources of water power. Nearly all of this region east of the Mississippi River was originally covered with a forest growth while the western portion commonly known as the "prairie lands" had few trees.

At about the 100th meridian we pass to the second great division where the annual rainfall drops to less than 20 inches—too little for ordinary agriculture—and this portion is arid. From this point, where the so-called "Great Plains" start, there is a rapid though even rise in altitude till at the foothills of the Rockies it is nearly 5,000 feet above sea level. Next in order is the high and arid plateau region bounded by the Rocky Mountain chain on the east and by the Sierra Nevada and Cascade ranges on the west. This is one of the largest of the high plateau lands of the world, being for the most part between 4,000 and 6,000 feet above sea level; the great mountain chains that bound it rise several thousand feet higher, some peaks being over 14,000 feet. Except in the far south there are no low and easy passes through these ranges, and the railroads crossing over them are forced to climb to an altitude of from 7,000 to 11,000 feet, descend to the high plateau, and finally climb once more over the ranges on its western border. The lack of rain checks ordinary agriculture except near the river bottoms or where irrigation is possible, and the forest growth is mainly

found on the mountain ranges where the rain and snowfall are greater. Thus most of this region is suitable only for grazing purposes.

Finally, there is the region west of the Sierras and Cascades extending to the coast. From the mountain tops there is a steep descent to the valley lands drained by the Columbia, the Sacramento, and the San Joaquin rivers and bounded on the west by the low Coast ranges. In the rapid descent from the mountains these streams and their branches furnish numerous sources of water for irrigation and power. In southern California and in Oregon and Washington much of the intervening low land is arid; in the former, actual desert. Easy access to the sea is afforded by the breaks in the mountain ranges marked by Puget Sound, San Francisco Bay, and the outlet of the Columbia. Except for San Francisco Bay and Puget Sound good natural harbors are lacking on this coast.

The Climate and Rainfall. All of continental United States except Alaska falls within the Temperate Zone and so enjoys the climate, neither too hot or too cold, that has proved most conducive to human effort and progress. Although the width of the country from north to south, about 1,000 miles, permits of considerable variation in the temperature of different sections and thus in the crops that can be produced, there are few regions where either heat or cold goes to such extremes as seriously to lessen human effort. So far as such a region does exist it is to be found chiefly in the hot and humid section of the coastal plains bordering on the Gulf of Mexico or the inland semidesert areas of the Far Southwest. The crop-growing season between the last frost in spring and the first frost in the autumn varies from 4 months in the North to 10 months in the South. In the region east of the 100th meridian the rainfall is adequate yet not excessive, varying from about 20 to 60 inches a year; moreover, it is fairly evenly distributed throughout the year. In the high plateau region to the west the rainfall is generally less than 20 inches a year, which is insufficient for the cultivation of crops under ordinary methods. To the west of the Sierras and Cascades some of the immediately adjoining areas in the north and the extreme south suffer from inadequate rainfall, though in the section nearest the coast there is in the autumn and winter a season of considerable rainfall, in fact very heavy rainfall along the northwest coast, followed in the summer by a season of very little precipitation.

Forests. The forest area is largely determined by the rainfall. Originally practically all of the area of the country from the northern boundary to the Gulf of Mexico and from the Atlantic coast westward to the prairie lands near the Mississippi was covered by a thick forest growth which had to be removed before cultivation of the soil could begin. These forests included a great variety of trees, both hardwood and softwood. But from the beginning of the prairies west to the Sierras the forest growth was sparse and

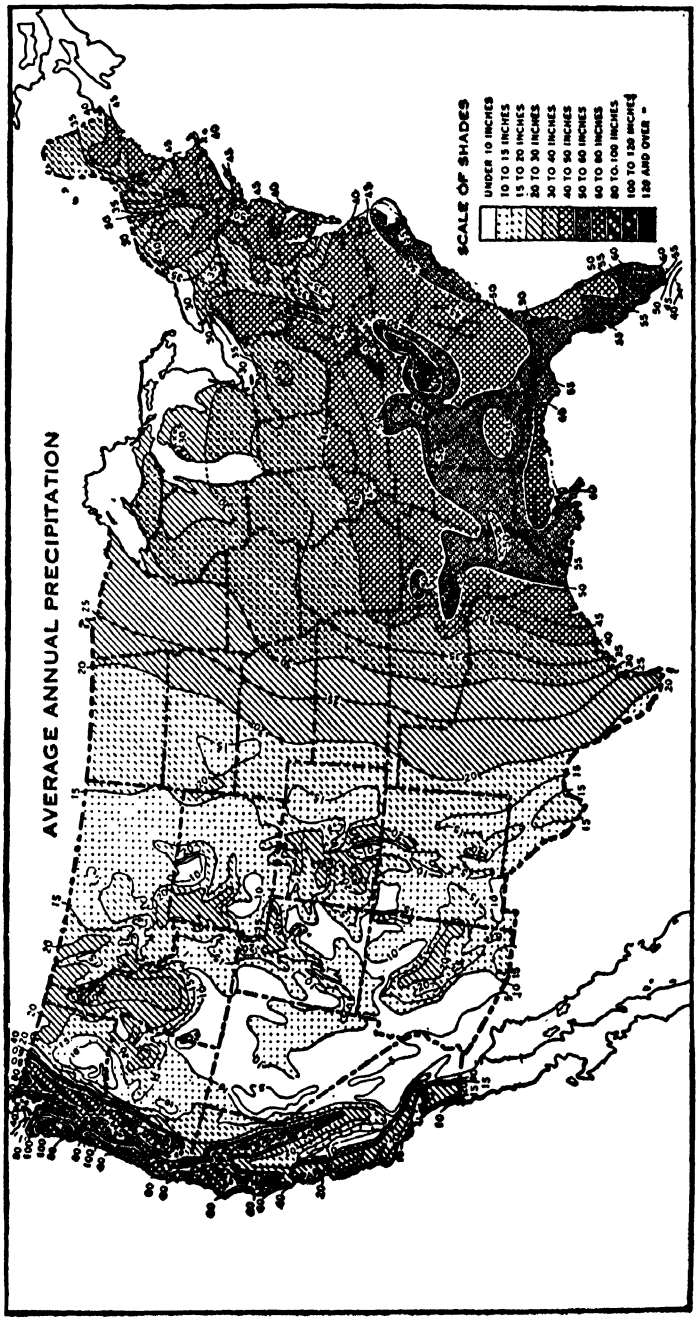


FIG. 2. Average annual precipitation. (*U.S. Department of Agriculture.*)

largely confined to the land along the river bottoms or the mountain ranges. The growth was not so dense as in the East, and the timber less valuable. On the western slopes of the Sierras in the Cascade range of Washington and Oregon and also the Coast range with their heavy rainfall, a heavy growth of large and very valuable fir trees was found, though to the south-

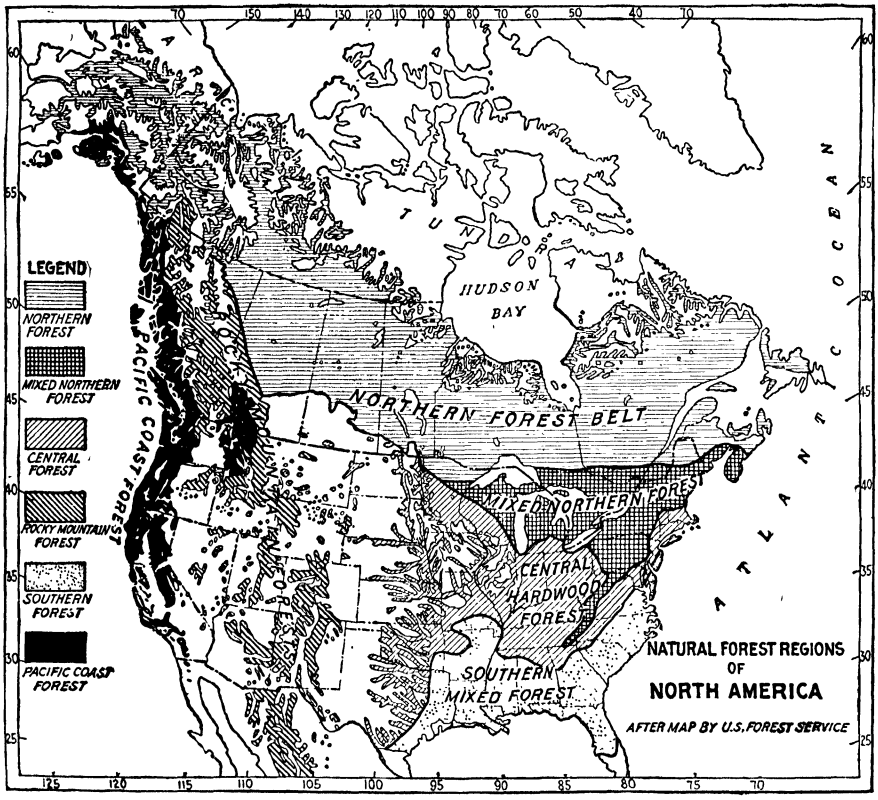


FIG. 3. Natural forest regions. (*U.S. Forest Service.*)

ward in California, aside from the few small growths of giant trees, the timber supply was of declining importance.

Mineral and Stone Resources. The variety and extent of the mineral resources of the country are unusual. Particularly important for modern industry are the great deposits of coal and iron found in many scattered areas, chiefly from the Rocky Mountains eastward. Copper is found in great abundance notably in northern Michigan and the western high plateau region, and lead and zinc chiefly in the section from the Mississippi River to and including the Rocky Mountains. Gold and silver deposits

of great value have been found located for the most part from the Rocky Mountains westward. In fact, of the most important and widely used metals, tin is the only one that is lacking, unless we include platinum, and the supplies of such metals as manganese, nickel, chromite, and antimony are very small. Mineral oil or petroleum has been found in great abundance, chiefly in the Ohio and Mississippi valleys and southern California, and natural gas usually is obtained in the same regions. Among the stones of widespread use all kinds are found, numerous varieties of granite and marble, and abundant supplies of sandstone and limestone, and in some sections phosphate. Deposits of bauxite used to make aluminum are also available, and clays suitable for brick and pottery are widespread.

Wild Game and Fish. A factor of vital importance to the aborigines and of considerable importance to the white settlers in the earlier period of colonization was the abundant supply of wild game and fish. Fish were abundant wherever salt or fresh water was found but were particularly important along the coasts of the North Atlantic and the Pacific Northwest. Among the wild game the bison and the deer were especially useful as food and for their hides, and the beaver and other fur-bearing animals were sought for their pelts. So far as meat and hides are concerned, we now depend chiefly on the domesticated animals brought in by the early Spanish explorers and settlers; fish continues an important element in our food supply. The wild animals now so greatly reduced in number are today mainly of value for such furs as they yield.

The Noncontiguous Territories. Thus far this description has been limited to the contiguous area of continental United States, since that is the only region that played any part in our economic development up to the end of the nineteenth century. Since then we have added to our noncontiguous possessions through the acquisition of the Hawaiian Islands, the Philippines, and Puerto Rico, and the natural resources of these new territories, together with those of Alaska, now beginning to be developed, are becoming a factor in our economic life. Although portions of Alaska are capable of growing crops, this territory is chiefly valuable for its fisheries and mineral resources. The full extent and character of the latter are still to be determined, but considerable gold has already been obtained and the coal deposits are known to be valuable. The most significant fact as regards the natural resources of our island territories is that they yield many tropical products obtainable, if at all, only in relatively small amounts within continental United States. They thus furnish a particularly important supplement to our temperate zone products and help to round out the economic self-sufficiency of the country. However, owing to the somewhat narrow limitations of resources and quantity of output, the country still

has to depend upon other sources for a considerable portion of its needs for many of these products.

If we stop for a moment to consider this brief survey of the natural resources of the country, it will be seen that the outstanding feature is the great variety and abundance of them and the unusually favorable basis that they afford upon which modern industrial society can build in the effort to supply its economic wants. The most serious drawback of continental United States is the lack of adequate rainfall in the great plateau region of the West, and so far as we can now see this will always prove a fundamental obstacle to the intensive economic growth of that region. The favorable temperate climate is in part offset by the absence of many products of the tropics which are needed to supply our wants. Aside from these and the scarcity of a few of the less important metals, our natural resources supply in comparative abundance that environment and those raw materials upon which society is most dependent. There are but two or three countries in the world that can begin to compare with the United States in possessing within a contiguous area such a favorable combination in the character, variety, and abundance of their natural resources; none of them has as yet reached anything like such a stage of economic or general cultural development as has the United States. Although some of these resources are by no means inexhaustible and in certain cases have already been seriously depleted, still in this physical environment the country enjoys conditions the importance of which, not only in its past but for its future economic development, can scarcely be exaggerated.

The Economic Life of the Indians. The settlers who came to America found the New World already inhabited by the Indians. It was therefore necessary to drive them out, subjugate them, or come to some terms of agreement before settlements could be firmly established. Since the primitive economic life and culture of the aborigines played an important part in the outcome of this conflict of races, it is desirable to gain some idea of its character. The disparity between the stages of economic and cultural development of the two races was so great that, after the white settlements had once been made, the red man could do nothing but occasionally harass the steady westward march of the white man, and it was only through the final adoption on the part of the whites of a paternalistic attitude toward them that the Indians were saved from extinction. Since the influence of the aborigines on the whites was so slight, a study of their economic life is chiefly of value as showing the characteristics of a primitive industrial society and thus, by way of contrast, enabling us to obtain a clearer conception of the form and characteristics of the economic order that the settlers had developed in Europe and sought to establish here at the time they came to this country.

This account of the Indian method of getting a living will be confined to that of the natives who lived in the area at present included in the United States and to the conditions that are supposed to have existed about the time of Columbus's discovery before those methods were altered by the influence of the whites. It should not be forgotten, however, that to the southward among the Aztecs of central Mexico, the Mayas of Yucatan, and the Incas of Peru a distinctly higher stage of civilization and economic development had been attained than among the Indian tribes north of Mexico.

At the time of Columbus's discovery it is estimated that there were not over 1,000,000—possibly not over 500,000—Indians living north of Mexico, the region east of the Mississippi being the most densely settled portion of the country. It is supposed that under their methods of getting a living this was as large a population as the natural resources of the region could sustain. This was because the Indians did so little to alter the resources freely provided by nature in the effort to supply their wants. They were therefore largely dependent upon the limited supply of natural resources available in a form nearly ready to meet these wants. For this reason and because the natural resources of the different sections of the country varied so greatly, the mode by which the Indians obtained a living differed in a marked degree in each section. Moreover, as getting a living chiefly consisted in getting food, it was the variations in the natural environment affecting the food supply that were of primary significance. Hence in explaining their mode of getting a living it is necessary to describe separately that employed in each section having marked variations in the natural environment.[1]

The Food Supply of Different Regions. The first region where the natural environment was fairly homogeneous was the vast area east of the Mississippi River. There, as we have seen, the rainfall was abundant, the soil generally fertile and mostly covered with forest growth. The Indians living there had advanced to the stage of cultivating the soil and so did not depend entirely for satisfying their wants on what was freely supplied by nature. Among the cereals, corn was the only one widely cultivated and proved to be the main reliance. Other cultivated crops included beans, squash, and to the south millet, melons, sweet potatoes, and smoking tobacco. The food supply thus obtained was augmented in one section or another by wild game, fish, wild rice, honey, berries, and maple sugar. There were no domesticated animals to supply meat. Cultivation necessitated a settled abode and the Indians typically lived in small villages. Their shelter was generally constructed of poles lashed together and covered

[1] The following is based upon Clark Wissler, "The American Indian," 3d ed., New York, 1938.

with bark, mats, thatch, hides, or mud. Among the Iroquois long rectangular communal houses were found. Palisades for purposes of defense often were built about the villages.

The second important region consisted of the Great Plains beyond the Mississippi, a considerable portion of which was too arid for cultivation. There was, however, sufficient vegetation to sustain the large herds of bison that abounded, and the Indians were chiefly dependent upon that animal not only for food but for many other things as well. The meat dried and pulverized as pemmican would keep for many months. There was a very limited use of roots, wild berries, and wild game. Apparently, too, dogs, which with the turkey of the pueblo region were the only domesticated animals the Indians had, were sometimes eaten and served also as draft animals. Under such conditions, a nomadic life prevailed, and the tepee used as shelter was constructed of a few light poles covered with buffalo hides easily taken down and moved about. In the southern portion of the plains area, however, settlements were to be found cultivating the moister soil of the river valleys.

A third area centered about the Columbia River basin and the adjacent region to the east. Here abundant salmon was the determining factor in the food supply. The fish were caught at the time of the run and a portion of the catch was dried, smoked, and kept for future use. Along the coast where fish were abundant, fairly permanent villages existed and totem-pole plank houses were built; in the interior a more nomadic life was necessary to secure sufficient food and the tepee was common. There, after the salmon catch, the Indians sought wild berries and later gathered roots or hunted wild game, thus affording, as Wissler says, one of the most striking examples of the correlation between dependence on wild foods and instability of residence.

South of this region, in California and the adjacent area to the east, nature was much less bountiful. Such crops as corn, beans, and squashes, which the Indians cultivated elsewhere, require considerable summer rainfall and, as there was almost no rainfall in California at that season, no cultivation of crops seems to have been attempted here. Nor was the supply of fish and wild game abundant. Hence nuts, chiefly acorns, and seeds or roots, herbs, and even dried insects were the chief reliance for food; the moderate, relatively even climate made shelters built of brush or tule reeds sufficient. The tribes in this region thus had a very low level of subsistence.

Finally, there may be distinguished the tribes living in the rather arid high plateau region in Arizona and New Mexico. There, in spite of the unfavorable environment, we find the most advanced state of Indian industrial society and culture in the country; in fact, otherwise, the problem of getting a living would have been most difficult. This development is

probably to be explained by the proximity of these tribes to the still more advanced tribes of central Mexico. This region is fortunate in that the small rainfall that it has is largely concentrated in the growing season. In this way, by employing certain dry-farming methods or by the use of irrigation, crops could be grown in some sections. Thus corn, beans, melons, squashes, sunflower seeds, and cotton were produced under more intensive methods of cultivation than were to be found anywhere else in the country. Although wild game was scarce, the rabbit being the most common, the turkey had here become domesticated. A settled life was thus made possible and the groups lived in the stone or adobe pueblos such as are still in existence.

The Supplying of Other Needs. In supplying their wants other than for food the Indians used but few of the resources about them. The chief tools were of stone, wood, shell, or bone. There was no use of metals except for a little copper. The smelting and casting of metals appear to have been unknown to the Indians north of Mexico, and the small amount of copper used was employed because it was easily malleable. As far as tools were concerned, they were those of the Stone Age. For fibers the chief reliance was bast fibers such as grasses, twigs, and portions of the bark of trees, though cotton is claimed to have been used in the pueblo villages. The making of mats and baskets was carried to a high degree of perfection, particularly in the West. Spinning and weaving by hand were common, and apparently the loom was employed in the pueblo region. Such clothing as was worn was for the most part made of deerskin or, where this was not easily obtainable, of woven fabrics. Ornaments of a great variety of materials were common. Pottery was generally made except on the Pacific coast and a portion of the plains, though the use of the potter's wheel was unknown. In their agriculture a rough hoe and a crude pointed tool that served as a sort of spade were employed, so that only easily workable ground could be tilled and even that was little more than scratched. Fire was obtained by the fire drill. For water transportation, the dugout and the canoe made of bark or skin were employed; for overland transportation, in the absence of draft animals, goods were carried in packs on the back, except on the plains where dogs were attached to a travois made of long poles which dragged behind on the ground.

The General Economic Organization. The economic organization among the Indians was thus of the simplest type. The real unit was comprised of family groups living together usually in small villages of a hundred or so population. These communities each produced substantially everything that they consumed and were therefore self-sufficing economic units. As a result, almost no trade was carried on between the groups. The little that did exist—it seems to have been furthest developed in the Northwest—

took the form of barter, though in some sections the strings of beads made of shell and used for ornament, called "wampum," seem to have served as a form of money. Communication was by word of mouth as there was no written language at that time. These conditions also resulted in there being very little division of labor except between the sexes. The women carried on the household duties and cultivated the crops (though in the pueblo region the men participated in the latter activity), while the men did the hunting and fighting. Aside from the few who acted as priests and medicine men there was no differentiation in the work of the men. One exception is found in the Northwest where a few slaves, the captives of war, appear to have existed. On the other hand there was a considerable amount of cooperation between the members of the group in their larger undertakings, especially in hunting and fighting. Small wars were of constant occurrence due to the struggle for food areas or to the blood feuds which had no end. The very slight amount of accumulated wealth that existed naturally resulted in there being very little available as a basis for private property, and universal hospitality lessened the need for it.

The land, where there were permanent settlements, was considered as owned in common, though in some cases limited rights in its use were allowed to the family. Thus private property was limited to the shelter, produce, and personal effects of the family to which might be added a few intangible hereditary rights. Often much of this was looked upon as the property of the woman and descended through her. Custom and habit served in the place of law as the means for settling disputes. Such conditions resulted in a high degree of economic equality and a very democratic society. Even the chiefs, who were generally elected, had little power except as leaders in war. Custom and public opinion, especially the fear of the scorn and ridicule of the group, which in such a small and closely built community might become almost unendurable, supplied the chief means for social control over the individual. The small local groups were organized into tribes, chiefly for purposes of defense or ceremonial performances, and occasionally several tribes formed larger confederacies, that of the Iroquois being the most noted.

The Significance of Their Mode of Getting a Living. This brief survey of the Indian mode of getting a living will suffice to indicate the very primitive character of the industrial society that the white man found when he came to take possession of the Continent and, by comparison, the vast superiority which the whites possessed in the economic and general cultural civilization that they brought with them. For the aborigines successfully to contend against it was impossible; the civilization of the whites placed the natives at their mercy, to destroy or to aid as they saw fit. The relatively slight use of the resources and forces of nature which the

primitive culture of the Indians permitted, and the resulting high degree of dependence on food supplied with but little additional effort on man's part by the environment, resulted in a mode of living almost completely shaped by the character of the food supply and a life almost entirely given up to the desperate struggle for food. Of what we consider luxuries they had nothing, and even of necessities barely enough for a low existence.

Thus, under the Indian methods of getting a living, the natural resources that now support over 145 million with a vastly higher standard of living scarcely supplied less than a million aborigines with a wretched existence. The question of how the white man achieved this notable result is the real subject of our study and it is by way of comparison and contrast with the methods of getting a living first introduced and later developed by the whites that this account of the economic life of the pre-Columbian Indians will prove most instructive.

Chapter III

THE EUROPEAN BACKGROUND OF COLONIAL ECONOMIC HISTORY

Introduction. Some knowledge of the economic, political, and social conditions in Europe during the colonial period is essential for an understanding of many factors that vitally shaped the economic life and development of the colonies. In the first place the process of colonization involved not only the migration of people to the New World but also the transit of the Old World's civilization. This civilization was so far in advance of that which was found among the Indians that it completely dominated the type of social institutions and the form of the economic order that the colonists endeavored to establish in the New World. Yet the transit of this civilization did not take place without changes; as will subsequently appear, the colonists took advantage of the opportunity to make many modifications designed for the most part to provide a better adaptation to New World conditions or to promote the attainment of their social ideals.

It was a combination of economic, political, and religious conditions in Europe that led to the establishment of the colonies and largely determined the character of the people who migrated to America and the type of social ideals that they held. The colonies, being subject to European nations, felt the reaction of political developments in Europe to a greater degree than would otherwise have been the case. Since the value of the colonies in the estimate of Europe lay chiefly in the advantages to be obtained from control of their trade, the relations between them and the mother country were chiefly influenced by economic conditions and considerations. In consequence there is no other period up to 1914 when events in Europe exercised so important a reaction upon this country's economic history as they did during the colonial period and the years immediately following down to 1815.

The Civilization of Western Europe near the Close of the Middle Ages. At the period of Columbus's discovery the people of western Europe enjoyed a civilization that was many, many centuries in development ahead of that of the Indians north of Mexico. Only a few of the outstanding features of this civilization as the Middle Ages drew to a close in the fifteenth century can be noted here—those that were of particular importance for their subsequent reaction on America. Basic among these was the altered

outlook upon life produced by the movement known as the Renaissance which by this time had spread from Italy through western Europe. The older outlook on life with its strong element of religious asceticism tended to look upon the world as a vale of trials and sorrows where man's fleeting hours should be devoted to preparation for the Judgment Day in the hope of salvation in the life to come. No age that has completely lost the medieval fear of the imminent end of the world can hope to appreciate the powerful effects of such views on the social order.

The humanism of the Renaissance, on the other hand, stressed the development of all the finer inherent capacities of man as a rational and sentient individuality and the use of his faculties and resources for the enrichment of his life in this world. This new outlook on life was a product of various developments commencing about the opening of the twelfth century with the beginning of the series of great crusades, though the earlier spread of Moslem culture in the Mediterranean area was not without its influence. The Near East had preserved much of the culture of the classical world, which the West had lost following the breakup of the Roman Empire, and this had been augmented by contributions from the Arabs and the Far East. The Crusades brought the West in contact with this rich heritage of the Levant. They created a growing demand for the varied products of the East, which developed a commerce that in time brought great wealth to the trading city-states of Italy and a luxury in living that flowered in the Renaissance. At the same time the study of the writings inherited from classical antiquity was greatly stimulated, and this was given an added impetus by the migration of scholars to the West following the capture of Constantinople by the Turks in 1453 and the downfall of the Eastern Empire. This study greatly broadened the outlook and interests of scholars and promoted far greater freedom and independence of thought than had prevailed under the narrow religious scholasticism of the Middle Ages; it revived an interest in the sciences as well as in the arts and stimulated critical thinking which in the religious field eventually bore fruit in the Protestant Reformation. The Renaissance marks the rise of an attitude toward life—a belief in the life that is rich, full, and active—which has largely dominated Western civilization ever since and is a basic factor in the background of American social development.

The close of the Middle Ages brought another development destined to attain growing importance in its reactions during the succeeding centuries: the growing spirit of nationality to be seen throughout western Europe in the rising power of strong centralized states and the decline of the feudal system, which had dominated in most of this region from the tenth to the thirteenth centuries. Italy divided into little city-states and kingdoms and Germany with its innumerable principalities and free cities, where the power

of the Holy Roman Emperor steadily dwindled, escaped this centralization; in fact, they failed to secure political unity till the third quarter of the nineteenth century. But in Portugal, Spain, France, Holland, and England this period witnessed a rapid growth in the power of the king and the central government, a decline in that of the feudal lords, and a rising spirit of national unity. In the course of time, the power of the absolute monarch was built up, as in Spain under Philip II (1556–1598) or in France under Louis XIII (1610–1643) and Louis XIV (1643–1715), while in England royal absolutism was secured under the Tudors (1485–1603). So the modern nation arose, and the constantly increasing political and economic rivalry with the intensification of the spirit of nationalism which subsequently developed have exercised the greatest influence upon the course of world history ever since.

Economic Conditions in England Just before 1500. Since many English economic institutions adopted in the colonies had their origins in the economic organization of England existing before 1500, some knowledge of it is needed to understand colonial developments. In the fourteenth century most of the people in England were engaged in agriculture, chiefly carried on under the feudal system. The villeins gave about half their time to work on their lord's manor but were assigned plots of 20 or 30 acres to work for themselves. They were also subject to other feudal obligations and could not leave the manor to work elsewhere. The little group that made up the feudal manor was largely economically self-sufficing, a small surplus of its output, chiefly that of the lord, being sold and the proceeds used to purchase supplies from outside.

Although the growing towns and cities were chiefly devoted to industry and trade, many of the inhabitants cultivated some of the surrounding land. Those entering the handicraft trades, after a period of apprenticeship, became journeymen and hired themselves out to a mastercraftsman, hoping in time to become masters themselves. The master usually had his shop in his own dwelling where the raw materials were worked up with a few simple tools and then sold to the customers.

Those engaged in industry and trade in the larger places formed "guild merchants" to regulate their activities and promote their interests. These guilds were granted extensive powers of control and practically became an important branch of the local government. As industries grew in size, each organized a separate craft guild of its own which sought to regulate the hours of work, the quality and methods of making the product, the conditions of its sale, and the terms under which apprentices and journeymen were employed.

In addition to the trade of the craft shops, there was that of the weekly, or even more frequent, open markets in the streets or squares where much

of the trade between the town and the surrounding country district was transacted. Finally, there were the great fairs held once or twice a year, usually on the outskirts of large towns, where traders from all over the country and even from abroad brought a great variety of goods, many of which were not regularly found in small markets. There too the surplus staples of the country districts were often sold and a considerable wholesale trade developed. This trade was also carefully regulated, and the customs developed in the fair courts and known as "the law merchant" often became embodied in the law of the land.

As England was considerably behind other countries of western Europe in her economic development, her foreign trade was small and her exports were chiefly such raw materials and foodstuffs as she could best produce. Wool was by far the most important, but hides, leather, tin, lead, and a few foodstuffs were also exported. Imports included lumber, tar, furs, iron, and fish from the Baltic countries; fine textiles of linen and wool from Flanders; wines and salt from France, Spain, and Portugal; and, mainly from Italy, such products of the Near and Far East as spices, silks, cottons, sugar, dyes, drugs, and precious stones. This trade was mostly in the hands of foreign merchants, such as those of the Hansa cities of the Baltic or those of Venice, and was carefully regulated.

The conditions just described, however, were being modified during the two centuries before 1500. Outstanding was the marked decline of feudalism following the rise in wages after the Black Death despite restricting statutes. Increasingly the manorial lords found it advantageous to commute their serfs' obligations for a money payment and to lease their demesne land to tenants. Others enclosed the open fields and converted them to sheep pastures, a move that became widespread in the sixteenth century. As a result, the great mass of the rural population was freed from serfdom, and many moved to augment the industrial population of the towns.

The guilds reached the height of their power about the middle of the fifteenth century; thereafter, as their control over local affairs was reduced and industry began to locate outside the cities, their influence waned. As industry expanded, England exported more of her great staple wool in the form of finished cloth. As foreign trade increased, English merchants took over more of its conduct from foreigners, aided by the stronger central government.

In the other nations of western Europe the economic conditions at this period did not differ markedly from those in England except that trade and industry were considerably more advanced, notably in the cities of northern France, Flanders, Italy, and parts of Spain and Germany. Italy was the most advanced country, having a flourishing textile industry and a

control of much of the trade in products of the Near and the Far East which her merchants distributed to most of western Europe. There the beginnings of modern banking and large-scale commercial enterprise could be found and double-entry bookkeeping was devised.

It is important to note the basic characteristics of the economic order that prevailed as the Middle Ages came to a close, since subsequently they provided the pattern that was introduced into the colonies. With relatively minor modifications, they have remained basic in the economic order of the United States ever since. Though some of these characteristics can be traced back to Biblical times, others were of later origin, and full development of all was attained only in modern times. The most important were (1) the institution of private property, (2) individual initiative and comparative freedom of enterprise in production, (3) a growing division of labor and specialization, which in turn involved (4) exchange of goods or services, (5) aided by the use of money and credit instruments, and resulting in (6) an increasing interdependence and complexity in the structure of the economic order, (7) a growing influence of competition in determining exchange values, (8) a pecuniary calculation as the basis and chief guide in most economic activities, (9) an increasing use of capital in most fields of production, leading to (10) a greater size of the business enterprise. Though subject to modifying changes to meet altered conditions and ideals, these characteristics remained dominating factors in shaping the development of the economic order of all the more advanced nations until the recent social policies adopted in Russia and the totalitarian states wrought radical changes.

European Developments after 1500. The year 1500 is the date commonly accepted as marking the beginning of modern history. Thus the history of the white man in America is all embraced within that comparatively brief period called "modern times." Moreover, the two outstanding events that most sharply marked the transition from medieval to modern history—the great discoveries and the Reformation—were destined to exercise a profound influence on colonial history.

The voyages of discovery which disclosed the New World and a sea route to Asia were immediately due to the desire of the people of western Europe to establish direct trading connections with the countries of the Far East and so to secure a share in this rich trade, which had been almost monopolized by the merchants of Italy who depended on the supplies brought to the Levant over the old trade routes across Asia or through the Red Sea. In providing the financial backing for these voyages of discovery the rulers in Spain and Portugal took the lead. During the fifteenth century the Portuguese, starting under the leadership of Prince Henry the Navigator, sticking closely to the land, slowly extended their explorations down

the west coast of Africa, reaching the Congo by 1484. It remained for Vasco da Gama to round the Cape of Good Hope and reach India in 1498, thus disclosing the sea route to the Far East that was most used for nearly four centuries.

To leave the land behind and sail westward into the terrors of the vast unknown when many still denied that the earth was round required a combination that was not found until, following the invention of the compass and other instruments to guide navigation, the faith of Columbus and the resources of Queen Isabella were united and the daring little fleet set forth on the voyage that led to the discovery of the New World in 1492. That this was in fact a new world only obstructing easy access to the riches of the Far East was not realized at first and, when further exploration showed such to be the case, it hastened the effort to find an easy route around or across this barrier. The Pacific was first seen by Balboa from the peak in Darien in 1513, and the only available sea route to the westward was made known when Magellan, sailing through the treacherous straits that bear his name, completed the first voyage around the world in 1522. By 1550, the Spaniards had explored the eastern coast of America from Labrador southward and the western coast as far north as Oregon. Finding no opening to the Pacific in the obstructing continents, the explorers turned their search to the waterways running into the interior and for two hundred years vainly endeavored to find some easy route to the western sea, thus hastening the process of making known the geography and the resources of the New World.

A much stronger incentive to explore the interior of the two new continents was soon provided by the discovery of gold and silver and the acquisition of the hordes accumulated by the Aztecs and the Incas in Mexico and Peru. During the sixteenth century, various Spanish expeditions led on by Indian tales explored much of the southern portion of the United States in a search for gold and, when none was found, turned their activities elsewhere. They founded no enduring settlements save those established at St. Augustine and Santa Fe around the close of the century, thus leaving the region open to the settlers from other nations who came overseas in the next century. It was the output of the precious metals from Mexico and Peru, which rose with great rapidity until about 1620, that provided the greatest reaction of the New World upon the Old during this period. At the same time it gave a great impetus to the efforts of other nations to establish colonies in the New World.

The intellectual awakening and spirit of inquiry aroused by the Renaissance and abuses within the Church led to the Protestant Reformation, started by Martin Luther in 1517, which split the unity of Christendom in twain, plunged Europe into a century and a half of religious struggles,

not only between Catholics and Protestants but between different sects that developed among the Protestants, with consequences that shook dynasties and nations and brought widespread religious persecution and human suffering. The reactions of this conflict gave an added impetus to the struggle for colonies and exercised a momentous influence on the development and life of the colonies.

The Catholic countries, Spain and France, rigorously excluded all Protestants from their American possessions; hence those seeking an overseas refuge were diverted to the colonies of the countries that had turned to Protestantism, such as England and Holland. Though some Catholics were to be found in these colonies, notably in Maryland, the settlements became overwhelmingly Protestant in character. Yet this did not result in religious unity, and the development of differences between the various Protestant sects that arose substantially affected colonial history.

The unfortunate lack of unity among the Protestants—at least unfortunate for the group in an age of intolerance—had its origin in the independent spirit of inquiry and the protest against the dictated dogma of the Church which lay back of the Reformation. Two great spiritual leaders emerged in the early stage of this movement—Luther and Calvin—but they differed on many points. Lutheranism came to be accepted in most of Germany outside of the south and parts of the west and soon spread over Scandinavia. The stern tenents of Calvinism were adopted by the Huguenots of France, the Dutch of Holland, and the Presbyterian Church of Scotland. The Anglican Church, making less of a departure from the Church of Rome, became the established Church of England. Except in France, where the Huguenots lost such limited privileges as they had enjoyed under the Edict of Nantes of 1598 by its repeal in 1685, these religious groups dominated their respective countries and, except in Holland, resorted to widespread oppression and persecution of the various minor Protestant sects that arose at this time.

Most important among these minor sects in England was the group of Puritans. In many respects close followers of Calvinism, they at first sought to reform the Church of England from within but were met with increasing persecution under the Stuart kings. This, combined with a serious economic depression, led to the great Puritan migration to New England from 1630 to 1640. The outbreak of the Civil War in 1642 soon placed the Puritans in control during the Commonwealth, but this was lost on the restoration of the Stuarts in 1660. In the subsequent renewal of oppression, another sect, the Quakers, was subject to prosecution that eventually drove many to seek a refuge in the colonies. In Germany the small radical and pietistic sects that sprang up, such as the Mennonites and Moravians, were subject to similar prosecution by the Lutherans and

in the eighteenth century, suffering from the ravages of war as well, many migrated to the New World in search of peace and religious freedom.

Economic Developments on the Continent. The great inflow of the precious metals from America soon spread throughout western Europe and led to a rapid increase in prices during the sixteenth and early seventeenth centuries, which in turn gave a great stimulus to the expansion of industry and trade. At the same time, since wages did not rise so rapidly as prices, discontent spread among the working classes and led to various social uprisings which tended to improve the condition and increase the freedom of the masses. A like result followed when people took advantage of the more abundant money and higher wages and prices to purchase exemption from such personal services and other obligations as still survived from feudal times, thus further undermining the restrictions upon individual freedom and enterprise.

The effects of the discovery of a direct sea route to the Far East were eventually augmented by the spread of the Ottoman Turks which early in the sixteenth century closed the last of the old trade routes that had remained open. In consequence, the control of this rich trade passed from the merchants of Italy to those of the nations bordering on the Atlantic, at first to those of Portugal and Spain but from the seventeenth century on to those of Holland, France, and England. The ports of these countries then became the great centers of European trade.

Another result of the discoveries was that when commerce, instead of being confined to the inland seas or close to the coasts, took to the oceans and began to make long voyages to distant lands and carry on a far more extensive trade than ever before, important changes in its organization took place. This distant trade with its growing volume and long period of time between purchase and sale of goods required more capital; it required a heavy outlay for the establishment and protection of the agencies or "factories" as they were called, where the products of these far-off countries were gathered together and the exports thence could be sold; it required expensive protection for the larger ships employed in the trade. To provide such an outlay was beyond the means of individuals or small groups of traders; it required great resources and a large, permanent, and centralized organization to be successful. To provide these needs there gradually evolved the great trading companies which from the middle of the sixteenth century on came into control of much of the overseas trade of the nations of western Europe. Commerce was becoming more capitalistic in character than ever.

In these countries, marked by the continued growth of the power of the central government and the rising spirit of nationality, such trading companies were backed and aided by the nation, which expected thereby

to increase its revenue and wealth, instead of by the merchants' associations of trading cities as in medieval times. The commercial rivalry became one of nations rather than of individual cities.

It was from the central authority that these companies received the charters which commonly granted them extensive privileges, including a monopoly of the trade with a given region and powers of government over the settlements that they might establish. The monopoly grant made it easier to control the trade and to collect such dues as were imposed upon it. Also, only in this way could adequate protection be given those who invested their capital in these enterprises; for, if outsiders or "interlopers," who had contributed nothing to the outlay involved in developing and protecting the trade, were allowed to compete in it freely, there would be little chance that the company could obtain any return on its heavy outlay.

The extent to which the government aided and controlled these companies varied considerably and depended largely on the resources and power of the king. In Spain, whose overseas trade was largely with her own colonies, the government very strictly regulated the trade, and in France the intermediary companies depended largely on government money and aid. In England, where the power and financial resources of the king were more limited, private initiative and capital were relied on almost exclusively, and the government did little more than furnish encouragement, grants of power, and some protection.

In this way originated the different companies trading to the Levant, the Guinea coast, the Far East, and America of which the British East India Company was the leading example. It was by means of the resources and effort of similar companies to develop trade with America that the first permanent settlements in the colonies were founded.

England during the Colonial Period. During most of the colonial period, England was too fully occupied with domestic problems and the course of political events on the Continent to find much time to devote to the colonies. Under the Tudors the religious control of the Catholic Church was displaced by the establishment of the Church of England, the feudal lords were subordinated, and the power of the king and the central government greatly increased. The period culminated in the great achievements of the age of Queen Elizabeth (1558–1603) which included a very rapid expansion of industry and trade, daring attacks of the English sea rovers such as Hawkins and Drake upon the colonies, the commerce, and the treasure ships of Spain, and the defeat of Spain's powerful effort to invade the country following the destruction of the great armada.

The seventeenth century was marked not only by the religious strife and persecution already noted but also by the changes in the form of government as a result of struggles that had an important reaction upon the

colonies. The royal power built up under the Tudors was used in more autocratic and corrupt ways when the Stuarts succeeded to the throne with James I in 1603. Meanwhile the rapidly increasing population of the towns and cities, where there was a marked growth of the middle and working classes among which were found most of the religious dissenters, became more restless as well as more powerful. Civil War broke out in 1642; Charles I was soon beheaded and Cromwell's Puritan Commonwealth established, only to be followed by the restoration of the Stuarts under Charles II (1660–1685) and James II (1685–1688) and the reestablishment of the Anglican Church. The rule of the restored Stuarts proved even more corrupt and intolerable; combined with the growing fear that they sought to restore Catholicism, this led to the Revolution of 1688. William and Mary then ascended to the throne under the terms of the Declaration of Rights, soon embodied in the Bill of Rights, which sought to ensure a Protestant succession and greatly increased the powers of Parliament at the expense of the royal authority, thus marking another forward step in the rising power of the people and the movement toward democracy.

The eighteenth century in England is spoken of as the Age of Reason or the Enlightenment. It was a period when the importance of science was being rapidly recognized and its laws applied to help solve the problems of man; a period when the dictates of reason rather than those of arbitrary authority were accorded wider acceptance; a period of a slowly rising spirit of humanitarianism.

It was also a century marked by comparative freedom from serious domestic strife, by rising economic prosperity, and by growing political power and prestige, particularly as compared with England's chief rival and foe, France. In 1707, Scotland was united with England under the name of Great Britain, largely allaying one source of strife. On the death of Queen Anne without surviving progeny the Protestant succession was quietly secured through the accession of the House of Hanover, though the Stuart pretender, backed by France, continued to cause concern till his final defeat and flight (1745–1746). In consequence, religious persecution was greatly reduced and a more tolerant spirit prevailed. The first two Georges (1714–1727 and 1727–1760) were quite content to leave most problems of government to their ministers, and Parliament became strongly entrenched behind its recently acquired powers. Spain had long since ceased to be dangerous, and the commercial and naval power of Holland had been shattered in the last half of the seventeenth century. England, now dominant on the seas, felt relatively safe in her insular position. France was now her chief enemy and under Louis XIV (1643–1715) had become the dominant power on the Continent. But by 1689 Louis had reached the

height of his power, and for most of the following century the strength of France steadily declined. Thus eighteenth-century England, basking in the sunshine of rising political power, comparative domestic tranquility, and advancing economic prosperity, enjoyed a period of well-satisfied self-complacency.

England's Economic Development. The three centuries beginning with the sixteenth witnessed England's rise from a relatively backward position to one of leadership in industry and commerce among the nations of the time. Favored by the absence of any serious invasion of her own soil, aided by a government more ready to adapt its policy to the needs of changing conditions and to permit greater freedom of individual initiative, and possessing the most rapidly growing colonial possessions of the time, England through her expanding manufactures and trade provided the chief basis for the rapid rise of her population and her wealth. The widespread belief about 1600 that England was overpopulated and that emigration of the poor might well be encouraged vanished after 1660 as conditions improved. Enclosures were not renewed on a large scale until after 1760 and then were chiefly for the purpose of introducing better methods of cultivation than could be employed under the old open-field system. Meanwhile more land was added to the cultivated area and better methods introduced, especially during the eighteenth century. From 1660 on, the more protective policy of the Corn Laws prohibited imports of grain when prices were low and provided a bounty on exports. Thus stimulated, England was ordinarily able to supply the needs of her growing population and also have a surplus for export down to around 1765; after about 1790 she became regularly and increasingly dependent upon imports.

As industry expanded, various developments occurred which tended to undermine the power of the guilds and secure greater freedom of individual initiative. On the one hand, as the guilds tended to become more exclusive and opposition to their monopolistic practices grew, the central government stepped in to control them. They were deprived of more and more of their powers over local government, and Parliament passed general laws applicable to industry. A famous example was the Statute of Apprentices of 1563. Designed like early laws to check the rise in wages, it made labor compulsory, provided that the justices of the peace in each locality were to fix wage rates annually for different industries, and required 7 years of apprenticeship for those engaged in the crafts. Though it was not repealed until 1813, it was but poorly enforced during the preceding century. However, it provided an example which the colonies on occasion sought to imitate. On the other hand, the guilds were weakened by the development of new industries not enjoying the privileges or subject to the control of the old guilds, or by the fact that increasingly craftsmen seeking freedom from

guild control set up their shops outside the old town limits or in newly developed regions where guild control had not become entrenched.

Although there were comparatively few improvements or inventions of far-reaching importance in the type of tools or machines used until after the middle of the eighteenth century, still the innovations made, combined with the growth in the volume of output, helped to bring in some changes in the organization of the trades and led to a very extensive development of what is called the "domestic" or "putting-out" system of industry. Many craftsmen continued to carry on production in small shops in their houses, employing only a few apprentices and journeymen and commonly selling the product direct to consumers. Others, operating on a larger scale, bought the raw materials and distributed them among laborers who worked them up in their own houses, returned the finished product to the employer, and received wages for their work. Sometimes, where the needed tools or machines were expensive, the employer provided these as well. The employer, thus securing a large stock of goods, often carried on a wholesale trade as well as making retail sales. This of course required more capital and led to the growth of a class of so-called "merchant-capitalist" employers.

In industries where water power or a considerable plant and machinery were required, of course the work had to be done on the premises and the same naturally applied to mining enterprises. There were a few cases before the eighteenth century where a considerable group of workers and substantial amounts of capital were employed in such undertakings, sometimes resorting to the joint-stock company form of organization, but nearly all production was carried on as a small-scale enterprise owned and operated by a single individual or a partnership. In the course of the eighteenth century, when more elaborate machinery was introduced and closer supervision of the work became desirable, as in the stocking and silk manufactures, and still later more power-driven machinery was invented, as in the textile and iron manufactures, the factory system of production spread. The rapid rise of industrial capitalism may be said to date from the Industrial Revolution which took place in England between about 1770 and 1830.

As the size of industrial and trading enterprises grew and more capital was required, there was greater need for financial methods and institutions that would stimulate saving, develop credit devices, and provide a more efficiently organized market for lendable funds so that capital would more readily flow to the enterprises where it was most needed.

In medieval times, when most borrowing was to meet personal needs rather than for purposes of production expected to yield a profit, the Catholic Church had held that it was an un-Christian practice to take advantage of a person's needs by charging interest on loans and so pro-

hibited it. But with the growing opportunities to use borrowed capital for gaining a profit, this attitude was slowly modified by various exceptions and finally reversed, first by the Protestants led by Calvin and ultimately by all, though usurious or excessive rates continued to be condemned and most countries fixed legal maxima. England first made interest legal in 1545, the maximum being set at 10 per cent, but by 1713 this had been reduced to 5 per cent. Thus a stimulus was provided for the accumulation and lending of capital.

In earlier times the merchant traders of the Continent had been one of the chief sources from which borrowed funds were obtained, and it was to this class that rulers frequently turned when in need of money. By the sixteenth century a similar group was arising in England. At the same time, with the growth of trade and the increase of money in circulation, the money-changers became more important while growing wealth increased the business of the goldsmiths. As both of these groups required a place of safekeeping for their money, other people adopted the practice of depositing money with them so that they often had considerable sums on hand; in time they began to lend some of this money to borrowers and even to issue their own notes, thus creating a new type of credit instrument. Out of such developments commercial banking arose, starting in Italy and Spain, then spreading to the trading cities of Germany, France, and the Low Countries and still later to England where the first bank, the Bank of England, was chartered in 1694. Four years later, the London Stock Exchange was formed to provide an organized market for securities. By this time bills of exchange were in fairly common use and saved the expense and risks of transporting specie, while they might also be used as a device for extending credit.

In both domestic and foreign trade England made great advances during these centuries. The comparative economic self-sufficiency of the medieval manor and small towns slowly gave way to a trend toward greater specialization, division of labor, and the accompanying exchange of goods, promoted by better and cheaper transportation facilities and the increasing wealth of the growing population. In her export trade, manufactured goods tended to replace raw materials, notably so in the case of her great staple wool which after about 1600 was shipped out almost exclusively as finished cloth, and many of the new lines of manufactures that arose during this period contributed to this trade. Her imports, though still including fine textiles, wines, semitropical goods, and many products of the East, began also to include more raw materials for her manufactures and her expanding merchant marine and navy.

As Englishmen took over this trade and established their own agencies abroad, the export of English goods was much more effectively promoted.

It was in the last half of the sixteenth century that many of the great chartered companies were organized to develop the trade with more distant lands and the regions opened up by the new discoveries. In the next century, starting with the aid of the more rigorous Navigation Laws of 1650–1663 and the other attacks upon Holland's supremacy in shipping, England launched a development which in the course of the following century gave her the dominant position among the world's mercantile fleets, while the preeminence of her navy generally assured the control of the ocean routes so vital for her overseas trade.

Throughout this period both the sovereign and Parliament, over which the rising mercantile interests obtained a growing influence, took a far more active interest in, and adopted a much more vigorous policy for, the development of foreign trade. The stronger central government provided more effective support and, backed by the rising spirit of nationality, the advancement of foreign trade was made a national affair and resolved itself into an international struggle for colonial empire, a contest in which the American colonies on the Continent began to play a rather humble part. In this struggle the economic policy that largely governed the action of England, as well as that of other nations, was what is known as the "Mercantile System." As this policy was destined to play an important part in the political and economic history of the colonies, it is essential to describe its characteristics.

The Mercantile System and the Colonies. Mercantilism, though commonly referred to as a system, was neither a clearly defined set of precepts nor a logically coherent theoretical system. Its supporters varied greatly between different periods and different countries as to the particular measures that should be adopted, and private rather than public interests often dominated their actions. Other objectives besides the economic were frequently involved, and the measures actually adopted were apt to reflect an effort to meet the problems of the day in a pragmatic manner. Still there is enough that was fairly common in the statements of policy and the type of measures employed to justify a generalized summary of the leading features of the system.

Mercantilism had as its main objective the building up of the power and wealth of the nation through economic means. With the rising spirit of nationality, the central government with its increased powers now sought to augment the strength of the nation in much the same manner as the large trading cities had tried to advance themselves in earlier times. Besides, the growing activities of the king and the central government required far more revenue to support them, and the development of a country's industry and trade increased the wealth from which this revenue could be obtained. But mercantilism was also a product of the growing

importance of wealth and capital and command of economic resources as a vital factor in the struggle for survival in the wars arising from the intensified international rivalries of the time. The personal service and the fighting forces formerly supplied by the feudal lords and their retainers no longer sufficed after the introduction of firearms and the establishment of standing armies and large navies with all the heavy expense in peacetime as well as wartime that these involved. Ever since feudal times the steadily growing trend toward the mechanization of warfare—much more rapid than ever in the twentieth century—has made modern war far more dependent on economic resources and their efficient mobilization than on mere man power.

The mercantilists attached especial importance to certain means for building up the economic resources and wealth of a nation. One was the accumulation of a large quantity of money in the country, in the belief that a great store of the precious metals was vital in time of war, especially at a time when credit institutions were poorly developed. There was also a belief, far less justified and due to ignorance of the principles of money and international trade, that in general money was a peculiarly desirable form of wealth as compared with most commodities. Where a country did not possess mines yielding the precious metals, the chief method of obtaining money was through trade. When a country sold goods or services to other countries in excess of the value of things bought from them, money flowed in to settle the difference, and the balance of trade or indebtedness was said to be favorable; when this situation was reversed, it was said to be unfavorable. The mercantilists hence sought to favor all trade with countries that showed a favorable balance and to restrict the trade that was unfavorable or regulate it to secure a favorable balance.

In consequence, there developed a great mass of legislation designed to restrict or prohibit the export of money, to check imports from countries where the trade balance was unfavorable, and to increase exports. Sometimes, as in the case of England's trade with India which showed an unfavorable balance, the objection raised was overcome if it could be shown that these imports were later reexported and so helped to create a favorable balance in the trade with some other country. It was a favorable balance in the total of transactions with all countries that was the primary concern.

A second objective emphasized by the mercantilists was the building up of a large mercantile marine. This would reduce the freight charges paid to foreign shipowners and so lessen the drain of specie; also, if native shipping were employed by foreigners, it might bring money in. In addition, the merchant marine would train up a large body of sailors and provide auxiliary ships that would help strengthen the navy in time of war. Hence various regulations were adopted designed to confine much of the carrying trade to domestically built and owned shipping.

A third objective of mercantilism was to develop domestic industry and provide full employment for labor by keeping rival foreign goods out of the home market and securing as wide a market as possible for domestic goods in foreign countries. Also, where necessary, it was the purpose to ensure an abundant supply of the requisite raw materials either at home or from abroad. Hence the export of domestic raw materials was checked, and favorable trade arrangements with other countries or the acquisition of colonies was advocated to obtain those that had to be imported.

A fourth objective was to produce at home a sufficient quantity of such foodstuffs as the country was capable of growing so that it would not be dependent upon foreign sources of supply, particularly in time of war; if a surplus for export was also available, so much the better. Protective duties tending to check imports, keep up prices, and stimulate production were employed to attain this end.

It may be pointed out, finally, that the combined tendency of these different objectives was to make a country economically self-sufficing and independent. Also, as put into practice, this policy involved an extensive system of government control and regulation, for it was based on the belief that individuals, if left free to follow their own interest, would frequently engage in activities that might injure the nation. It also reflected something of the old medieval idea that trade was not likely to be beneficial to both parties to an exchange and what one gained was at the expense of the other. Thus mercantilism seriously circumscribed freedom of individual initiative and freedom of trade.

From this brief survey of the objectives of mercantilism, it is obvious that the acquisition of colonies might prove of very great aid in furthering their attainment. Colonies might yield raw materials or other products required by the mother country or such as were in demand for reexport to other countries; they might possess mines producing the precious metals; their markets would afford an additional outlet for home manufactures; their exploitation would provide an opportunity for the investment of capital; surplus population might find a home there and not be lost to other nations; the control of colonial trade would yield additional profits to merchants and further the expansion of the merchant marine. All these would help to increase the country's stock of money, augment the profits of industry and trade, add to the national revenue, and make the nation more nearly economically self-sufficing and independent.

The International Struggle for Colonies. It was these mercantile ideals, combined with the great economic opportunities that came with the discovery of the New World and ocean routes to the Far East, that led to the keen struggle for colonial empires among the nations of western Europe, beginning with the sixteenth century, and started an economic and political

rivalry that has continued down to the present day. Though distinctly abated for a period after the Napoleonic wars, the past 60-odd years have witnessed a revival, sometimes called "neomercantilism," and we can see in the events of this period and the forces that helped to bring on the First World War as well as in the intensified spirit of nationalism that characterized its aftermath and brought on the Second World War, many of the policies and ideals that underlay the old Mercantile System.

This struggle had widely ramifying reactions upon the political and economic history of the American colonies, not only because of the wars in which the colonies became involved but also because England's attitude and policy toward them were so largely shaped by mercantilist objectives. As the colonial empire of the different nations attained increased importance, the effort to ensure some balance between them became, especially in the eighteenth century, a factor in the struggle to maintain the balance of power in Europe. In the course of this rivalry we see first one nation and then another rising to a position of dominance, the success of each arousing the envy of others, who ravaged the commerce, seized the colonies, and tried to build up a colonial empire of their own on the spoils.

In the sixteenth century, this supremacy fell to Spain and Portugal whose explorers had led in the discoveries. A papal bull of 1493, modified by later treaties, divided the world where discovery would confer title between these two nations. As the dividing line was drawn, Spain secured the western portion including the Americas, except eastern Brazil, and the Philippines in the Pacific; while Portugal got the eastern portion including Brazil, the western and southern coasts of Africa, settlements in India and the East Indies. Spain, which in 1500 had a population of about 7 million, was at the zenith of her power during the sixteenth century and also was in control of Portugal during the period 1581–1640, but from the opening of the seventeenth century on, Spain's strength rapidly dwindled. Much of the subsequent struggle for colonies centered about the efforts of other nations to break down the colonial trade monopolies and seize the possessions of these two countries.

That Spain was not invincible was shown when little Holland declared her independence in 1581 and the attempted invasion of England in 1588 failed, while English sea rovers continued to prey upon her trade. An inefficient economic system, domestic and colonial, combined with the waste of endless wars undermined the country's strength, despite the continued inflow of the precious metals from her colonies. Portugal regained her independence in 1640 and Holland secured the recognition of hers in 1648, while in the New World Spain was forced to yield one concession or colony after another before the insistent encroachments of other nations.

Holland was the next country to attain great commercial power and

during the first three quarters of the seventeenth century her fleets dominated the commerce of the world. While Portugal was subject to Spain, the Dutch seized Cape Colony, Ceylon, and the East Indies as well as trading posts in Africa, India, and the Malay Peninsula, thus gaining control of the rich trade with the Far East and a share in the slave trade. In the New World they wrested some of the West Indies from Spain, temporarily seized Brazil, and established the colonies of Dutch Guiana and New Netherland on the mainland. The success of Holland was the marvel of Europe; her ships seemed to be everywhere and Amsterdam was the financial center of the period. But the small area and limited resources of the little nation were scarcely sufficient to enable her to cope successfully with England and France whose envy she aroused and who, about the middle of the seventeenth century, began a series of commercial restrictions and wars which seriously impaired her trading and maritime supremacy.

In the eighteenth century, Holland having been weakened, England and France turned upon one another. France under Louis XIV, with about 20 million inhabitants, had become the greatest power in western Europe; but the rapid rise of England, since Holland's decline now dominant on the seas, produced a dangerous rival. They had already clashed in the New World in their efforts to extend their possessions there during the seventeenth century, partly through conquest of some of the Spanish West Indies and partly through settlements on the mainland along the North Atlantic coast. When the will of the King of Spain bequeathed all the Spanish dominions to the grandson of Louis XIV in 1700, England joined the other powers in the War of the Spanish Succession (1701–1713) to prevent Bourbon dominance. Only a fortunate turn of political events saved France from a disastrous outcome, and as it was she gave up Acadia, Newfoundland, and the Hudson Bay country to England in the Peace of Utrecht in 1713. The rivalry came to a climax in the Seven Years' War (1756–1763) which resulted in a great victory for England. The French were practically driven from India, and British power was first firmly established there; in North America France lost all her possessions on the continent, Canada and the eastern portion of the Mississippi Valley going to England, while the western portion of French Louisiana went to Spain which country turned the Floridas over to England. Thus the English colonies were finally relieved of the French menace from the west and the north which had always hemmed them in and made them dependent on England for protection.

It must be emphasized, however, that in this long struggle the colonies on the mainland of North America played a relatively unimportant part. From the European mercantilist point of view, the control of the trade

with India, with the Spice Islands, with the gold- and silver-producing Mexico and Peru, or with the sugar islands of the West Indies was far more valuable than that of the thirteen colonies on the mainland. France attached almost no value to her vast Louisiana territory, today one of the richest agricultural regions in the world, but in the eighteenth century only an economic liability. In 1760, England was uncertain whether in the prospective treaty of peace with France it would be wiser to retain Canada or the little island of Guadeloupe in the West Indies, and Benjamin Franklin was doing his utmost to secure a decision in favor of Canada.

The reason for this attitude is to be found in the objectives of the Mercantile System, especially the desire to build up an empire that should be economically self-sufficing. Obviously countries like England and France, in the Temperate Zone, would particularly desire colonies in the tropics possessing natural resources and products such as they lacked. Thus the West Indies, growing sugar, coffee, cotton, tobacco, indigo, and various dyewoods, fitted in with their needs. Also, since these colonies required but did not produce many agricultural products and manufactures available in the mother country, their market provided an additional outlet for such goods. On the other hand, the colonies on the mainland in the Temperate Zone produced much the same things as did England. This was less true of the Southern colonies with their tobacco, rice, indigo, and naval stores; but even these did not rival in importance the products of the West Indies. The Northern colonies, aside from furs, fish, and timber products for shipping, yielded little not available in England. Even such manufactures as they developed tended only to displace English goods, and they were often spoken of as "barren" colonies. It was only around the middle of the eighteenth century that the far more rapidly growing white population of the colonies on the mainland and the rise in their imports from England led the mother country to value them somewhat more highly than previously.

If any of the nations of Europe engaged in the struggle for colonial empire at this period had had the slightest conception of what the course of developments in the nineteenth century was to bring about, the fate of the thirteen colonies might have been very different. But this is only one of the innumerable lessons of history showing how vital and fundamental a factor in the fate of nations some attempt to study and forecast future developments, supremely difficult as it is, may prove to be. Yet the nation that fails to do so is simply gambling with the fates.

Chapter IV

THE FOUNDING OF THE COLONIES AND THE GROWTH OF POPULATION

The Groups and Motives Promoting Settlement. In the movement that led to the establishment of the colonies, there were three groups whose activities were a factor in the results achieved: (1) the governments, (2) the people who migrated to the colonies, (3) the trading companies or proprietors who promoted and helped finance the enterprises. In the case of each group, varied motives lay back of their action though the most prominent were religious, political, or economic in character.

In the case of the governments, religious motives played a minor part but were not without influence. The prospect of converting the savages to Christianity made its appeal to many, and in the keen rivalry between Protestants and Catholics the establishment of one or the other faith in the colonies was regarded as so much strength gained. Also, the close connection between Church and state accentuated this religious motive. It was most prominent before the eighteenth century and played a greater part in Spain and France than in England. Vastly more influential in governmental action were the economic and political motives back of the dominating mercantilist policy, as described in Chap. III.

Among those who migrated to the colonies the religious motive was strongest in the groups that came during the seventeenth century before the subsidence of the persecutions aroused by the Reformation. This was reflected in the Puritan exodus to New England before 1640, the movement of churchmen to Virginia during the Protectorate, the later influx of Quakers into Pennsylvania and elsewhere, the Huguenots who fled from France after the revocation of the Edict of Nantes in 1685, the Lutherans, Mennonites, and Moravians of Germany seeking to escape religious persecution and the ravages of war in the early eighteenth century, and the Scotch-Irish desiring to flee from similar troubles in Ireland.

Purely political oppression was a relatively unimportant factor as far as most immigrants were concerned, being most marked in the case of those who sought refuge in Maryland and Virginia during the period of Cromwell's Protectorate.

Economic motives, though often combined with others, were doubtless the dominant influence in the case of the vast majority of those who of their

own free will came to settle in the colonies, particularly during the eighteenth century. In colonial times, as ever since, it was the hope of bettering their material condition that led them to undergo the expense, the hardships, the loss of home ties, and other difficulties incident to migration to the New World. Still more so in the case of those who came through force—the slaves, the kidnapped, the criminals, and the paupers—economic motives, the need of cheap labor, and the desire to lessen the burden of public support of jails and poorhouses, dominated.

In the case of the third group, those engaged in the promotion of colonial settlements, the economic motive was even more influential, though religious, political, and even philanthropic ideals were sometimes in evidence. In Spain and France the government provided much of the financial support required for the establishment and maintenance of the colonies, but in England it did little more than make land grants and afford encouragement and protection while the supplying of funds and initiative was largely left to private enterprise, which was allowed far greater freedom of action than in the other countries. This private enterprise in England took two main forms: (1) the trading company, chiefly interested in the profits to be obtained by the development of trade, and (2) the proprietors who received large grants of land from the king and hoped to obtain a handsome income by building up great landed estates with many of the rights of a feudal lord.

That a large outlay of money would be required to found an enduring settlement was made plain by the various projects that only ended in disaster. The first two English attempts to found a colony—those of Gilbert in Newfoundland and Raleigh in North Carolina—were made under proprietary grants and ended in failures. The first successful English settlements, those in Virginia and Massachusetts, were promoted by trading companies possessing greater financial resources. These were modeled on the companies carrying on much of England's overseas trade at this period. But the problem they faced was very different from that of the companies trading with countries like Russia, Turkey, or India, which already had a fairly advanced civilization and produced many commodities much desired in England. In America, on the other hand, since the only commodity obtainable from the Indians that England wanted was furs, it was necessary for any company desirous of developing a successful trade to bring over settlers who would develop the country's resources. Thus these trading companies were forced to undertake colonization.

The Settlement at Jamestown. In 1606, King James issued the Virginia Charter authorizing settlement by two groups: the London Company receiving a grant of land between the 34th and the 38th parallels of north latitude and the Plymouth Company the land between the 41st and

the 45th parallels, the intervening region being open to either. Nobles, government officials, and merchants subscribed the funds which were invested in ships, supplies, and other necessities; a group of settlers was enlisted, and both companies promptly sent forth expeditions which reached America in 1607. That of the Plymouth Company located on the Kennebec River in Maine, but inefficient management, the poor quality of the settlers, and trouble with the Indians led to the abandonment of the settlement the following year.

The expedition of three vessels with 120 people sent out by the London Company which founded Jamestown in 1607 just barely escaped this common fate. Scarcity of food, sickness, and Indian attacks caused great suffering and, in spite of new arrivals and supplies received the next year, by the spring of 1609 barely a quarter of those who had left England still survived. To resuscitate the colony a new charter for a joint-stock company with a much larger land grant was obtained in that year and another fleet of nine ships with about 500 emigrants was sent out. Yet a year later between disease, Indian attacks, and starvation, despite resort to cannibalism, there were only 150 still alive in the settlement. It was then decided to abandon the colony and survivors were on their way down the river when they met another ship bringing food and new recruits and were induced to turn back.

Thereafter under the vigorous, autocratic administrations of Smith and Dale more attention was given to raising the needed food instead of the impracticable semitropical products that England hoped the colony would yield or the vain search for gold. Also the system whereby all that the settlers produced was turned into a common pool so that there was little incentive to individual effort was modified, first by allowing each to retain the produce of a portion of the land and eventually his whole output.

When, about 1616, a satisfactory method for curing the tobacco, which the Indians taught them how to raise, was introduced, they at last found a profitable product such as England wanted, despite the king's fulminations against the noxious weed, and from then on the success of the colony was assured.

By 1625 the settlement held about 1,100 people though over 5,000 had left England to join the colony and the trading company had raised some £200,000, the equivalent of several million dollars today, to finance the enterprise. Yet the company had secured little in the way of profits, its members were unwilling to sink more money in the enterprise, and it faced bankruptcy. Finally, disputes with the king led to the annulment of the charter in 1624 and Virginia then became a crown colony, an outcome destined to be the fate of most of the colonies in the course of time. However, the trading company, even if a financial failure, had served a purpose, for

through its perseverance and the accompanying outlay of money, labor, and human life the colony was kept alive until it became self-supporting.

The Massachusetts Settlements. It was also the London Company that made a grant of land to the Pilgrims, but this proved inoperative for the settlement that they made at Plymouth in 1620 was found to be beyond the limits of Virginia. The group then drew up their own Mayflower Compact to provide a basis for the social control of the settlers. To finance the enterprise a group of merchants subscribed some £7,000 to the shares of a company valued at £10 each and the emigrants were given one share apiece. The produce of the colonists was to be turned into a common pool, and at the end of 7 years the property of the company was to be divided up among all the shareholders. This plan resulted in much the same inefficiency and discontent as in Virginia, and in 1623 a plot of land was temporarily assigned to each family to cultivate for itself. Though the location was far healthier than that at Jamestown and relations with the Indians much better, thus decreasing the proportion of deaths, the little group experienced dire suffering and, when another lot of sixty settlers arrived in 1623, the outlook was most discouraging. However, the more homogeneous character of the group assured greater harmony, and the intense religious zeal and austere moral idealism that had brought these people into the wilderness inspired them with a firm determination to face its hardships and trials in a spirit that was bound to conquer. At Plymouth, as at the later Puritan settlements in New England, this religious idealism was an important factor in the successful founding of the colonies, to say nothing of its profound influence on their later religious, political, and social development. But those who financed the Pilgrims' enterprise only suffered a loss, and in 1627 the colony bought out their interest for £1,800.

The next important settlement was carried out by the Massachusetts Bay Company. In 1628, a group primarily interested in trade and fishing secured a grant of land from the Council for New England; in the following year a royal charter incorporated them as the Massachusetts Bay Company, and a small expedition was sent out to the little settlement at Salem which had been made by those who had abandoned an earlier attempt to establish a fishing post at Gloucester. Subsequently, a group of Nonconformists arranged with the company to migrate, provided the government and control were transferred to Massachusetts. This being agreed to, the Great Emigration began in 1630 during which year some 2,000 colonists went to Massachusetts. The first arrivals, finding the people at Salem in sad straits from sickness and lack of food, decided to settle at Boston, though conditions were so discouraging that over 200 returned to England when the fleet sailed home. After a hard winter, during which many died, new supplies arrived from England and also welcome corn from Virginia.

Thereafter conditions improved and the development of the fisheries, like that of tobacco in Virginia, greatly aided in making the colony self-sustaining. The large migration continued up to about 1640 and the population of Massachusetts Bay, estimated at 4,000 in 1634, had risen to over 16,000 by 1643. The cost of the supplies and transportation plus the personal outlays during this period amounted to nearly £600,000. Thus another colony was firmly established.

Once two or three colonies had become firmly established, the development of other colonies was a much less difficult undertaking. Later comers could learn from the mistakes of the first settlers, and the existing settlements provided a safe base from which new undertakings could be initiated. Thus the first settlements in Rhode Island and Connecticut, made in the decade following 1635, were due to the migration of small groups from Massachusetts; that in Rhode Island led by Roger Williams was made by a group seeking greater political and religious freedom while those who founded the Connecticut River towns from Hartford north sought more fertile land. Separate Puritan groups from England established Saybrook at the mouth of the river, and New Haven. A clear title to the land was not secured until 1662–1663 when Charles II granted the two colonies of Rhode Island and Connecticut, into which the various settlements had been merged, royal charters with provisions so liberal that they continued in use well into the nineteenth century.

The Dutch Settlements. Meanwhile a Dutch trading company was endeavoring to build up another colony. Following Hudson's explorations, the Dutch had established a trading post at New York in 1613 and the next year a grant of land between the 40th and 45th parallels was made to a company which was succeeded by the Dutch West India Company in 1621. It made numerous grants of land to settlers in the region between the Connecticut and the Delaware rivers. In 1626, Manhattan Island was bought from the Indians for $24 and New Amsterdam founded. Starting in 1629 the company, in the effort to attract more settlers, offered large tracts of land, including many feudal rights and known as patroonships, to those who brought over fifty families; yet despite its efforts the population grew very slowly. The company sought to monopolize all trade, and its officials were often incompetent or corrupt while the settlers complained of its restrictions. It finally became bankrupt.

English colonists drove the Dutch from Connecticut, and then in 1655 the Dutch seized a little settlement that a group of Swedes and Finns had established on the lower Delaware in 1638. Finally, in 1664, New Netherland was conquered by the English and Dutch control of this strategic position in the midst of the English colonies was thus eliminated. At this time the population of the colony was around 7,000 and, although agricul-

ture had been developed so that local needs were amply supplied, the colony's trade was based largely on furs obtained from the Indians.

With the conquest of New Netherland, the last of the trading companies instrumental in the establishment of the colonies disappeared. They had played their part in providing the organization and most of the financing that made possible the successful establishment of the first colonies in Virginia, Massachusetts, and New York. But from the point of view of the financial backers of these enterprises they were a failure, and control of the colonies eventually passed to the crown or to the colonists themselves. In the rest of the colonies, except Georgia, the promotion and financing of the early settlements were largely undertaken by individual or group proprietors yet, with a few exceptions, the results obtained were, from a financial point of view, not unlike those of the trading companies.

The Settlements in Proprietary Colonies. The proprietary grants were made by the king, generally to individuals whom he wished to reward or, as in the case of Penn, to whom he was in debt. The holders of such grants, who also received extensive powers of government, hoped to build up great landed estates in some respects similar to the manorial estates of feudal times. Although their chief reliance was upon the income from the rentals or sale of land and a few manorial rights, they expected to profit from the development of trade. The difficulties that they faced in the effort to achieve these ends were similar to those of the trading companies, for before they could obtain any appreciable income from their land, settlers had to be brought over and the resources developed; yet the proprietors generally possessed even less means for financing this than did the trading companies.

In 1623, a grant of the land between the Merrimac and Kennebec rivers together with a monopoly of the fisheries and trade was made to Gorges and Mason who later divided the region, Mason getting New Hampshire and Gorges Maine. Neither proprietor did much to colonize his grant, but small settlements, chiefly devoted to the fisheries and lumbering, were gradually established. Massachusetts laid claim to Maine in 1652 and finally bought out the proprietors in 1677; New Hampshire passed to the crown in 1680. The growth of both colonies was slow and depended chiefly on individual migration from England or the other colonies.

Maryland was granted to Lord Baltimore in 1632, and he also received extensive powers of government and feudal rights. He sought not only to build up a large landed estate but also to provide a refuge for persecuted Catholics. The first settlers arrived in 1634, and each received a grant of 50 acres of land subject to a small annual quitrent charge. The experience of Virginia having shown the way, the settlers quickly developed a successful colony chiefly raising tobacco.

The Duke of York who received the proprietary grant of the region taken from the Dutch sold the portion constituting New Jersey to two proprietors who eventually disposed of it to other groups. Inefficient management and constant disputes with the settlers resulted in New Jersey's becoming a crown colony in 1702. Meanwhile such growth as took place was due more to the influx of independent settlers from England or the other colonies than to efforts of the proprietors. The portion of the proprietary grant that was retained by the Duke of York constituted the province of New York and became a crown colony when the Duke ascended the throne as James II in 1683.

In 1681, Pennsylvania was granted to William Penn who was interested in founding a refuge for the persecuted Quakers as well as in personal gain. Founded at a relatively late date, this colony enjoyed an unprecedentedly rapid growth from the very start, partly by taking advantage of the earlier experience of others but chiefly because the benevolent spirit of Penn led to the adoption of religious toleration, generous land laws, and a degree of political freedom which at once attracted a large influx of settlers. The industry and thrift of the Quaker immigrants and later of the Germans combined with the fertile soil and the relatively wise control of the proprietors soon made this one of the most peaceful and prosperous of the colonies. Together with Delaware, also under the Penns, and Maryland, it remained, with but a brief interruption, under proprietary control until the Revolution, these three being the only proprietary governments not eventually taken over by the crown.

In the Carolinas, except for a few settlers from Virginia, no development took place until after the grant of this region in 1663–1665 to a group of proprietors who laid plans for introducing a landed aristocracy. Charleston was founded in 1670 by settlers coming largely from the Barbados; but the proprietary control proved inefficient and tyrannical, the colony grew very slowly, and finally the government and most of the proprietors' lands were taken over by the crown in 1729.

Georgia was settled under a grant made in 1732 to a group of philanthropists headed by Oglethorpe. It was intended as a colony where those imprisoned for debt and other unfortunates could secure a chance to make a new start in life. A corporation was formed to finance it and Parliament appropriated £10,000 for the purpose. Control was vested in a group of trustees, but their management was inefficient, and in 1751 it also became a crown colony.

The Effects of the Proprietors' Efforts at Settlement. Although the proprietors commonly provided the initiative, the organization, and some of the financing necessary to the earliest settlements in their grants, their activities were usually a minor factor—not infrequently a retarding one—

in the subsequent growth of settlement. Few proprietors succeeded in building up the large landed estates hoped for. It is to be noted that the two most successful, those in Pennsylvania and Maryland, were cases where there was an individual proprietor rather than a group and that he, especially in the case of Pennsylvania, was interested, at least in the earlier years, in something more than the profits to be obtained from the grant and was reasonably tolerant in his attitude toward the settlers. In the cases of group proprietorships, the grantees, seeking only profits, wrangled among themselves and neglected the interests of the settlers till the crown took over control. Under a royal government the provincial assemblies, always interested in attracting settlers, found it distinctly easier to secure measures that would further this end.

It is most important to appreciate the reaction of the efforts of the early trading companies and the later colonial governments as well as those of the proprietors upon the social life and institutions of the colonies. Outside of political or religious rights, the proprietors had little to offer the emigrants but grants of land, for they were land-poor. Yet land was so abundant and the competition of the different groups for settlers so keen that generous grants on fairly easy terms—usually a low quitrent—had to be offered to secure immigrants. This made it impossible for the proprietors to obtain the large returns hoped for from their estates and unwise to try and impose any serious feudal obligations. One result was that only a mere vestige of such feudal customs as still survived in England was transplanted in the colonies. Also, this same competition for settlers put pressure on all groups throughout colonial history to afford the colonists greater political and religious freedom. The liberal conditions in Pennsylvania tended to force concessions elsewhere, though the theocracies of New England might repel immigrants whose religion was disliked. This economic situation, by promoting economic, political, and religious freedom, contributed to the development of the spirit of individualism and liberty.

Other Factors Aiding Migration. Though the activities of trading companies and proprietors were essential in the establishment of the earlier settlements, the ultimate growth of the colonies, as far as it depended upon free immigrants, was due chiefly to the initiative of individuals who came in a steadily increasing stream in the hope of bettering their material condition in the New World. Once settlements had been firmly established, it was not difficult for an immigrant to get a start in the colonies provided the heavy cost of the voyage, perhaps £6 to £10—in those days a large sum—could be met. For one lacking the money this obstacle was overcome by an agreement or indentureship under which he sold his services for a period of years, usually four to seven, to cover the cost of his passage across the ocean. On landing, the shipowner or other person to whom he had given

the indenture sold the right to his services to a colonist and thus secured payment for the passage. As distinct from such an indentured servant, the free-willer or redemptioner was one who was given a chance to indenture himself after his arrival and use the proceeds to pay for his passage. This system, which was used by a great many immigrants, provided another means for financing the oversea migration.

Besides those who emigrated of their own free will a substantial addition to colonial population was made by those who were brought over by force, such as the convicts, felons, and paupers sent over by England or those who were kidnapped, and, far more numerous, the constantly rising import of slaves.

The Relations between the Colonists and the Indians. Before the subsequent growth of colonial population is described, it is important to note the character of the relations between the settlers and the Indians, since this had important consequences, both economic and social, and differed markedly from that in the French and the Spanish colonies.

As previously noted, the civilization brought over by the white man was so infinitely superior to that of the red man that the latter was completely at the mercy of the former. The whites were free to choose: they could live with the natives and try to lift them to a higher plane of civilization; they could in time annihilate them; they could treat them as a separate nation, bargain for or seize their land and trade with them, but generally hold aloof from any close association. The first course was the one most generally followed by the Spaniards and, to a less degree, by the French; the English for the most part chose the last.

Although the early Spanish conquerors almost exterminated the natives in the West Indies through war and slavery, at a later period their attitude toward those on the mainland was much modified, chiefly through the influence of the Church and its missionaries. These servants of the Church labored incessantly not only to Christianize the natives but to protect them, educate them, and instruct them in agriculture and the handicrafts. They were chiefly responsible for such progress in civilization as the natives attained. Also, many Spaniards lived among the natives and married them. The significant consequences are seen today in the survival of the Indian tribes in Latin-American countries and the presence of a large element of mixed bloods in the population. In the colonies of France, a very similar attitude prevailed, but the smaller number of emigrants and the shorter period of control in Canada and Louisiana made the consequences less important.

In the English colonies, on the other hand, very little effort was made to civilize the Indians. Some missionaries went among them and a few Indian schools were established, but practically all the whites lived entirely apart

and had no contact with the natives except to bargain for their furs or their lands. As the white settlements expanded and more land was wanted, the Indians under pressure, often involving war, were forced to give up one portion after another of their hunting grounds. The typical frontiersman's attitude was that the only good Indian was a dead Indian. Finally, in the last quarter of the nineteenth century, having been pushed back far to the West and there surrounded on all sides by the inrush of white settlers, such Indians as remained were enabled to survive only by the nation's adopting them as its wards and by a policy of paternalism that protected

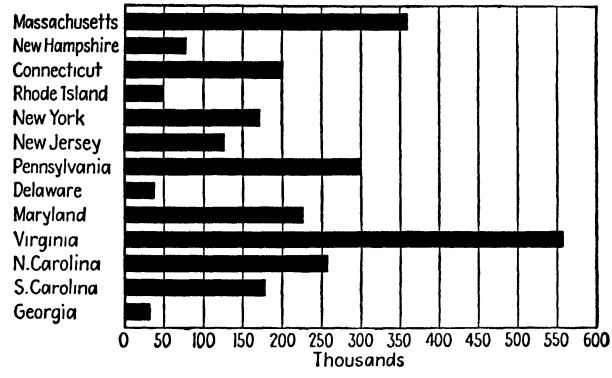


FIG. 4. Estimated population of the colonies, 1775.

them, at least in part, from the avariciousness of the dominant whites. In consequence, the number of pure- or part-blooded Indians in the population today is insignificant—a fact of vital importance in the economic and social history of the country.

The Growth of Population and Immigration. The growth of population in the colonies was a product of two factors: (1) the natural rate of increase determined by the excess of births over deaths, which tended to be relatively high, and (2) the net immigration. The early settlements in Virginia and Massachusetts were the centers that attracted the greater portion of immigrants during the first three-quarters of the seventeenth century. Up to about 1640, the New England colonies enjoyed the most rapid growth, due chiefly to the Puritan exodus from England. At that date there were perhaps 28,000 whites in the colonies, the larger portion in New England and most of the rest in Virginia. By 1660, the number had risen to around 85,000 and by 1700 to some 275,000. It was between these years that the middle colonies began to grow more rapidly, notably Pennsylvania with its influx of Quakers after 1681. From the settlements along the Delaware, colonists spread over southern New Jersey while the northern portion of that province received an influx from New York and southern

New England. In New York the growth was less rapid, owing to the Indians and the restrictive land laws. Maryland and Virginia steadily advanced, immigration being augmented by the indentured servants, paupers, criminals, and slaves. With the filling in of the tidewater section,

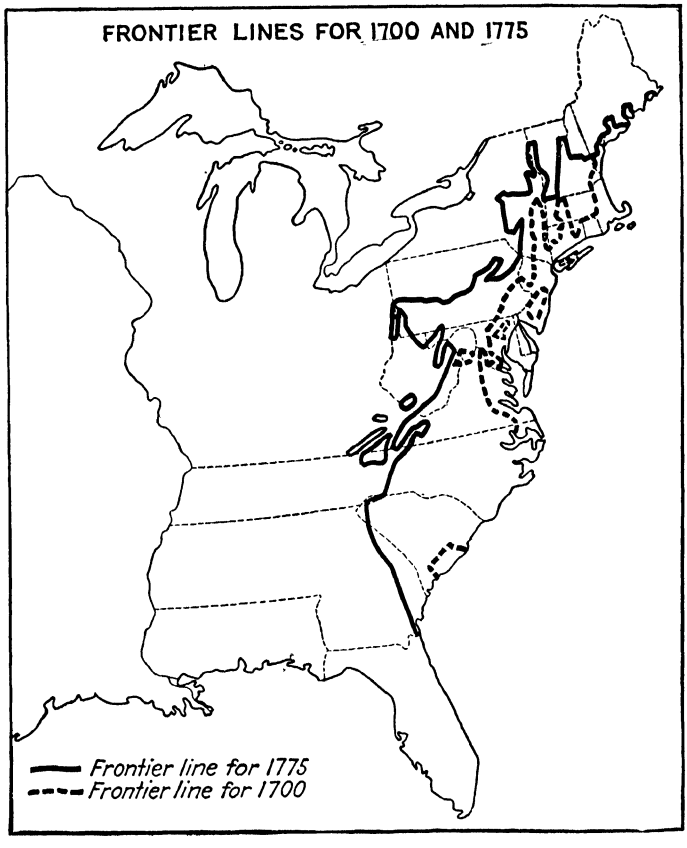


FIG. 5. Line of frontier settlement, 1700 and 1775. (*Based on C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.*)

settlers began to move toward the uplands and into North Carolina. The distant settlement in South Carolina, though receiving some French Huguenots, advanced rather slowly.

By 1700 there was a fairly continuous line of settlements stretching from the Kennebec River in Maine along the coast to New York, then across New Jersey to the Delaware and down both of its banks to its mouth, spreading out over the land adjacent to Chesapeake Bay and southward over the tidewater region of Virginia to Albemarle Sound. Far to the south

was the small colony about Charleston (see the map on page 65). For the most part these settlements were within 50 miles of the coast and, where more distant, they were usually along the river valleys stretching into the interior such as the Connecticut, the Hudson, and the Delaware. Up to this time the stock was almost entirely of English origin. Aside from small groups of Dutch, Germans, Scotch-Irish, French Huguenots, and about 22,000 African Negro slaves, it constituted a racially homogeneous group, largely drawn from the middle and lower classes of England.

During the eighteenth century, the population of the colonies continued to increase at a very rapid rate, rising to totals estimated at about 500,000 in 1720, 900,000 in 1740, and 2,500,000 by 1775. In fact from 1660 up to the Revolution, an increase of around one-third every decade seems to have been very steadily maintained.

During the eighteenth century, the influx of immigrants steadily mounted, and it is to be noted that in this period three groups which had theretofore contributed relatively little to the inflow became much more important: (1) the Scotch-Irish, (2) the Germans, and (3) the Negro slaves.

The Scotch-Irish had their origin in a migration from Scotland to northern Ireland early in the seventeenth century. This group of dour, puritanical Presbyterians settling among the emotional Celtic and Catholic people of Ireland laid the foundations of a discord that has rent that island ever since. At that period, however, this group sought escape from economic and religious repressions imposed by England. Their migration to the colonies first attained importance after 1713. A few settled in New England but most went to the middle colonies, especially to Pennsylvania. They tended to settle on the frontier and then, as the region up to the Alleghenies was filled in, they began to push southward into western Maryland and from the 1730's on were advancing up the valley of the Shenandoah in Virginia and into the uplands of the Carolinas. Still others went direct to the Southern colonies, usually settling on the frontier, which their aggressiveness well fitted them to defend. This influx into the uplands of the South, together with that of the Germans and a smaller group of Quakers, resulted in the region's being settled by small farmers, seldom owning slaves, and of non-Anglican faiths, very different in type, origin, and religion from the planters who dominated the tidewater section, a difference that later led to much dissension.

The greater portion of the Germans seeking to escape religious persecution or the ravages of war came from the Rhine Valley. One group founded New Bern in North Carolina, another settled in the Mohawk Valley in New York, but the greater portion, induced by Penn's agents, went to Pennsylvania, and in the decade following 1717 they arrived in such numbers as to alarm the people, who feared the colony would become a German state. Still the influx continued, many of the later comers pushing

on to settle in the uplands of the South, while in Pennsylvania they came to make up nearly a third of the population. The surviving group known as the "Pennsylvania Dutch" is a result of their clannish tendency. They were peaceful, hard-working, careful, and thrifty farmers, among the most successful in the colonies.

The influx of the third group, the Negro slaves, will be described subsequently. Here it will suffice to note that, although the first slaves were brought to Jamestown by the Dutch in 1619, the number imported was relatively small until about 1700, after which the growth was rapid, averaging about 3,500 a year from 1734 to 1770. By 1775, there were over 500,000 in the colonies, nine-tenths of them in the region south of Pennsylvania. In Virginia they constituted nearly half the population and in South Carolina two-thirds.

Although in general immigrants were not only welcomed but actively sought abroad and a considerable competition to attract them developed between the colonies, there was also opposition to the influx of certain groups. Occasionally religious grounds led to efforts to keep out Catholics or Quakers, but the strongest objection was directed against England's practice of sending over paupers and convicts. Colonial efforts to prevent this accomplished little, and it is estimated that altogether about 50,000 criminals and felons were sent across.

The Natural Increase of Population, Malthus's Law. Meanwhile the natural increase of the population in the colonies was continuing at a high rate. Franklin estimated that there were on an average eight births to a family and that half of these children would live to grow up and have families of their own, though a slightly lower rate of increase seems more probable. Although the birth rate was high, the death rate was also high, especially among married women and children. Near the close of the eighteenth century in Massachusetts the expectation of life at birth was probably just under 35 years, in striking contrast with the figure of around 65 years today.

To understand the nature of the favorable conditions that resulted in such a rapid natural increase of population in the colonies, despite the high death rate, it is essential to refer to the factors emphasized by Robert Malthus as underlying the law of population growth which he formulated in his *Essay* of 1798. The substance of Malthus's law was that population *tends* to increase more rapidly than food supply. This proposition was based on the facts that, although it is physiologically possible to double the population every 25 years, the output of food from the land could not be increased indefinitely at any such rate. Hence, if the potential increase in population continued, sooner or later a point would be reached where the food supply would be insufficient and the further growth of population would be checked by deaths from starvation, or diseases incident to insuffi-

cient nourishment, or wars over food areas. These checks that tend to kill off the population and increase the death rate Malthus called "positive" checks and contrasted them with the preventive checks which included the various factors that tend to limit the size of a family and so decrease the birth rate. Malthus, influenced by the conditions in England of his day, was inclined to believe that the preventive checks would have little effect, though later slightly modifying this view, and that consequently the *tendency* that he emphasized would become an actuality making disease, starvation, and crime the real checks upon population growth.

It is obvious that if this were the case among any group of people it would mean a standard of living that provided barely enough for a family to subsist and reproduce its own number, thus allowing practically nothing above the actual necessities of life. The result would be a wretched existence and a very backward state of civilization, such as has been described as existing among the aboriginal Indians or can be found among primitive tribes or the masses of the people in parts of India, China, and other countries today. It is significant that Malthus wrote to explain the existence of much of the crime, misery, and suffering in the world.

On the other hand, should the people of a country generally choose to try and raise their standard of living and so put into effect the preventive checks tending to limit the size of families, their standard of living, other things equal, would tend to rise above the subsistence level and make possible a higher stage of civilization. Also, in so far as the introduction of more efficient methods of production increases the per capita supply of food and other goods, it makes it possible for a people to choose between using this surplus for raising their standard of living or bringing up larger families or in part for both. It is scarcely possible to overemphasize the economic, political, and social importance of the choice which a people makes in this matter, for in the long run that choice more than any other one thing is likely to determine the rate of progress of a people's civilization.

In the American colonies the conditions were favorable to a rapid increase in population without seriously retarding a rise in the standard of living. Land and varied natural resources were abundant and cheap, while population was sparse and labor was everywhere in demand. Once settlements were firmly established, there was no real pressure of population upon subsistence. Most children, instead of being an economic liability to a family until they are at least sixteen or older, as is the case today, became an economic asset at an early age and were put to work at the numerous household tasks, in the fields, or at some craft; extra hands, even though small, were always welcome, and this doubtless had its effect upon the birth rate. Though wars and Indian massacres took their toll, the high death rate was due chiefly to the backward state of medical knowledge and public hygiene at the time and not to any pressure of population on the food supply. In

fact, such was the prosperity of the colonies, notably during the eighteenth century, that in spite of the rapid growth of population there was also a marked advance in the standard of living.

The Extent of Settlement by 1775. By 1775 a nearly unbroken line of settlements extended along the coast from eastern Maine almost to Florida, and the line of the frontier settlers had been pushed back in all sections north of Georgia well against the barriers of the Appalachian Mountains (see the map on page 65). Nearly all of southern New England was settled and pioneers were moving up the valleys of the Merrimac and Connecticut into central New Hampshire and Vermont. In New York, settlers were largely confined to the southeastern section and the valleys of the Hudson and the Mohawk. From Pennsylvania southward through Virginia settlements extended over the first mountain chain to the main barrier of the Appalachians and a small group had passed over this into southwestern Pennsylvania.

Though much less densely settled than the Northern colonies and, as everywhere, tending to concentrate along the river valleys or the coast, the Carolinas and eastern Georgia had grown very rapidly in the decade before 1775, and in parts settlements had been extended to the Blue Ridge while in North Carolina a few had gone over the mountains to the valley of the Watauga in Tennessee. From this frontier post Daniel Boone and his followers had blazed a trail through Cumberland Gap to central Kentucky where little settlements had started just before the Revolution.

In the region farther to the west there were no settlements except the little groups about the forts and trading posts that had been established by the French, which, as far as those east of the Mississippi were concerned, had passed, along with Canada, into the possession of Great Britain in 1763. These outposts, primarily established for purposes of defense and trade with the Indians, had attracted few settlers, the most numerous group being located in southwestern Illinois. The colony of Louisiana had developed very slowly while under French control, and advance was little faster after it was divided between England and Spain in 1763. By 1775, New Orleans, founded in 1718, had a population of over 3,000 while that of the whole region was over 13,000, around one-half being whites. The few small settlements made in the Floridas while under Spanish control were somewhat increased after the region passed to England by settlers coming chiefly from the English colonies on the Atlantic coast.

Since most of the great body of immigrants during the eighteenth century settled in the middle and Southern colonies, not to mention the imports of slaves, these colonies enjoyed a much more rapid increase in population than did the New England colonies. As a result, by 1775 the total population, excluding slaves, was divided fairly evenly between the three groups of colonies. The Southern colonies including Maryland had a slightly larger

proportion of the whites than the other two, and in addition about nine-tenths of the Negro slaves.

Only an extremely small proportion of the people dwelt in the larger towns or cities, perhaps around 5 per cent; the rest lived in small country towns and villages, much more frequently found in the northern colonies, or scattered through the rural districts. Such cities as developed owed their growth chiefly to trade, the expansion of which required a favorable location on a navigable waterway and a growing population in the tributary hinterland. Although Boston had been the largest city in the colonies up to about 1750, it was later surpassed by both Philadelphia and New York. Just before the Revolution Philadelphia had about 28,000 inhabitants and New York over 21,000; Boston was third with some 15,000. Charleston, the only large city in the South, had around 10,000 and Newport nearly as many, while Baltimore, Salem, Providence, and Albany ranged from 8,000 to 3,000.

Although the eighteenth-century immigration brought in stock somewhat different in origins and characteristics from those of the English who constituted about nine-tenths of the population around 1690, the colonists, except for the Negroes, still remained fairly homogeneous in character and in the main of Anglo-Saxon origin. A recent estimate of the distribution of the white population by national and linguistic stocks as enumerated in the Census of 1790 places the English at 60.9 per cent, the Scotch at 8.3 per cent, the Irish at 9.7 per cent, and the Germans at 8.7 per cent, the small remainder being Dutch, French, Swedes, or unassigned. Presumably the proportions were about the same in 1775.

In religious belief the colonies also had much in common. By far the greater portion belonged to the various Protestant faiths; those representing the Puritan or Calvinistic branches, such as the Congregationalists or Presbyterians, were predominant. In Pennsylvania, the Quakers were most influential, and in the Southern colonies the members of the Anglican Church, though in the upland sections, the Scotch-Irish Presbyterians, the German sects, and the Quakers were most numerous.

The greater portion of the colonists was made up of a mentally alert, ambitious, aggressive, and democratically inclined group. Their idealism helped them to face the hardships of a pioneering life and to attack the tasks incident to the development of the country's resources with unbounded energy, perseverance, and a spirit of great optimism; all of which, together with the thrift and austere living prevalent among many, contributed in no small measure to the economic upbuilding of the colonies. Although such traits are not to be valued primarily in economic terms, their significance in the material advancement of a nation must not be forgotten.

Chapter V

AGRICULTURE AND OTHER EXTRACTIVE INDUSTRIES IN THE COLONIES

Introduction. In a country that is being newly opened up certain of the various extractive industries, such as agriculture, mining, lumbering, hunting, or fishing, are fairly certain to become the dominant economic activities. The ever-present need for food will lead to the development of agriculture, hunting, and fishing if these resources are available and the products are relatively cheaper than those which can be imported. It is also likely that the products of the extractive industries of a new region will be those for which the demand of older regions is the strongest and hence will be the most profitable exports. The colonies were no exception to this general rule. Agriculture was far and away the most important pursuit and probably nine-tenths of the people were chiefly dependent upon it for their living. Next in rank and fairly widespread, though far less important, were lumbering and the related industries. Fishing on a commercial basis was chiefly confined to New England. Mining was but slightly developed and mostly confined to iron mining. Hunting for the sake of furs was left largely to the Indians, while that for food was chiefly for the hunter's own needs.

Though farming on a larger or smaller scale was the chief pursuit of most of the people, it must also be noted that, unlike the usual practice today, many of these farmers were also engaged in other lines of economic activity. An appreciable quantity of manufactures might be turned out by the farmer's household, particularly during the winter months when farm work required less time; lumbering, fishing, and hunting were often side lines of production and not infrequently the running of a country store or even a professional pursuit. Also, unlike what is usual today, a relatively large proportion of what was produced on the farm was consumed there or at least in the vicinity; even the Southern plantations, which were the outstanding exception, produced a substantial proportion of the things they required. This situation, which was a product of all the conditions that tended to limit specialization or division of labor and maintain a household economy, must be borne in mind as an outstanding characteristic of the economic life of the colonies.

The Disposal and Tenure of Land in the Colonies. The system of land tenure in the colonies was copied from that prevailing in England at

the time and so reflected the surviving feudal forms. By colonial times the feudal obligations had been generally commuted to the payment of a quitrent and land was commonly held in what was known as free and common socage or fee simple, under which it was heritable and the holder had the right to dispose of it subject to the rent payment. This form of holding was generally adopted in the colonies, though in the corporate colonies, as distinct from the proprietary or crown colonies, no quitrent was paid. The obligation of the proprietors to their overlord the king was met by a nominal token payment.

Although some proprietors imposed feudal obligations other than the quitrent, such as escheat fines on alienation of the land or the requirement that grain be ground at the lord's mill, the quitrent was by far the most valuable, and usually the only, feudal due, and it therefore was the chief cause of disputes. The quitrent varied considerably but was usually between ¼*d.* and 1*d.* an acre, so low that it was never a heavy burden except for holders of large tracts of unused land. When the government of a proprietary colony passed to the crown, as it usually did, the land rights also passed in most cases, parts of New Jersey and North Carolina being the chief exceptions.

The constant disputes and the expense of collection resulted in but little net revenue being obtained from the quitrents. In New Hampshire and New Jersey the proprietors secured almost nothing and in New York and Carolina very little. In Virginia and Pennsylvania the returns were better, while in Maryland they may have amounted to £5,000 a year. Professor Bond estimates that the total of quitrent rolls in both crown and proprietary colonies just before the Revolution was £37,500 but that the actual collections averaged only about £19,000 a year.

The methods by which land was disposed of varied considerably in the different colonies, being influenced by the form of government, the type of settlement, and the character of the agriculture that prevailed. In the New England colonies, where small farms and settlement by groups were customary, the land was usually granted in townships to groups of individuals who settled in little villages, though in the eighteenth century, when speculative activities developed, such grants or sales were increasingly made to groups that planned to sell rather than to settle on their land. The land so received was divided into sections; a portion was kept for pasture, meadow, or woodland as the common land of the town and the rest apportioned as farms and town lots among the grantees. Later settlers or somebody who performed some important service such as the erection of a grist mill might be given a grant and in time practically all of the common land was divided up. Under this system of town grants and village settlement the township became the important unit of local government.

In the middle colonies the grants or sales of land were usually made direct to single individuals rather than as townships to a group. Though there was some tendency for settlers to gather together in one locality, this was much less marked than in New England. Most holdings were small, the chief exception being in New York along the Hudson where, besides the Dutch patroonships, there had been numerous large grants to single individuals under the English regime. Commonly the county became the most important unit of local government, though in some sections the smaller township unit was developed to carry on many functions.

In the tidewater region of the colonies from Maryland southward, a distinctly different type of landholding and settlement prevailed. Though small holdings were frequent, the large plantation was the dominant type and the population tended to become widely dispersed so that few towns developed and the county became the important unit of local government. The acquisition of great estates was facilitated not only by large grants to individuals but also by the more general use here of the system of headrights under which a person bringing over a settler was entitled to a grant of land, usually 50 acres a head, subject to the customary quitrent. The abuses that developed in connection with this system led Virginia to give it up in 1705 and sell the land outright. It was also customary to give 50 acres to those who migrated at their own expense, while indentured servants sometimes received a like grant on the expiration of their term of service. In time the practice of selling tracts of 50 or 100 acres for a fee of 5 to 10*s.* became more common, and this appears to have been the method in vogue among the settlers who poured into the upland region of the South during the eighteenth century and generally engaged in farming on a small scale.

The perpetuation of landed estates intact was promoted by the two customs of primogeniture and entail adopted from England. Under the practice of primogeniture the eldest son inherited all of a landed estate, but in certain of the colonies, such as Pennsylvania or the New England colonies, this being considered undemocratic, the eldest son was limited to a double share. The practice of entailing a landed estate by will was intended to ensure its being handed down in the family intact for at least a specified period of time and was found in New York, Pennsylvania, and the Southern colonies.

Generally speaking, the acquisition of land by settlers in the colonies was easy and inexpensive, notably as compared with Europe. Much was given away both in large and in small tracts, though this practice became less common in the course of the eighteenth century. Also there was always the possibility of squatting on land along the frontier beyond effective legal control, and not infrequently the squatter eventually secured a title without payment. Where land was sold or leased, the widespread competi-

tion to attract settlers tended to make the terms relatively easy. This explains the failure to develop feudal terms of tenure with more success. It was easy access to land that attracted most immigrants; it was of the greatest influence in tending to promote economic democracy as well as greater religious and political freedom and a spirit of liberty.

The Agriculture of the Colonies. The overwhelmingly predominant position attained by agriculture in the economic life and development of the colonies was largely due to two causes. (1) In so far as transportation or other difficulties made it impossible or economically undesirable to obtain food and raw materials by trade from elsewhere, any group was obliged to meet these needs, so far as the natural resources made it possible, by recourse to farming and the other extractive industries. It was the widespread prevalence of conditions tending to limit trade that was responsible for the relatively high degree of economic self-sufficiency that existed in most families and localities. (2) On the other hand, in so far as trade with other regions was economically possible so that some specialization in production was advantageous, it was generally found most profitable to specialize in the products of the extractive industries and chiefly in those of agriculture. This is in accordance with the law of comparative cost, which holds that where trade is carried on between different regions or countries each will tend to specialize in the production of those commodities in which, under the existing economic conditions, it has the greatest relative advantage—the same principle that underlies all specialization and division of labor. It was the cheapness of their natural resources that gave the colonies their greatest relative advantage in the extractive industries and made agricultural products predominant in their export trade.

In the seventeenth century, when most people still lived within easy reach of water transportation, agriculture was pursued to get food since supplies from elsewhere were too uncertain. But it soon became evident after a period of experimentation, not only that it would be cheaper to raise most of their own food but that in general the products of the soil were those which would afford the greatest profit in trade with other regions. In the eighteenth century the expansion of foreign markets furthered the tendency of those favorably located to specialize along these lines, while the spread of population into the interior where cheap transport was less available made agriculture a necessity in such regions. Even those extensively engaged in lumbering or fishing were apt to depend on farming as an important, if not the chief, means of support. It may be surmised that agriculture was the main pursuit of nearly 90 per cent of the population even up to the end of the colonial period.

The Chief Agricultural Products. At the start, much experimentation had to be done to learn what products the colonies were physically and

economically best fitted to raise. The Indians were important in showing the colonists how to raise corn, tobacco, and a few vegetables. But the earlier reports sent back to Europe had led people to expect that the colonies could produce a great variety of semitropical products, such as sugar, silk, coffee, wine, and olives, which, because of mercantilist objectives, were particularly desired by England. In consequence, from an early period much attention was given to efforts to raise such products and these efforts, strengthened by subsidies of varying form, were continued throughout the colonial period.

Even in New England they tried to raise cotton, olives, and coffee, while vinedressers were brought over and bounties offered in the hope of stimulating the cultivation of grapes, all without enduring results. The importance of silk culture was constantly emphasized, and efforts to introduce it were made from New England to Georgia. In Virginia and Georgia laws were passed requiring the planting of mulberry trees, and as early as 1655 the Governor of Virginia succeeded in producing 400 pounds of silk; in Georgia under the stimulus of a bounty the output rose to some 20,000 pounds in 1760. Hemp was another product that England desired, but in spite of the bounty that she offered little was raised. In the case of indigo, on the other hand, greater success was attained. It was introduced into South Carolina in 1741, and, aided by bounties, the output rapidly rose so that by the Revolution 700,000 pounds were being exported. In after years, with the loss of the bounty and other adverse developments, even this crop practically disappeared. Very little cotton was raised in the colonial period nearly all of which was for home use; in fact some was imported.

In some sections the failure of these experiments was due to the unsuitable conditions of soil and climate, and the futility of trying to raise such products was soon recognized. In other cases where it was physically possible to raise these products, it was found economically unprofitable to do so. The latter situation was the product of all the conditions that tended to make other products more profitable. Generally speaking, the more profitable products were those for which the natural environment was favorable and in the raising of which a relatively small amount of labor was required, since otherwise the relatively high cost of labor might more than offset any natural advantages. In fact most of the bounties or other stimuli to production were granted in the case of products that needed a large amount of labor.

It did not take long for the colonists to find out most of the products which, under the existing economic conditions, it was most profitable to raise. In New England, with a thin covering of glacial drift, the soil, though enduring, was less fertile than elsewhere and corn became the most im-

portant crop. Wheat, though grown from an early date, proved an uncertain crop, and only a relatively small amount of oats was raised. Among the vegetables the squash, pumpkin, turnip, and numerous garden products were grown; the white potato, though indigenous to America, does not seem to have been raised until it was brought back from Ireland early in the eighteenth century.

The middle colonies, as regards both climate and soil, more nearly corresponded to the conditions existing in England. Wheat was the most important cereal crop, but corn was raised in abundance along with smaller amounts of oats, barley, rye, and buckwheat. The climate made possible a greater variety of vegetables and fruits than in New England.

The tidewater sections of the Southern colonies were notable for the extent to which they concentrated on a few staples raised for sale, though they also produced most of the food required for their own needs. In Maryland and Virginia, tobacco became the great staple and dominated their agriculture throughout the colonial period. Corn was also widely raised and later, as settlers poured into the upland districts, wheat became an important crop. In South Carolina and Georgia, rice, successfully introduced about 1700, became the dominant staple; indigo, with the aid of a bounty, came in after 1741. Corn and, in the uplands, wheat were raised along with garden vegetables, including the sweet potato and melons.

A variety of fruits was cultivated in all the colonies, though outside of the middle colonies few farmers gave them much attention. The apple was the most common and successful fruit, particularly in the North, and the cider obtained from it was very extensively consumed. Cherries, peaches, and plums were frequently found where the climate was suitable, and the gardens often included strawberries and raspberries, while in the rural districts the wild growth provided a substantial supply. Many families cultivated a patch of flax to eke out their needs for making linen cloth, and the seed came to be exported in considerable quantities to Ireland or else was used to obtain oil.

For livestock the colonies had to depend originally on what was brought over from Europe. Hogs and cattle were by far the most important, though poultry were kept practically everywhere. The swine throve on the feed available in the woods, and pork was the chief meat consumed. The cattle supplied beef and dairy products while oxen were employed for the heavier draft work about the farms. As the upcountry in the South became settled, a form of ranch cattle industry arose through the establishment of "cow pens," the grown cattle being driven to the seaboard markets such as Philadelphia or Baltimore. Colonial horses were relatively light in weight, the heavy draft horse being almost unknown, and they were chiefly used for traveling or light farm work though a few were bred for racing. Sheep

were much less frequently raised, and their wool was the main objective as the prevalent breeds did not produce the best mutton. They suffered especially from attacks by the wolves, and the largest flocks were commonly found on islands and peninsulas along the coast from Massachusetts to Virginia where protection was easiest.

Technological Methods. The prevailing methods of carrying on farming operations were almost primitive in their simplicity, but it must be remembered that the methods in vogue in most of Europe when the colonies were being founded had undergone little change for centuries. Though England, learning much from Holland, was making rapid advances in her agricultural methods during the eighteenth century, very little of this was taken over in the colonies. The tools used were generally heavy and cumbersome. The awkward plow, commonly made of wood except for an iron tip, might require two or three oxen to pull it. Grain was cut with a hand sickle and threshed with a wooden flail or trod out by animals, much as in Biblical times. For transportation, where horseback would not suffice, heavy two-wheeled oxcarts were used or, when snow was available, sledges.

Clearing the land for cultivation was one of the most difficult tasks confronting the pioneer in any section, for practically all the region was well forested. Many New England towns were located on high ground rather than in the more fertile river valleys because the forest growth was less dense there. The quickest way was to clear out the underbrush and then girdle the trees, leaving them standing till they died, when crops were planted between the trunks. Even after the trunks were cut down or rotted away, the stumps might be left for many years; sometimes, if not burned out, they were dug up and used for fences. Stones were piled up in the fields or used for fences, but fences of any sort were built only when there was no other way of protecting crops and gardens from the livestock. In small villages they were likely to hire a person to watch the herds instead.

Little effort was made to maintain the fertility of the land, either through the use of fertilizer or the proper rotation of crops. Although crops were sometimes changed or the land allowed to lie fallow, root crops to restore the nitrogen were seldom employed except for some rather late use of clover. Land was cheap and, when it became exhausted, was very likely to be abandoned and new land put under cultivation, especially in the South. Scarcely more care was given to the livestock than to the land. For the most part they were turned loose to range through the woodlands or pastures and, after the crops had been gathered, allowed to graze on the stubble. Adequate winter feed was seldom provided; some hay was gathered, but the stock was rarely given enough grain to fatten them properly or to keep the draft animals in good shape. The practice of letting the stock graze in common herds in the pastures not only resulted in the loss of

manure but also prevented effective efforts to improve the breeds, and little was done to import better grades.

To Europeans, accustomed to a much more intensive type of agriculture using relatively more labor and capital on a given area of land, colonial methods appeared incredibly careless and wasteful. Undoubtedly waste did exist, yet the scarcity of labor and capital combined with the abundance of land in the colonies made extensive methods of cultivation much more economical than would have been the case in Europe and explains many of the prevailing practices.

The Organization of Agriculture. The outstanding characteristic of the typical colonial farm was that the greater portion of the products raised was for the family's own consumption. This relatively self-sufficing economy meant that most farmers raised a considerable variety of products, in short engaged in general farming, often in many side activities as well, and that commercial agriculture, that is, raising crops chiefly for sale in the markets, played a relatively small part in the farm organization in most sections. This generalized statement applies with varying degrees of accuracy to different regions. It is most widely applicable to the farmers of the whole frontier line; it is fairly applicable to most New England farmers; somewhat less so to those of the middle colonies who raised a considerable amount of grain and livestock for the market; and least applicable to the large plantation owners of the tidewater South growing the great staples tobacco, rice, and indigo. Farmers near the larger settlements tended to produce more for sale in the local markets. But practically every farmer planned to have some cash crops, even if small, that would serve to pay for such necessities as he himself could not produce.

For labor as well as for most goods, the typical farm household was a self-sufficing group; the labor used was generally limited to that available in the family. This was the usual situation in New England and throughout the frontier sections in all the colonies as well as among the small farmers who made up the bulk of the rural population everywhere. On the Southern plantations, however, the problem of securing an adequate supply of labor was always pressing and when, toward the last of the seventeenth century, the number of indentured servants proved insufficient, there followed a rapid increase in the use of slaves on the tobacco plantations. The later introduction of rice and indigo was dependent largely on Negro slaves, since the conditions of work were especially trying for white labor. North of Maryland few slaves were employed on the farms as they were not well suited to the type of crops raised. In the middle colonies, indentured servants continued to supply such additional labor as the farmer needed, but they usually became independent farmers as soon as their term of service expired.

With land cheap if not free and the outlay required for farm equipment relatively small, the typical farmer's problem of financing was reduced to a minimum. If his funds were insufficient, he was compelled, in the absence of commercial banks, to fall back upon loans from private individuals. The greater capital needs of the Southern planters, who often ran heavily into debt, were met through credit extended by the English merchants who sold their crops and bought their European supplies. These English debts around 1775 in Virginia alone were estimated by Jefferson at £2,000,000.

For the farmer who did not concentrate on raising some staple for the market, the economic problems faced were relatively simple. What was going on in the rest of the world reacted only slightly upon him; he had little reason to be concerned about hired help or financing or market prices and marketing methods. His problem was mainly that of determining what the family needed and then planning how to use the resources at his command to produce the things necessary to supply those needs in the most efficient manner. This was in marked contrast with the situation that confronts most farmers today.

Other Extractive Industries: Lumbering. After agriculture, lumbering was the extractive industry most widely pursued in the colonies. In those days, when iron, steel, and coal were so little used, wood was in even more universal use than today. Moreover, the land being thickly forested, this raw material was more than abundant and the farmer was only too glad if he could find some use for the trees he had to clear from his land. Both hard- and soft-woods were available nearly everywhere, and the products obtained from them supplied innumerable needs in the colonies and also found a large export market.

In one way or another much the greater portion of the farming population of colonial times was to some extent engaged in lumbering, if only to supply the family needs. The wood lot provided all the fuel; it provided the material out of which the log cabin was built and might provide the lumber, prepared at the local sawmill, out of which a frame house was constructed, not to mention that employed to make furniture, various household utensils, and farm equipment. Lumbering was one of the by-products of general farming and could always be turned to during the winter months when more time was available and, if snow covered the ground, hauling was easier. If a near-by stream existed, logs were cut to be floated down and sold at a more distant market. Trees were burned to make potash and pearlash, which, being easily transported and enjoying an excellent export market, provided a valuable cash product.

There were also groups that may be said to have specialized in the forest industries and whose products entered extensively into trade. In the Northern colonies, especially New England, these were engaged in cutting the

timber used to build ships and to provide the masts needed by the royal navy or that required for buildings in the West Indies or to make the casks in which the products of those islands or of southern Europe were shipped. In the Southern colonies the pine forests, especially those in North Carolina, were used to produce naval stores, tar, turpentine, and rosin, while cypress and cedar furnished shingles which were also exported in large quantities. In all the colonies the fuel needs of the larger towns and cities provided a growing market for cordwood.

The Fisheries. After lumbering, the most important extractive industry was the fisheries. In the case of New England this proved a very valuable asset for, with the exception of forest products, that section produced relatively little that found a ready market outside of the colonies. The fisheries of the North Atlantic coast were among the best in the world, supplying mackerel, hake, pollock, herring, and whales; but most important of all was the cod. In fact, the fisheries were the first resource of the region to be extensively used by Europeans, for French, Spanish, and English fishermen had been regularly resorting to the Newfoundland banks for a century before permanent settlements were established in New England; most of the temporary settlements previously made were offshoots of this industry.

The colonists from Massachusetts northward almost immediately began to develop the fisheries, chiefly along the New England coast, though by the last quarter of the seventeenth century they were also operating off Newfoundland, in competition with the English and French, whom they also began to provide with various supplies. Before the middle of the century, they had a surplus which was being shipped to the rapidly growing market in the West Indies and helped to provide a means of payment for much-needed imports. The whale fishery was slower to develop but had become fairly well established by the end of the century. During the eighteenth century the growing scarcity of whales led to much longer voyages into the Arctic and later the Antarctic seas, and by the Revolution over 300 vessels were engaged in this pursuit, Nantucket Island and New Bedford being the chief home ports. The main products of the whale, oil and spermaceti, were in universal demand at a period when oil and candles furnished the chief means of illumination and the fashions of the day created an excellent market for whalebone.

Although little was done during the colonial period by the settlers south of New England to develop the neighboring fisheries, except to supply local needs, the New England colonies continued an aggressive expansion of their fisheries during the eighteenth century, except as interrupted by war. The French fishery was greatly reduced after 1763 when England secured the remaining French possessions, excepting two small fishing islands, and by the decade preceding 1775 it was estimated that New England had 665

vessels and 4,400 men engaged in the fisheries and that their annual yield was worth nearly 2 million dollars.

Besides supplying domestic needs and providing a very important export, the expansion of the North Atlantic fisheries made a vital contribution to the economic development of New England in several other ways. These fisheries provided an expanding market for various New England products such as provisions and rum and for the operation of New England merchants. The transport of the fish to foreign markets, the best grades being sent to the Catholic countries of southern Europe and the poorest to the West Indies to feed the slaves, gave rise to a valuable carrying trade estimated to employ some 350 vessels by 1770. Finally, the vessels required for this, together with those directly employed in fishing, stimulated the shipbuilding industry and developed a large body of trained seamen, things that were also of importance when the country later found need for a navy.

Wild Game. In the interior regions, in addition to the fish chiefly caught for household or local consumption, there was an abundance of wild game which was sought by the hunters and trappers, deer, bears, wild turkey, and beavers being the most important. The first three furnished meat for local use, while deerskins were an important element in the clothing of frontiersmen and also had a good export market. The furs, notably that of the beaver which was used to make hats, were the most important product of these animals and, outside of deerskins, the only one that entered extensively into trade. In the slack winter months, farmers of the back country often diverted some of their time to hunting and trapping; a small group among the frontiersmen made this their main pursuit and they were the leaders in exploring the western country.

As settlements advanced into the interior, the available supply of fur-bearing animals was rapidly depleted, and still more dependence had to be placed upon the furs obtained through trade with the Indians. New York took the lead in this fur trade, since the Iroquois of that region were more friendly to the English than were the other tribes. During the eighteenth century even this source of supply was declining and, increasingly up to the acquisition of Canada in 1763, the fur trade passed into the hands of the French as supplies had to be obtained from beyond the Alleghenies where their frontier trading posts were dominant. The fur trade of the Southern colonies, which developed rather late, was chiefly in deerskins.

Mining and Related Extractive Industries. Except for iron, the colonists made little use of the mineral resources of the region. A very small amount of copper was mined, and lead was secured near the small settlements on the upper Mississippi. Despite knowledge of the existence of coal in various localities, almost nothing was done to open up mines and most of the small amount used, chiefly for heating in the Northern cities,

was imported from England or Nova Scotia. These imports provided most of the total consumption which probably never exceeded 9,000 tons a year before 1775. The slight domestic output was obtained mostly from just above Richmond in Virginia whence small shipments were regularly made after 1758. Occasionally elsewhere, local supplies were used in iron forges.

The iron resources began to be developed almost from the start. The Virginia Company in 1621 sank some £4,000 in a plant which was soon destroyed by the Indians, thus ending all projects in that colony till the next century. The first successful attempt to make iron was started at Lynn, Mass., in 1643 where a furnace and forge were built for about $5,000 with a capacity of some 8 tons a week. The chief ore used here, as in most of the other furnaces that sprang up along the coast from Massachusetts to New Jersey, was bog ore. It was cast into hollow ware such as pots and kettles or into pigs later forged into bars and other shapes. Later, rock ores derived from the hill regions from Connecticut south to Virginia were developed and made possible the growth of a considerable industry in the course of the eighteenth century.

Clay suitable for brickmaking was found in many localities, but brick was not extensively used except for the more substantial buildings and better dwellings, chiefly in the seaport cities when the near-by timber supply grew scarce or the city ordinances required it. Clays suitable for pottery were also used and in some places, where the proper sand and lime were found, glass was made. The quarrying of stone for building purposes was seldom undertaken, but some stone suitable for grist mills was used.

Chapter VI

MANUFACTURING INDUSTRIES IN THE COLONIES

Introduction. Under the term "manufacturing," though no sharp line of division can be drawn, are included those industries engaged in turning the crude products of the extractive industries into more highly finished products regardless of whether this is carried on in the household, in the shop of the craftsman, or in a plant or factory. In manufacturing, just as in the extractive industries, conditions in the colonies were such that few individuals devoted themselves exclusively to this activity. Much manufacturing was carried on by individuals along with various other lines of work, chiefly the extractive industries; only in the larger towns and cities was it likely to be the sole means of earning a livelihood. Thus there was no such large specialized group engaged in manufacturing as exists today.

This outcome was also due in part to a second outstanding characteristic of colonial manufacturing: it was relatively backward in its development; the colonies depended far more on imports of manufactures from other countries than on imports of any other general class of goods and their exports of such goods were relatively small. This weakness and the consequent lack of a well-rounded and balanced economy was an important factor in the economic life of the colonies, and it is essential to understand the reasons for it.

The main causes determining the growth or lack of growth of manufacturing, as of other economic activities, may be classified in two general groups, though the line between them is not always clear: (1) the underlying economic conditions, which are commonly by far the most important, and (2) what may be called the more artificial conditions, such as legislation or other social action, immediately designed to stimulate or retard growth. These two groups of factors will be considered in the order named, and the way in which they reacted upon specific branches of manufacturing will be noted later.

Underlying Economic Conditions Determining the Growth of Manufactures. Unlike the extractive industries, which of course have to be carried on, if at all, where the natural resource used is available, the location of manufacturing industries is seldom so predetermined by any one factor as to necessitate that the other factors of production be brought

to it and so is commonly open to a wider range of choice as regards location. Certain manufactured products because of their nature have to be produced at or very close to the locality where they are consumed, but ordinarily the main factor setting limits to the area within which such products can be economically produced for sale in any given market is the cost of transportation. If the costs of transportation including other related charges are relatively small, this area may be nation-wide or even world-wide; if they are relatively great, the area will be much more limited. Within this area the industries supplying the market will tend to be located, assuming no artificial restrictions, where there is the greatest advantage in the comparative costs of production, including the costs connected with transportation to the market. As with all lines of economic specialization, the law of comparative costs is basic in determining where and by whom goods will tend to be produced.

In manufacturing, as in any other field of economic activity, the basic elements determining cost are the costs of the four factors of production—natural resources, labor, capital, and business management—though the efficiency with which they are combined in the process of production is also important and must be considered as an element in determining the costs of each. Obviously a low cost of any one or more of these factors of production in a given locality will tend to give that locality an advantage in comparative costs over other localities where the cost is higher. Since manufactured products, like all others, vary greatly in the proportion of the different factors of production which is required to make them, the most important thing in determining an advantage in comparative cost will be a low cost of those factors which make up the greater portion of the total cost. A low cost of such a factor may easily more than offset a high cost of less important factors and so give an advantage in comparative cost.

It is a very broad generalization, the applicability of which will vary greatly as among different goods, that the cost of labor and of capital will tend to make up a rather larger proportion of the total cost of manufactured products than of the cost of products in the extractive industries. To the extent to which such a condition exists, it means that a low cost of these factors would be particularly important in determining whether any locality enjoyed a comparative advantage in producing manufactured goods. The character of manufacturing in colonial times, however, differed so much from that of today that this broad generalization needs to be somewhat modified to apply to the conditions of that period. In those days the relatively slight use of extensive plant and machinery in manufacturing made capital a less important factor and conversely tended to make labor a much more important factor than is the case today. In consequence, a low labor cost was more essential to the successful development of manufactur-

ing and a low cost of capital less so than would be the case in modern times.

Closely related to this characteristic of colonial manufacturing was another, also in marked contrast to present-day conditions—the most efficient scale of production under the existing conditions could be attained by a concern of relatively small size. Today where manufacturing is carried on with extensive use of machinery, giving more scope to the operation of the law of decreasing costs, it is cheaper to turn out goods on a large scale; though of course this will not be done unless there is also an accessible market sufficiently large to absorb the output. In colonial times, since it was not necessary to produce on a large scale to obtain a low cost for the output, it was consequently not necessary for the success of a concern to have access to a large market. This was one factor of a group, among which high transportation costs was especially important, that made for decentralization and a wide dispersion of plants in numerous lines of manufacturing.

Economic Conditions in the Colonies as They Affected the Growth of Manufactures. The basic economic conditions in the colonies, as compared with those in the countries of Europe from which most manufactured goods could be imported, were the comparatively high cost of labor and of capital and the low cost of such natural resources as they possessed. We may also surmise that the factor business management was relatively a little more costly in the colonies, owing to lack of a large group of experienced entrepreneurs; but the problems of organizing and directing the simple processes and small output that prevailed at that time were relatively easy and the cost of management was a very slight element in total cost. Thus the basic economic conditions in the colonies were, generally speaking, unfavorable to the development of lines of manufacturing turning out products that could be imported from Europe. Yet, as will be explained later, there were possible combinations of conditions which were favorable to the growth of certain types of manufacturing.

By far the most serious obstacle among these basic conditions was the high cost of labor. Even today this is apt to be true in the case of any line of products requiring a relatively large amount of labor for its production, and in colonial times, when so little laborsaving machinery was employed, it was a far more important factor. It has been estimated that unskilled laborers in the colonies were paid wages about one-fourth higher than in England and those of skilled artisans were often one-half higher. Unless paid by the piece, the labor cost of a product depends upon the skill and efficiency of the worker as well as upon his wage rate. Commonly colonial labor, especially skilled labor, was less efficient than in England, and so labor costs there were likely to be still higher than is indicated by the

difference in wage rates. It has been estimated that in the case of skilled labor it was twice as high.

Although we may conclude that the high cost of labor, particularly of skilled labor, was the most important single factor tending to check the growth of colonial manufactures, there were various combinations of conditions which might more than offset this disadvantage. The most important type of such a case was those lines of manufacturing where the labor cost made up a small proportion and natural resources, such as raw materials or water power, a relatively large proportion of the total cost, as in the case of the cruder and less highly finished products. Under these conditions, the colonial advantage in the low cost of natural resources might be sufficient to offset the disadvantage in high labor cost. Usually this was the situation in such lines of manufactures as the colonies were successful in selling in export markets.

Another fairly common type of case, but resting on an entirely different economic basis, is found in many household manufactures. Where a family was primarily engaged in farming, the work, being seasonal in character, did not occupy all the man's time throughout the year; nor did the regular household duties together with such work as they did in the fields require all the time of the women. Thus idleness and a loss of potential earnings arising from the time that might be devoted to productive work faced them. Since idleness, except on the Sabbath, was severely frowned upon, such time as was thus available was usually directed toward some useful line of work. Hence the members of the household turned to the manufacture of such products as their skills and the available raw materials made possible, and these products might be turned out in a quantity greater than was needed to supply the household wants if there was any market for them. As the time employed in this production would otherwise have been lost, economically speaking, in idleness, the family looked upon the labor involved as costing them practically nothing.

Under these conditions, the colonial household found it more economical to manufacture products which might have been imported, and which it would have been cheaper to import, had the family been obliged to reckon the labor required as a part of the costs of production. Commodities produced under such conditions, where one or more of the factors of production can be reckoned as costing little or nothing because most of the cost can be charged against some other more important commodity produced in connection therewith, are known as "joint-products" or "by-products." In many lines of industry this is an important factor in their location and growth; in colonial times numerous other pursuits as well as household manufacturing were made possible because they were by-products of farming.

As previously indicated, the total of all costs involved in sending goods from the place of their production to the place of their consumption is a vital factor in determining the extent of the area where production for any given market tends to be located; this cost set limits to geographical specialization or division of labor. In colonial times these costs were relatively high, and consequently they greatly limited the area of the market and the advantages to be gained from specialization. Numerous conditions affecting the marketing process contributed to this high cost, but the most important was the high cost of transportation. Overland transport was especially costly, and wherever possible waterways were used instead. It is said to have cost more to carry a ton of iron 70 miles overland from Lancaster, Pa., to Philadelphia than to carry it across the ocean from England. Bulky commodities could seldom stand the cost of overland transport for any appreciable distance, and most of the great staple products of the colonies were bulky in character. In those days any inland town or region lacking water transport facilities was at a far greater disadvantage for carrying on trade than would be the case today. For the same reason such a region was likely to have to raise or manufacture the more bulky commodities itself if they were to be obtained at all. This was the chief cause for the widespread dispersion of certain lines of colonial manufactures. Conversely, a locality possessing cheap water transport to other colonial or foreign markets had a greater chance to develop any line of manufacturing for which the other economic conditions provided a comparative advantage to the locality.

In addition to the obstacle of high transportation cost, the colonial market was limited by the sparsity of population and the low purchasing power of the people as well as by all the other conditions that prevented the growth of a well-ordered marketing organization, among which were the difficulties of communication and a poor monetary and credit system which put obstacles in the way of the financial arrangements necessary in the sale of goods.

Although this situation was typical of the colonial period as a whole, the developments that took place during that period tended to widen the markets for many colonial manufactures. Thus the growth of population and the rising wealth of the people increased the demand for goods; the same conditions in the rapidly growing West Indies expanded the market for various exports. Also, such improvements as took place in the means for transportation or communication and other facilities for exchange helped to lessen the obstacles that limited the market.

Artificial Aids to, or Restrictions on, Colonial Manufactures. The preceding account of the underlying economic conditions affecting the growth of manufacturing in the colonies will largely explain the character

of the measures adopted in the effort to stimulate various industries, since such measures were devised so as to lessen or overcome the obstacles that tended to check that growth. The measures included (1) those originating in action on the part of the different colonies and (2) those emanating from Great Britain.

Practically all the measures originating in the colonies sought to stimulate rather than to restrict manufacturing industries. The most serious obstacle of all, the scarcity of labor, the colonies sought to overcome by a wide variety of measures which will be described in the following chapter. The difficulty in securing capital was sometimes overcome by a public loan, a grant of land, or the authorization of a lottery where the establishment of some industry was considered of particular social importance.

In the case of an industry where the required raw material was scarce, a bounty might be offered or some other measure devised to encourage its production. This was especially common in the case of the textile fibers, wool, flax, and silk. Scarce raw materials might be exempted from taxation, and at times a high duty or even prohibition was placed on their export.

In addition to the measures specifically designed to counteract the scarcity of some factor of production, there were those of a more general character. Such included the bounties, premiums, or prizes given for finished products, the exemption of plants or their employees from taxation, or the occasional grant of a temporary local monopoly. The duties on the importation of foreign manufactures levied in some colonies, being designed to yield revenue rather than to afford protection, were generally low and not important in their effect.

British Aids and Restrictions. The regulations of Great Britain affecting colonial manufactures were designed in some cases to aid and in other cases to check development. They are to be understood in the light of the ideals of the Mercantile System which sought to secure from the colonies raw materials or finished products needed by England and opposed the development in the colonies of lines of manufacturing that would compete with English products.

The first British law directly restricting a colonial manufacture was passed in 1699 and forbade the export of wool, woolen yarn, or woolen cloth from one colony to another or to a foreign port. Since the supply of wool grown in the colonies was always deficient and large quantities of woolen cloth were imported from England, there is little reason to suppose that this act had any appreciable effect in checking the growth of this industry; possibly at times it interfered with shipments between the colonies, but its vigorous enforcement seems doubtful. In 1732 a similar prohibition, for the benefit of English manufacturers, was placed upon the export of hats. This probably checked what was a lucrative though not

important manufacture; but the falling off in the supply of beaver skins in the following years was also a retarding factor.

A much more serious threat was the Molasses Act of 1733, designed to aid the British West Indies sugar planters, and imposing a prohibitive duty on molasses imported from the foreign West Indies, particularly the French islands, where it could be obtained at a much lower price. Since this law admittedly was not enforced, the rapidly growing New England rum manufacture built up on the basis of this import was not checked. Applying to a still more important industry, an act of 1750 prohibited the erection in the colonies of any new slitting or rolling mills, tilt hammers, and steel furnaces. The same act, however, offered a stimulus to the production of iron by admitting colonial pig iron into the English market free of duty and by allowing the free import of colonial bar iron at the port of London, a privilege extended to other ports in 1757. Although the casting of iron was not restricted and the export of pig iron was distinctly stimulated by this law, its prohibition of new plants was considered most obnoxious, even though this appears to have been poorly observed and the previously existing plants expanded their output.

In addition to these laws imposing direct restrictions on a few specified lines of manufacturing, there were various laws which in an indirect way may have tended to check the growth of colonial manufactures. Certain arrangements of the British customs duties made possible the sale of European manufactures in the colonies at relatively low prices in competition with the local products. In addition, England imposed restrictions on the free emigration of skilled artisans in 1718, more specifically applied to those in certain textile industries in 1750; she also forbade the export of certain machines or tools used in these industries starting with the stocking frame in 1696, adding implements used in the wool and silk industries in 1750, and those employed in the cotton and linen industries in 1774. It may be doubted whether any of these restrictions had appreciable effects, and much the same could be said of England's occasional disallowance of colonial laws designed to stimulate manufacturing.

As opposed to these restrictive measures of England, there were others which tended to promote the growth of certain lines of colonial manufactures. Doubtless the most important were the provisions of the Navigation Acts which included colonial-built and -owned ships within the privileges of the substantial monopoly granted English shipping in the British carrying trade. Despite the comparative advantages in shipbuilding which the colonies possessed, there would have been only a very limited market for their ships without this privilege; as it was, a flourishing industry developed and the sale of ships to England was such that by 1775 a third of British-owned shipping was said to be of colonial build. Closely connected with this

industry were the British bounties on the production of various naval stores such as pitch, tar, hemp, masts, and spars. The bounties, begun in 1705 and designed to lessen England's dependence on the Baltic countries for such supplies, were continued with little interruption almost up to the Revolution. Except in the case of pitch and tar, the effects on development were slight. Being chiefly designed to increase the supply of some scarce raw material, the results of the various English stimuli were felt chiefly in the extractive rather than in the manufacturing industries.

Concerning the effects of either colonial or British legislation upon the general development of manufacturing in the colonies, it may at once be said that they were not a very important factor in the results obtained. The underlying economic conditions largely dominated the outcome. Aside from those conditions favoring the widely scattered small concerns producing for a local market, the general situation was not favorable to the growth of most manufacturing industries. The meager results attained under the various laws only furnish one of the innumerable lessons of economic history showing the great limitations on the effectiveness of such legislation when the underlying economic conditions, the effects of which it seeks to counteract, are unfavorable.

The Technology and Organization of Colonial Manufactures. The outstanding features in the technology of colonial manufacturing industries were the small number and the simplicity of the tools or machines used, the great dependence on human effort for power, and the small size of the production plant. These features were important in determining the distribution and growth of the different industries as well as in shaping the character of the organization under which they were carried on. The most common types fall into three classes: the household industries, the workshop crafts, and the industries using a considerable plant in employing either power or more elaborate machine methods.

In the case of products where only a few simple tools were used and no great skill or technical knowledge was needed, they were extensively made in the household or on the plantation. Thus spinning and weaving of linen or woolen, and less frequently of cotton, cloth were common in most families. A little lumbering and carpentry and the production of many household utensils or furnishings were customary. The farmer did his own slaughtering, curing, and salting of meat to supply family needs, and tallow, soap, lard, and candles were by-products of this activity. Less frequently the manufacture of nails and shingles or the preparation of potash and leather, combined perhaps with the production of shoes or deerskin clothing, formed a part of the household output. It may be presumed that among the masses the women made a large proportion of the clothing and the household linen. The household industries being so widespread, it is evident that the

total volume of their output must have made up a very considerable portion of all colonial manufactures. Though most of these products were consumed in the household or on the plantation, there was frequently a surplus which was disposed of in such markets as were available. For the most part, these industries were a part of the relatively self-sufficing household economy.

In the case of the handicraft industries where simple light tools were employed and skill in workmanship was more essential, a greater degree of specialization existed. Little was required in the way of capital since the tools were inexpensive; the workshop was usually located in the artisan's home; the stock of raw materials carried was small, for this was often furnished by the customer; and, since much of this work was done to order, the supply of finished goods on hand, if any, was slight. The craftsmen who carried on their work in this way included cobblers, weavers, hatmakers, watchmakers, silversmiths, carpenters, masons, coopers, cloth dressers and dyers, soapmakers, tallow chandlers, metalworkers, tailors, printers, saddlers, and numerous others of less importance. On the larger plantations the volume of work to be done necessitated the keeping of various craftsmen, who were usually trained slaves, and they often turned out surplus products which were sold on the market.

Where the population was so sparse that the local market did not provide enough work to support an artisan, he sometimes became an itinerant, going about from house to house with his kit of tools and possibly some raw materials and living with the family until he had finished such work as was required. Such a practice was common among cobblers and carpenters. In cases where the production process was of such a character that itinerant work was impossible, the artisan was forced to eke out his living by small-scale farming or some other side activity.

In localities where a larger market existed, some of these craft industries developed a more elaborate form of organization. A master craftsman might employ other workers in his shop, possibly both apprentices and journeymen. He might find it worth while to keep a fair stock of finished goods on hand; perhaps enough to carry on some wholesale trade along with his retail or custom trade. All of this involved a greater capital investment.

In some of the larger cities a still more elaborate organization developed in certain of the craft industries, the shoe industry of Massachusetts just before the Revolution being a notable example. There an employer who provided the raw materials and sometimes the tools hired artisans to work up the material in their homes. This putting-out or domestic system of industry, although extensively developed in Europe, was not very common in the colonies, though some cloth weaving was carried on in this manner.

The craftsman who developed such a type of business functioned not only as an entrepreneur and a laborer but also as a capitalist and a trader. As his business grew in size and required more time for management, he ceased to work at the craft himself and so became a merchant-capitalist-entrepreneur. This marked a step toward greater specialization of functions and so tended to create a class of employers distinctly separate from the hired workers.

The third group of industries was that where the technical methods involved the use of considerable machinery or plant. The processes employed might be rather simple, as in the case of a grist mill or a lumber mill, or they might be fairly elaborate and require considerable technical knowledge, as in the manufacture of glass, powder, or paper. In any case such an industry required a fair-sized market in which to dispose of its product, or it would not pay to erect a plant. If the product was not easily transportable, then the market had to be a local one and, since in most sections these local markets were small, it was only in the case of industries producing a commonly used, bulky commodity that it paid to build such plants. This explains the numerous and widely scattered mills for grinding grain, sawing lumber, fulling cloth, breaking hemp, making cider, or the whisky distilleries, tanneries, and iron forges. The availability of water power was of course a factor in determining the location of mills, though windmills were not uncommon and animal power might be used; but only the smaller streams and sometimes the tides were used for this purpose, and such sites were numerous. Often a group of small mills clustered around a favorable site became the nucleus about which settlers gathered, but the large power sites which ultimately grew into big manufacturing centers were not developed until a later period.

Where the character of the product or the conditions were such that a large market was available, some lines of manufacturing developed on a bigger scale. Most such plants were located on or near the seacoast where they had easy access to foreign as well as domestic markets. It was under such conditions that the shipbuilding industry, the manufacture of various naval stores, and some of the larger breweries, whisky or rum distilleries, meat packing, and lumber plants developed. Here too the capital investment involved was greater. The Hasenclever ironworks built in New Jersey in the 1760's, which is supposed to have been the largest manufacturing enterprise in the colonies, involved an investment of some $250,000; the outlay in connection with the Principio Company's ironworks in Maryland and Baron Stiegel's glass and ironworks in Pennsylvania were not far from this sum. In such concerns, therefore, the problem of securing the necessary capital was important and affected the form of business organization. In the three cases just mentioned most of the capital was obtained

in England or Germany, and this was frequently true of the largest colonial enterprises. For most manufacturing enterprises, however, an investment of from $1,000 to $10,000 sufficed, and this was obtained from local sources, private funds sometimes being augmented by public aid. Where a single individual lacked sufficient means, partnerships were organized and this was the usual form adopted by the larger concerns. The corporate form of organization was practically unused for business purposes in the colonies.

Aside from the acquisition of an adequate supply of skilled labor, capital, and the requisite technical knowledge, most of the problems confronting the managers of manufacturing enterprises were relatively simple as compared with those of today. An exception was due to the general lack of any means for obtaining fire insurance. This not only made it harder for an enterprise to obtain capital or credit but also resulted in any serious fire loss falling with such a crushing weight on the owners of an enterprise that its existence was abruptly terminated. It was for this reason that, in cases where an industry was important in supplying a local necessity, aid was often given in the form of a public grant or the authorization of a lottery to provide the funds to revive the enterprise.

The risks arising from fluctuations in the price of the product varied greatly in different industries. The household, manufacturing goods for its own use, had no concern over prices and, even when it produced a surplus for sale, the amount was so small that it had little effect on the family income. Similarly, in the case of those producing for a local market, there was relatively little risk, for prices in such markets were likely to be fairly stable and the stock of raw material or finished goods kept on hand was seldom large. The prevalence of custom orders also lessened risks. It was in the industries producing on a larger scale and for more than a local market, that the risks arising from price fluctuations were greatest. The slow and inadequate means of communication made it difficult to forecast market conditions, particularly those in foreign lands. The frequent wars of the period were one of the most important causes upsetting all calculations, and, in the colonies, the fluctuations in the value of the money in circulation and in the rates of foreign exchange added to the forces causing price changes.

On the other hand, the slight use of machinery and the small size of plants, resulting in a low proportion of fixed and specialized capital and overhead costs, made it much easier to adjust output to changing market conditions. A similar result followed from the fact that the processes of production were not so long drawn out in time and did not necessitate planning for so many years ahead as is the case today when the so-called "roundabout" process frequently requires machines to make other machines to make still other machines before a plant is ready to start production

while during this long period of preparation great changes in market conditions and prices may take place. Also in colonial times changes in methods of production were being introduced at a much slower rate than today and so lessened the risks and losses incident to the introduction of new processes and inventions.

The Growth of Colonial Manufactures. The preceding discussion of the conditions reacting on colonial manufacturing industries will provide the chief explanation for their existence and development. Owing to the lack of adequate statistical data, the growth that actually took place can be described only in vague and general terms.

In the case of the household industries, it seems probable that they grew almost as rapidly as the population. This was due to the necessities of the situation in which most people found themselves, especially those in the interior distant from waterways. It may be assumed, however, that in the larger towns and seaports there developed in time a considerable group who bought in the markets an increasing proportion of the commodities elsewhere supplied by household industries; though few families there, even among the rich, did not make something in the way of clothing, linen, prepared food, soap, candles, etc., to help supply the family needs.

In those industries producing chiefly for domestic markets, it might also be said that their growth tended to keep pace with the growth of the population. As the scattered population in the frontier sections increased in density and small groups developed into villages and towns, gristmills, lumber mills, fulling mills, and stills were built and carpenters, cobblers, tanners, dyers, forge workers, and similar craftsmen began to ply their trade.

In the group of industries that supplied more than the local markets, growth was not limited by the increase in population or wealth but was stimulated by all developments that tended to widen their markets. This group of industries showed more of a tendency toward localization, especially in the seacoast sections.

Perhaps the most important industry in this group was shipbuilding. In both Massachusetts and New York, this industry started almost with the first settlement, and by 1700 it had attained a substantial development. The construction in all the colonies at this date was about 4,000 gross tons a year and the rapid expansion during the eighteenth century raised the output to about 35,000 gross tons around 1770. Although construction was extended to southern New England, the banks of the Delaware, and still later on a small scale to the Carolinas, the chief seat of the industry was the region from Massachusetts Bay north to the Kennebec River where the supply of shipbuilding timber was most accessible. The greater portion of the ships was used in the rapidly expanding intercolonial or West Indies

carrying trade and in the fisheries, but there was also a growing market in England. Colonial-built ships cost substantially less than those built in England, though they were generally considered less enduring, and the British Navigation Laws provided a protected market. Thus aided, the colonies were selling between fifty and one hundred ships a year to England around 1770, and a third of British shipping was of colonial build.

The manufacture of lumber products was generally conducted on a small scale and, even when producing for more than a local market, was rather widely distributed, though most important in New England. The chief branches were the manufacture of staves, barrels, shingles, house timber, and boards. In addition to the rapidly growing domestic markets there were those of southern Europe and the West Indies. The manufacture of all these products increased rapidly during the eighteenth century. Much less important, despite British efforts to stimulate production, was the manufacture of pitch, tar, and turpentine, mainly located in the Carolinas, and largely an eighteenth-century development. Also less important, though rather widespread and often among the surplus products of the household industry, was the output of potash and pearlash, much of which was exported to England.

What may be called the packing industry became one of the important manufactures of this group at an early date. There were two main branches: the packing of meat, chiefly beef, and that of fish. Lacking modern methods of food preservation, these products were salted and pickled, or dried and smoked. Some fish packed in ice were kept fresh, but a growing proportion of the exports to southern Europe and the West Indies was dried. This industry was concentrated on the New England coast, and from the earliest times its product was one of the region's chief exports. The packing of beef and pork was concentrated in the middle colonies and developed more slowly, for it was not until the eighteenth century and the spread of cattle raising into the interior that packing for export became important. Near the close of the period, South Carolina also began to pack for the export market.

Closely connected with the packing of livestock were the tanning of leather and the manufacture of soap, lard, and tallow candles. Though widely produced in the household or local slaughterhouses, these commodities became important by-products of the packing industry and entered into the export trade.

Another industry preparing food products and developing out of local industry until it became one of the most important among those producing for a large market, was that engaged in grinding flour and baking bread or biscuit. As far as it was producing for more than a local market, it was concentrated in the middle colonies, notably in the vicinities of New York,

Philadelphia, and, later, Baltimore. As wheat growing was extended and foreign markets expanded in the eighteenth century, this industry rapidly rose in importance, and about 1770 the value of the exports of flour and bread was considerably greater than that of any other colonial export except tobacco and appreciably exceeded that of the exports of wheat.

The iron industry, though started at a very early date in both Virginia and Massachusetts, did not begin to expand very rapidly until after about 1720. The plants were located chiefly about the ore deposits from southern New York to Virginia with a few in Massachusetts, and occasionally attained considerable size. Except for a few experimental attempts to use coal as fuel, charcoal was employed exclusively, and its cheapness was a decided advantage for the colonies. This was a big factor in the rise of the exports to England after the British Act of 1750 admitted colonial iron free of duty; by 1771 the total exports of pig and bar, mostly from Maryland and Virginia, had risen to nearly 8,000 tons. Such was the growth of this industry that by 1775 it is estimated that the colonial output of iron had reached 30,000 tons and some 82 blast furnaces and 175 forges had been built, a larger number than was then to be found in England and Wales. The casting of iron was commonly carried on in connection with the smelting of ore, and the output consisted chiefly of household goods, farm utensils, ship equipment, etc.; but the market for these products was limited to the colonies. The industry, however, never reached the point where it was able to supply all colonial needs, and imports, particularly of the more highly finished products, were always fairly large.

The manufacture of rum is the most notable exception to the general rule that colonial manufactures were confined to raw materials produced in the colonies, since it was based on molasses obtained from the West Indies, but under conditions that made its cost relatively low. This industry first began to develop on an appreciable scale about 1720 and was concentrated in the vicinity of Boston and Newport. The product was consumed in generous quantities among the colonists and also found an excellent market in the Indian trade, the Newfoundland fisheries, and the African slave trade, the last alone taking nearly 300,000 gallons in 1770. A similar situation led to the rise of a substantial sugar-refining industry, though little of its product was exported.

The industries just described were the chief contributors to the export trade in manufactured products, and the fact that they were able to compete in foreign markets indicates that they were among the most successful lines of manufacturing developed in the colonies. However, there were numerous other industries that sprang up outside the household and were chiefly engaged in supplying colonial markets which at least deserve mention. Among those which became fairly widespread were distilling and

brewing, the fulling of cloth, tanning, the manufacture of leather products, agricultural implements, carriages, household furniture, and utensils. Somewhat less widespread and often located in the larger communities were printing, brickmaking, ropemaking, and the manufacture of sailcloth, hats, and silverware. Other branches of manufacturing that were likely to be more localized, often near the source of raw material, included those producing salt, paper, naval stores, linseed oil, glass, earthenware, guns, and ammunition.

At the close of the colonial period, manufacturing was still the line of economic activity in which the colonial economy was most backward and deficient and dependence upon imports was most marked. This dependence was greatest in the case of textile and iron and steel products, especially the finer grades, despite the widespread manufacture of these products in the colonies. Still, the progress made in manufacturing during the colonial period was very substantial. Admittedly much of the development that occurred was simply a product of the growth of population and the necessities of the situation which compelled them to supply their own needs, if they were to be supplied at all. It was something that they could and did accomplish so much in this way. It was more significant economically that they developed some lines of manufacturing able to compete successfully in foreign markets, even though these exports were relatively crude products and the success attained was based chiefly on the possession of cheap raw materials while the main obstacle to a greater growth of manufacturing created by the high cost of labor had not been overcome.

Chapter VII

LABOR CONDITIONS IN THE COLONIES

Introduction. There were two outstanding conditions that reacted upon the position of laborers in the colonies. The first was the relative scarcity, and hence high price, of labor, owing to the conditions that created a small supply relative to the demand. The conditions determining the supply of labor will be explained later; those that created the large demand originated principally in the abundant supply of natural resources that could be worked up into products for which there was a large market in other countries as well as in the colonies. The second fact was the comparative absence, except for the slaves and the temporarily indentured servants or apprentices, of a distinct laboring class in the sense of a group who during most of their lives hired themselves out to employers for wages upon which they chiefly depended for their living, though the beginnings of such a group were to be found in the larger communities. This situation, so different from that of today, was the outcome of various conditions chief among which were (1) the attractions of independence as a small farmer combined with the ease of acquiring land and (2) the small scale of enterprise which characterized most other lines of economic activity and the resulting lack of a clear-cut separation between the groups that functioned as entrepreneurs and as laborers. These two conditions characteristic of colonial labor exercised a most important influence not only on the economic but also on the social and political life of the colonists, notably in tending to develop a spirit of individual initiative, democracy, and independence.

The Supply of Labor. Labor, including that of independent workers as well as that of hired employees and slaves, is by far the most important factor of production judged by its contribution to national income. In fact its contribution is likely to range between one-half and three-quarters or more of that income. Hence an understanding of the conditions that determine the effective supply of labor is most essential. These conditions are numerous, but the outstanding factors entering into the problem may be classified as follows: (1) the total population and the number among this total capable of doing work, (2) the number of those capable of doing work who are willing to work, (3) the length of time in hours, days, and years,

and the intensity of their work, (4) the intelligence or skill that they possess and are willing to apply in their work. Since a great variety of conditions react on any one of these factors, we can point out only the more important among those operating in the colonial period.

The growth of population in the colonies and the main factors responsible for it have previously been described. It was then stated that the high wages and excellent opportunities to earn a good living provided the chief inducement for most of those who migrated to the colonies of their own accord, while the scarcity of labor constantly impelled the colonists to stimulate both voluntary and forced migration.

It should be noted that the age distribution of the population of the colonies was such that the proportion of those of more advanced years was relatively small and hence the number of those capable of work relatively large. This was partly a product of the high birth rate but was due chiefly to the growing influx of immigrants, most of whom were young, added to which was the practice of putting children to work at a very early age.

In the seventeenth century, the indentured servants provided one of the main sources of supply of hired labor, though there were relatively few in New England. In addition to those who voluntarily indentured themselves to pay the cost of their passage there was the group of involuntary indentured servants, chiefly made up of convicts and paupers, most of whom were sent to Maryland and Virginia. In the eighteenth century, the supply of voluntary servants was augmented by the large influx of Germans and Scotch-Irish. It has been estimated that during this period nearly two-thirds of the immigrants to Pennsylvania were indentured servants, that by 1754 there were 60,000 such in the colony, and that nearly half the total white immigration to the colonies came as bound labor. This influx tended to reduce the former longer term of indenture to around 4 or 5 years. Such servants, however, provided only a temporary addition to the supply of hired labor, for, when their term of service expired or when they ran away, which was not uncommon, they for the most part became independent farmers or possibly craftsmen.

It was only toward the close of the seventeenth century, when the supply of indentured servants proved insufficient to meet the growing demand, that the importation of slaves began to assume importance, but during the eighteenth century such imports rose rapidly. The system of Negro slavery as it developed in the colonies was an offshoot of the extensive system that developed in the West Indies. In part it was a product of the difficulty that white labor faced under the trying climatic conditions surrounding the cultivation of certain crops, notably sugar, rice, and indigo. Doubtless more important was the difficulty met with by large planters in securing an

adequate supply of labor for the production of the semitropical and tropical products for which the world was clamoring. At a period when the mobility of labor was far less than it is today, the forced labor of slaves provided the quickest and surest means for supplying this need. Also the conditions under which the great staples of the Southern plantations were raised were such that the disadvantages attending the use of forced labor were much less marked than in the case of the crops raised on the small farms that prevailed to the north. Finally, the moral conscience of the world had not been sufficiently aroused to secure any general condemnation of the system. Individual protests were made, but even at the close of the colonial period the Quakers and allied sects were the only groups that had taken a fairly positive stand in opposition to slavery.

In nearly all the colonies there were instances of Indians being enslaved, chiefly those captured in war; but being difficult to control they were seldom satisfactory workers and the number was never appreciable. The first Negro slaves were brought to Virginia by the Dutch in 1619, but as late as 1681 there were only about 3,000 slaves in that colony as compared with around 12,000 indentured servants in a total population of 70,000 or 80,000. There were then very few slaves in the other colonies outside of Maryland. From about 1700, the importations increased very rapidly so that the total number of slaves in the colonies rose to about 60,000 in 1714, nearly 300,000 by 1754, and around 500,000 by 1775.

This increase was due chiefly to the demand created by the expansion of tobacco growing in Maryland and Virginia and the introduction of rice and, later, indigo in Carolina and Georgia. In 1775, probably 465,000 of the slaves were to be found in the colonies from Maryland southward, for the most part on the great plantations; in South Carolina they made up nearly two-thirds of the total population. Of some 35,000 slaves to the north of Maryland the largest proportion relative to the whites was to be found in Rhode Island and New York. Most of them were in the vicinity of the larger seaports where many were employed as domestic servants or common laborers. The price of slaves varied greatly with their sex, age, physique, training, and general character; averaging around £20 or £25 in 1700, it had about doubled by the 1770's with the best fetching considerably more.

As far as willingness to work was a factor affecting the supply of labor in the colonies, it may be said that a large proportion of the free population was imbued with the spirit of work to a marked degree. Climatic conditions, except in the Southern tidewater region, were generally favorable. Most of those who migrated to the colonies were ambitious, energetic, and thrifty. The Puritan spirit scorned idleness as a device of Satan, and the ideals of religious and political freedom were a spur to constant toil. The parents

took care that this same spirit was developed in their children, for the latter were put to work at an early age about the household, on the farm, or in the shop. Even among those who accumulated wealth, the absence of what might be called a leisure class, such as was prominent in Europe, was a noticeable feature; the nearest approach to such was to be found among the plantation owners of the South. As compared with the well-to-do families of modern times, this spirit of work was even more marked among the women than among the men. Among the unfree workers, on the other hand, whether indentured servants or slaves, though most marked in the case of the latter, there was little or no incentive to work or work well except the fear of punishment. This of course is always the chief economic defect of forced labor and involves the extra cost of its close supervision.

The customary hours of work were generally much longer than today, though in the case of farm work the difference was less marked. Not only were the hours of work per day long but the number of days per year and the number of years of work relative to the lifetime were also long. Except for the Sabbath, observed with much strictness in the Puritan colonies, holidays were almost unknown and vacations from work scarcely thought of. The years of work for most started at a tender age and continued till failing powers or death intervened. On the other hand, the intensity with which people worked, again excepting farming, was much below that which prevails, particularly in manufacturing, today. In fact most of the activities of the business world proceeded at a much more leisurely pace and involved a far less intense strain on all concerned than is nowadays customary.

The fourth factor listed as determining the supply of labor is the skill and intelligence which the worker can apply to his tasks. The importance of this factor naturally varies with the character of the work to be done, but it is seldom without its influence even in the tasks of the common laborer. The lack of an adequate supply of skilled workers was a constant cause of complaint in the colonies; hence we are led to inquire what the colonists did, either through vocational training or general education, to try and raise the general level of skill and intelligence.

Particular attention was given to the training of the young for some skilled craft. As far as boys were concerned, this was generally carried out through the system of apprenticeship copied from England, though somewhat modified by colonial conditions. A boy of from twelve to fifteen planning to enter a trade would be apprenticed for a term of years, ordinarily until he was twenty-one. The master for whom he worked and in whose home he often lived was under obligation to teach him the trade and perhaps supply him with a certain amount of clothing as well as board and lodging. Frequently the master was also obligated to see that the apprentice secured instruction in reading, writing, and morals. In most of the colonies,

care of the pauper children until they became of age was provided under public regulation by this apprenticeship system. Sons of seaport merchants expecting to enter trade got their training as clerks in the stores and on ship voyages. In the case of young girls, since there were then relatively few opportunities for the sex to earn an independent living outside of the usual household activities, the training was confined to the house, in which, however, there was a multiplicity of activities available.

The colonial provisions for a general education were extremely meager and, as far as the great majority of children was concerned, were limited to instruction in reading, writing, spelling, and sometimes a little arithmetic or bookkeeping. The importance of education was especially stressed by the churches, particularly as providing ability to read the Bible. This partly explains the more general provision for, and requirement of, some schooling in the New England towns where greater unanimity of religious belief existed than in the other colonies and the dominant theocracies, except in Rhode Island, made it easy to pass the needed laws. Also the township system of compact settlement made schools more accessible and less expensive to support. As early as 1642, Massachusetts required that all be taught to read either by masters or parents and in 1647 passed a law calling upon all towns of fifty or more families to establish elementary schools and, in the case of the larger towns, Latin grammar schools, though attendance was not made compulsory. By 1671, all of New England except Rhode Island was under laws requiring some form of education, though there was later considerable relaxation and enforcement of the laws was not adequate, particularly in the frontier sections.

In the middle colonies, where there was greater diversity of religious belief, parochial schools prevailed; in the South the scattered population resulted in meager school facilities in most sections. The wealthier families employed private tutors and some boys were sent to England. In both of these groups of colonies private pay schools and grammar schools were available in the larger places, while the children of the poor were very indifferently provided for by parochial and charity schools or the instruction required for apprentices. It is obvious that relatively few of the colonial children could have obtained much formal schooling beyond elementary instruction in the three R's and that illiteracy must have been very common. Grammar schools, which took boys from about seven to fifteen years of age, after which they were presumed to be ready for college, were available only in the larger places and were attended chiefly by those sons of the well to do who expected to enter one of the professions. Seldom was thought given to more advanced education for girls.

The first college in the colonies was Harvard, founded in 1636 and followed by William and Mary in 1693 and Yale in 1701, while six others were

set up between 1746 and 1775. They were intended primarily to train young men for the learned professions, particularly for the ministry, and, with one exception, owed their origin largely to the activities of the different religious denominations. The curriculum was molded along classical lines, but the education provided was only more advanced than that of a modern high school in a few subjects and less so in others. Law schools were not yet available and medical schools only a little before the close of the period, so that those seeking such professional training generally studied in the offices of practitioners, though a few went to England, chiefly for law.

Evidently the state of general education in the colonies fell far short of what was desirable for economic, to say nothing of social, efficiency, even allowing for the undeveloped state of the sciences and general knowledge at that time. Still the colonies were doing more to lessen illiteracy and ignorance among the masses, the slaves excepted, than the countries of western Europe. In furthering this movement, the scarcity of labor together with the political and religious ideals were the dominant factors.

The Condition of the Workers. The position in which the free laborer in the colonies found himself was a great improvement over that which confronted him in Europe. Money wages were higher and food and housing cheaper than abroad. With labor everywhere in demand, no competent worker need lack employment for any length of time, for in those days periods of widespread depression and unemployment were rare; they affected only a very small group in the larger towns and cities while agriculture, which was the chief support of around nine-tenths of the people, was carried on much as usual. Relatively few were content to continue long in the status of a hired laborer, and the shift to a position of independence was relatively easy. The newly arrived immigrant might hire himself out for a short period until he had got his bearings and accumulated a little capital—as he was often advised to do—but he was generally quick to take advantage of the first opportunity to set up his own shop as a craftsman or rent or buy a farm. The native-born sons often did likewise when their parents could not set them up in independence. The great majority in both classes took up farming, and the ease with which land could be obtained, in marked contrast to the situation in Europe, provided an alternative opportunity for those dissatisfied with their working conditions to become independent farmers. During most of the country's history, this opportunity was to be one of the chief factors in improving the condition of the workingman.

The level of wages that prevailed in colonial times can only be inferred from the scattered figures available. Apparently a moderate advance occurred after the first third of the eighteenth century, and toward the close of the period common labor was being paid between 30 and 50 cents a day

and a skilled artisan from 60 cents to $1.25. The yearly pay of help that lived with the family and so got their board and lodging might range from $20 to $40 in the case of female domestic servants and from $40 to $80 in the case of ordinary farm workers. The level of wages was distinctly higher in urban centers than in the country, and that prevailing in the middle colonies was somewhat above the level existing in New England or the South.

Though these figures seem low today, it must be remembered that the purchasing power of this money wage, that is the "real" wage, was much higher than in modern times—it has been roughly estimated as three to four times higher than in the years just before 1914. The common laborer's wage enabled him to secure at least a sufficiency of the things then considered necessities, and he was much better off than his fellow worker in Europe. The skilled worker could obtain in addition a fair amount of the cruder comforts that then made up some of the luxuries of life. Of course a great many things that subsequent economic progress has made it possible to consider as necessities for all today were not available even to the wealthy in colonial times.

Occasionally, chiefly in the early period, the colonies attempted to fix wages. All these efforts, it is to be noted, were designed to keep wages down. Thus Massachusetts in 1634 limited wages in certain building trades to 2*s*. a day and in 1636 gave the towns the right to fix wages. This simply followed what was a common practice in England at that time, but the few efforts made to introduce this policy into the colonies were almost invariably abandoned. The reason was that, where wages were fixed too low, the laborer either moved to some other place or refused to hire himself out and turned to farming or some craft where he could be independent. Such action was facilitated by the fact that the colonial laborer enjoyed far greater freedom of movement than existed in England, where, chiefly in the effort to keep wages down, many restrictions were placed in the way of laborers who desired to change their work or to move to another place. The practical impossibility of enforcing such regulations in the colonies, where labor was scarce and a strong centralized government was lacking, greatly improved the condition of labor.

What practically amounted to fixing a worker's earnings was the rather common practice of regulating the prices of certain goods or services generally considered as necessities. This was another institution inherited from Europe and had its origin in the medieval efforts to protect consumers against monopolistic and unjust prices. In the colonies, price fixing was most commonly applied in the case of bread, known as the "assize" of bread, but was at times applied to other necessities, and the rates charged by carters, butchers, mills, ferries, and inns, which often enjoyed a local

monopoly resembling that of present-day public utilities, were frequently regulated. It was against such price fixing that the few so-called "strikes" of the colonial period were directed, as in the case of the street cleaners of New York in 1677, the coopers in 1680, or the bakers in 1741. Thus they were not like the modern strike, a conflict between laborers and employers, but a protest by a group commonly made up of independent craftsmen against prices fixed by local government.

The Economic Position of the Worker. Today the labor problem, particularly that involving the relations between the hired worker and his employer, has become one of the prominent and difficult economic issues; in the colonies this problem as we know it can scarcely be said to have existed. This was due chiefly to the very small proportion of those who continued as hired workers for much of their life and the comparative ease with which a worker could become an independent entrepreneur as an artisan or a farmer. Also the small scale of business enterprise and the fact that in most fields of economic activity the employer was likely to work alongside of his employees served to humanize the relationship between them. Finally, the forms of competition tending to depress wages were much weaker than today.

Even in colonial days, however, there was enough competition to lead certain groups of workers to try and restrict it by one or another form of regulation. The groups taking such action were not hired laborers like the modern trade-unionists or the European journeymen, for that class was too small and weak to wield any power, but rather the independent artisans. These craftsmen in the largest communities at times complained that they suffered from the competition of itinerant or unskilled workers, and they sought to secure laws or local ordinances that would eliminate such competition. It was this that led to the creation of the very few organizations corresponding to the English guilds of which we have any record. Thus in Boston in 1648 the shoemakers and the coopers were granted charters giving them a practical monopoly of the town's trade and the power to stop unskilled workers; Philadelphia in 1718 seems to have granted similar rights to the same crafts and also to the tailors; in 1667 New York gave a local group a monopoly of the carting business. Economic conditions in the colonies being unfavorable, all these grants were short-lived. The guild system was another one of the institutions of Europe that failed to develope in the colonies. The only semipermanent workers' organizations before 1775 were friendly societies.

Other devices of the artisans to check competition met with little better success. In the larger places there were frequent ordinances limiting the right to carry on a trade or run a shop to citizens or those formally admitted to the freedom of the place; but enforcement seems to have been very

ineffective even when, as was usually the case, such rights were easily obtainable. The regulations requiring a definite period of training as apprentices provided some protection against the competition of less skilled artisans and often had that as an objective as much as that of protecting the public against poor work. But these regulations also were seldom vigorously enforced; the traditional 7 years of training were often reduced, when not ignored, or the apprentice, after a little training, escaped to some community where no restrictions were imposed. The far greater freedom of the colonial worker to move from place to place or to shift from one occupation to another, as compared with the conditions in Europe, not only benefited the worker but also tended to promote a more efficient use of the available labor resources.

Chapter VIII

COLONIAL TRADE AND MARKET ORGANIZATION

Introduction. The function of trade in the economic order is to further the process of specialization or division of labor as between individuals or regions so that goods or services can be obtained more cheaply than when every person or family produces all that they consume. The economic principle underlying this specialization is known as the "law of comparative costs," namely, that each individual, assuming an intelligent choice from the point of view of his economic interests, will tend to specialize in that line of activity in which he possesses the greatest relative advantage as compared with those producing the various goods that enter into exchange under the conditions then existing. This principle applies not only between individuals that make up the family group, but between those in the same locality, the same nation, or throughout the world; in short it underlies all trade. Since there are marked variations in the economic efficiency of all the factors of production, not only within a country but throughout the world, it is obvious that the greater the proportion of the supply of these factors of production throughout the world that enters into the process of the world's specialization and trade, the greater the likelihood that the wants of the world will be supplied in the most economical way.

The ideal situation, economically, would be one where there were no limitations or hindrances on trade and where there was a perfectly organized world-wide market for all goods and services. Unfortunately, such conditions are far from being realized and trade is hampered in innumerable ways. In the first place, there are the costs of transportation and all the costs connected with buying and selling, such as packing, storage, insurance, or advertising. Unless these costs are lower than the economies secured through specialization in production, it will not pay to engage in trade. In the second place, individuals or social groups have frequently sought to obstruct freedom of trade, sometimes because of the economic advantage thus obtained by a few, sometimes because objectives other than the purely economic were supposed to be furthered thereby.

Still, if we look back over the long course of history, we see that the fundamental trend throughout the ages has been the slow but sure advance toward the attainment of the ideal of a world market. Nothing could afford

more striking proof of the advantages of specialization and freedom of trade to the human race. The advance in science, the introduction of better means of transportation and communication, the resulting development of the unknown or previously inaccessible resources of all regions, the introduction of new devices and institutions for facilitating trade have all helped to enable the world to support a larger population at a higher standard of living, thus furthering the progress of civilization.

This importance of the conditions affecting trade makes it essential to understand just what those conditions were in colonial times and the extent to which progress was made during the colonial period. Only as one realizes the great obstacles that tended to restrict and limit trade, both domestic and foreign, at this period can he appreciate the significance of the advances made in later times in furthering the economic progress of the country.

Transportation Conditions. Prominent among the factors limiting the area of colonial markets was the heavy cost of overland transport. This was made the more serious because the chief domestic products consisted of goods that were heavy and bulky in proportion to their value and hence less able economically to stand high transportation charges. It was in part to avoid this difficulty that the earlier settlements were made along the coast and the navigable streams. Such sections were not only easier to get to in the first place but, through the cheap and free highways of the sea, they provided easy access to both colonial and foreign markets. The colonists were fortunate in having so many excellent harbors and navigable streams, and throughout the period the waterways were the chief means of transportation for commodities that had more than a local market. On bulky goods, freight charges across the Atlantic were often lower than for only 100 miles overland.

As settlers were forced to locate in the interior at any distance from the waterways, the problems of overland transport became serious. At first the Indian trails or narrow paths were used and goods transported on horseback. As soon as the population of any section rose to the point where the burden of constructing roads could be borne, measures were taken, usually by the town or the county, to provide for them. It was, therefore, in the more thickly settled sections of the North that roads were best developed. Towns and counties commonly levied a road tax payable in money or to be worked out by the farmer and his team on the roads each year.

In the eighteenth century, as population spread into the interior, construction proceeded a little more rapidly; but there was always a tendency to reduce it to a minimum and to neglect the upkeep. By 1775 there was a fair system in the more densely settled regions supplemented by many narrow paths and old Indian trails. For more distant travel a system of

post roads radiating from Boston made connections with the neighboring colonies and joined a road running south through New York and Philadelphia to Chesapeake Bay. In New York, near-by settlements built roads to the Hudson River and the Iroquois trail extended westward from Albany to Lake Ontario and Lake Erie. A network of roads connected Philadelphia with the surrounding agricultural region and Forbes Road across the colony to Pittsburgh was opened in 1758. From Baltimore a road ran westward to the Potomac and joined Braddock's Road over the mountains to Pittsburgh, cut in 1754. The few roads in the tidewater South generally connected with the nearest waterway. As the upcountry region was settled, the Wilderness Road was built up the valley of the Shenandoah and over to the frontier outpost at Watauga; another road from Richmond was extended to connect with it. From Watauga, Boone, following the old Indian path through Cumberland Gap, opened a trail leading to the Lexington region in Kentucky in 1775 (see the map on page 256). Other roads or trails connected the upcountry with seaports or points on the fall line of rivers where navigation ended. As bridges over anything but the smaller streams were too difficult and expensive to construct, ferries were widely employed.

Even the best highroads were far from satisfactory, being seldom kept in proper repair and often, at unfavorable seasons, almost impassable; the ordinary country roads were still worse. In the sections where snow fell in sufficient quantity, extensive use was made of sledges to carry the more bulky produce to distant markets. Elsewhere, as passable roads became available, heavy wagons drawn by slow-moving oxen were used; in the tobacco plantations enormous cylindrical casks were constructed and rolled over the roads. Those whose chief surplus product consisted of livestock were fortunate in that it could be driven to market. On the better roads the light two-wheeled shay could be used, and on the main highways, where travel was denser, stage lines were gradually introduced. By 1760 one could journey by stage from Boston to New York in four days and thence to Philadelphia in three days more. The stage that made the latter trip in two days in 1766 was known as the "flying machine." To accommodate this travel, frequent inns and taverns were necessary, and their charges were commonly regulated for the protection of the public. In the South, where such accommodation was less available, the open door and generous hospitality of the plantations provided an excellent substitute.

The Means of Communication. Cheap and quick means of communication so that buyers and sellers can obtain prompt and full information as to market conditions and easily get in touch with one another are essential facilities for the most efficient trading; lacking such the risks of trade are greatly increased and the flow of goods to the uses that are most advan-

tageous to society will be impaired. How serious were the problems created by the lack of such facilities in colonial times is difficult of appreciation by a generation accustomed to the telephone, the telegraph, the radio, inexpensive transport, cheap printing and newspapers, low postage rates, and widespread advertising.

Most of the colonies attempted to establish a limited postal service during the last of the seventeenth century, and by 1672 there was a monthly post between Boston and New York. In 1693 under a crown patent to an individual, a service was set up running from New Hampshire to Virginia, weekly in summer and fortnightly in winter, but in 1707 the crown took this over and established the general post office. The rates charged in the colonies were about 4*d.* a single sheet for letters carried less than 60 miles and 6*d.* up to 100 miles: between England and the colonies the rate for a single sheet letter was 1*s.* In 1753 rates were reduced about one-third. As late as 1775, the service was confined mainly to the more populous seaboard area, and the rates were so high that travelers were asked to carry messages wherever possible.

The first permanent newspaper was *The Boston News Letter*, a weekly started in 1704. By 1740 there were eleven newspapers, but they were confined to only five of the colonies. The total rose to about thirty-seven by 1775. Typically they were a single folded sheet issued weekly, for the first daily did not appear until 1784, and were so expensive that few could afford to buy them. For the most part, the news dealt with political events, and business conditions received little attention. A fair amount of advertising, usually short notices of goods available without price quotations, was included, and this, with possibly some distribution of handbills, was the only device employed to spread market information. Under such conditions news of any sort spread very slowly and chiefly by word of mouth. Around 1760 it was stated that it took about 3 weeks for word of an event to spread to the different colonies; the frontier settlers got their news still later. Word of European happenings was likely to arrive from 2 to 4 months or even longer after the event.

Colonial trade was also limited by many other obstacles. The lack of a satisfactory monetary system and of good credit facilities, to be described later, complicated trade and increased its uncertainties. The absence, except for marine insurance, of facilities for securing different forms of insurance increased risks and limited trade as did also the backward character of various other institutions employed to aid the processes of trade.

Trade within the Colonies. The outstanding feature of trade within the colonies was its relatively small amount per capita. This was inevitable under the numerous conditions tending to hamper trade, though the low per capita income as compared with modern times was also a limiting factor.

The economic wants supplied by the commodities available in the typical family among the masses were relatively few in number and covered little more than the bare necessities of food, clothing, and shelter, all of the simplest forms. As most families dwelt in rural regions and got their living by farming, they were able to supply a large proportion of these needs by their own effort, and a relatively self-sufficing economy prevailed among them.

In frontier sections, shelter was provided by the log cabin erected with the help of a few neighbors and built of trees from the wood lot which also supplied fuel and the material for most household furnishings and farm equipment. For textiles and clothing, the patch of flax and the wild deer or fur-bearing animals supplied the raw materials which were worked up into finished products in the household. Practically all the food was raised on the farm, though hunting, fishing, and berrying provided other sources of supply. Among the relatively few things that such a family generally had to secure elsewhere by way of trade the most common were metal products, salt, cotton, medicines, paper, ammunition, and a few tropical foods. We may surmise that the average annual outlay on such purchases seldom exceeded $25 or $50, and often was even lower.

Naturally the trading done by those living in better settled rural districts was more extensive. It was likely to include in addition to those things already enumerated, the services or products of the local lumber mill, the grist mill, the distillery, the carpenter, the blacksmith, the doctor, and the clergyman if these were available, as well as a miscellany of items from the stock of the country store. Individuals dwelling in the larger towns and seaports, where far more specialization of work was possible, generally followed some one trade or profession and had to buy most of the goods and services that they used. Yet even in such places many kept a garden and possibly a cow, not a little of the clothing was made in the family, and household activities supplied many things that today would be purchased.

The trade between different sections of any one colony and in some cases between the adjacent sections of two colonies consisted mainly in the movement of products of the various extractive industries from the interior to the seacoast ports and the return movement of some local manufactures but chiefly of imported goods for distribution through the interior. In New England, the inland sections sent out lumber and a miscellaneous assortment of their rather small surplus of farm products or household manufactures. In the middle colonies, the list was very similar, but the volume of this trade was larger and there was much greater concentration on grain and in New York on furs. In the tidewater section of the South, the plantation staples augmented by a few forest products almost completely dominated this trade, while after 1730 the upland sections began to send down grain, skins, and livestock.

The least developed branch of colonial trade was that among the different colonies, though an exception should be made of colonies like New Jersey or North Carolina, where the best seaport markets were located in adjoining colonies, and of cities like New York that attracted considerable trade, much of which was essentially local, across near-by boundary lines. Outside these exceptions, the bulk of the intercolonial trade was chiefly concerned with the redistribution of goods from foreign countries. The main colonial products in this interchange were the southern staples, rum, a few manufactures, and after about 1750 a substantial volume of foodstuffs. In addition there was the trade with the Indians which brought in furs in exchange for rum, blankets, guns, and trinkets.

The Marketing Organization. In the rural districts about the only individual specializing in trade, except for the Indian trader of the frontier, was the keeper of the country store, and even he was apt to be a farmer as well. His miscellaneous stock was designed to meet the local demand for goods not produced in the vicinity, and it was usually to him that the farmer sold any small surplus of products that he possessed, though if his surplus was large he might take it to a seaboard market himself. The storekeeper ordinarily obtained his stock of goods by journeying once or twice a year to the seaboard cities, and on these occasions he might carry with him some of the country produce obtained in trade if more frequent shipments were not necessary. Few villages any distance from navigable waters had population enough to sustain more than two or three stores, but some additional competition was provided by the itinerant peddlers who traveled through the more populous rural sections. There was much opposition to these peddlers on the part of the storekeepers, and most colonies adopted measures designed to restrict their activities, though enforcement seems to have been uncertain.

In the larger towns and cities, far more specialization in trading activities and organization was possible. Specialization of retail stores at first developed along a few rather general lines such as groceries, dry goods and notions, hardware, or imported goods. The apothecary and tobacconist were among the earliest of the highly specialized retailers, but during the eighteenth century a wide variety of others appeared in the larger seaports. Besides the stores, the more populous places always had public markets, generally set up in open stalls in the streets or a public building like Faneuil Hall in Boston. Foodstuffs brought in by the neighboring farmers were the chief products sold here, but a considerable range of other goods such as fish or household manufactures might be found. This was another European institution and, following the practice abroad, these markets were subject to extensive control by the local government. In most places they were open only certain days of the week, and those bringing in country produce

were forbidden to sell to local hucksters and peddlers until consumers had been given the first chance to make their purchases. Another feature of the larger places, also copied from Europe, was the fairs, usually held in the spring and autumn. Here, although farm produce dominated, a wide variety of other goods might be offered for sale and not a little entertainment, often attracting people from a considerable distance.

The wholesale trade was confined chiefly to the larger seaports, although a few merchants in the interior had wholesale dealings with neighboring country stores. Apparently the specialized jobber intervening between the wholesaler and the retailer had not yet developed, and it is probable that most wholesalers also engaged in retailing. Many of them also served as commission men in buying and selling for the account of others. During the eighteenth century sale through auctions became increasingly common, especially for imported goods or for surplus stocks in a period of depression. These were chiefly patronized by retailers needing to replenish supplies. The larger seaboard merchants often had their own warehouse, wharf, and ships, and their business was frequently carried on as a partnership. Such merchants, like many others, were also constantly entering into arrangements for some joint enterprise which was limited to a deal in certain goods and then wound up. The great bulk of the wholesale trade of the colonies centered about the gathering in to the seaports of produce from the interior, most of which was exported, and the distribution of imported goods.

Foreign Trade: Underlying Economic Conditions. The importance of foreign trade, under which we include that with the British Empire as well as that with other countries, in the history of the colonies can hardly be exaggerated; this is true of the political history as well as of the economic development. This was due to two things: (1) Great Britain valued the colonies chiefly for their trade and, up to at least 1764, the relations between them and the mother country were largely determined by considerations connected with trade. (2) In the case of every colony, the development of its foreign trade was one of the chief factors promoting economic growth and progress; without it much of the advantageous economic specialization that arose would have been impossible. The situation was in marked contrast with that of modern times, for intercolonial trade in colonial products was slight as compared with interstate trade today, and for the colonies as a whole foreign trade was much more important relative to domestic trade than it has been for the United States in recent times. This vitally important position of foreign trade in fact continued down to the War of 1812, and the subsequent decline in importance relative to domestic trade is one of the striking differences between the economic order of the colonial period and that of later times.

To understand the character of the commodities entering into this foreign

trade, the routes that it followed, and the causes affecting its development, we must first turn to an analysis of the underlying factors involved. As in the case of the earlier analyses of agriculture or manufacturing, these factors may be divided into two groups: (1) the underlying economic conditions, including transportation and marketing changes, which entered into the determination of the comparative cost of goods in the colonies and in other countries, and (2) the artificial action, chiefly in the form of legislation on the part of the different colonies, Great Britain, or foreign countries which sought to regulate, either by repressing or stimulating, the economically natural or free course of trade. The first of these groups of factors was by far the more important of the two, as nearly always has been true of the great bulk of international trade throughout the world. It is chiefly because of the political issues and discussion aroused over the subject that the public mind has come to attach far greater importance to the power of legislation to control trade than it in fact has possessed while the influence of the underlying economic conditions has been sadly ignored. The country's economic history will provide numerous illustrations of this truth.

The main factors in the underlying economic conditions affecting comparative costs have been indicated in previous chapters where it was pointed out that, with a scarcity of labor and capital and an abundance of natural resources, the colonists found themselves best fitted economically to specialize, as far as commodities entering international trade were concerned, in the products obtainable from their extractive industries. Conversely, the countries with which the colonies traded enjoyed a comparative advantage in two general classes of goods: (1) those requiring a relatively large proportion of labor and capital and (2) those based largely on the natural resources of semitropical or tropical regions. The former advantages were possessed chiefly by European countries, notably England, France, and the Low Countries, in various lines of manufacturing. The latter advantage of course fell to tropical regions among which the West Indies were of chief significance. In fact these islands became so vital a factor in the economic life of the colonies that a brief summary of their development is essential for an understanding of the colonial period.

The Development of the West Indies. In the West Indies during this period, other nations, chiefly England, France, and Holland, were constantly trying to seize the Spanish possessions and break down the monopoly of trade with all of Spanish America that Spain endeavored to maintain. From the first of the seventeenth century on, when most of the smaller islands were seized following the rapid decline of Spain's power, these efforts met with increasing success. Spain had done little to develop the resources of the islands, her interest having been largely diverted to mining

the precious metals in Mexico and Peru, but England and France at once set to work to secure from their new possessions such tropical products as they needed and the islands could supply. The Dutch were more concerned with developing trade with the Spanish colonies.

Among these products sugar soon became preeminent. Europe produced very little cane sugar; beet sugar, which became so important a product of the Continent in the course of the nineteenth century, was then unknown. The result was that during the colonial period the British and French West Indies along with Portuguese Brazil became the chief sources of western Europe's supply of sugar; meanwhile consumption of the product was greatly expanded. It was chiefly on the sugar industry that the rapid growth in prosperity of these islands was based, and it was this that led the nations of Europe to regard them as such valuable possessions.

During the seventeenth century, the British islands took the lead in production, but in the next century the French islands enjoyed a much more rapid growth and soon almost drove the British product from the markets on the Continent. By 1776, the output of French Santo Domingo alone was reported to exceed that of all the British West Indies. On the other hand, the large islands of Cuba and Puerto Rico, still held by Spain, suffered from general neglect and strict commercial control and began to develop their rich resources only in the last third of the eighteenth century.

In addition to sugar and its by-product molasses such items as tobacco, cocoa, coffee, cotton, and dyestuffs were obtained from these islands. The island output might also be augmented by trade with the near-by Spanish mainland, which also brought in the much coveted specie, and the facility for carrying on such trade, most of which was illicit, was considered a great advantage of such islands as British Jamaica or Dutch Curaçao.

Since the West Indies concentrated almost exclusively on producing these goods, they were dependent largely on outside sources for many supplies, chief among which were manufactured goods, foodstuffs, lumber products, draft animals, and slaves. The manufactures were obtained in the main from Europe, as was also a portion of the foodstuffs; the colonies furnished most of the rest of the food together with lumber products and draft animals, and this was true of the needs of the French islands as well as those of the British. It was the rapidly expanding demand in the West Indies that furnished the chief market for the surplus products of agriculture, lumbering, and the fisheries of the Northern colonies and thereby played a most important part in their development. The slaves were obtained from Africa, and the various reactions of the slave trade on colonial economic development were of such importance as to require a brief account of that trade.

The Slave Trade. The slave trade, starting in the second half of the fifteenth century, was based on the supply of Negro slaves obtainable on the west coast of Africa in the region extending from Cape Verde to beyond the Congo, all of which was originally under the control of Portugal. The European market for these slaves was slight, but the discovery of the New World and the need for labor to exploit its resources created a demand that steadily rose until the adoption of measures to abolish the trade starting early in the nineteenth century.

During most of the sixteenth century, the Portuguese were able to dominate the trade and, as Brazil was their only American colony wanting slaves, they allowed others to take some part in the trade to the Spanish colonies which then provided the only other market. During the period of Spain's control over Portugal, 1581–1640, she was able to provide her colonies with slaves from the Portuguese possessions, but when these were lost she was forced to fall back upon slaves brought by foreign traders. To control this trade and secure a revenue from it, Spain adopted a plan known as the "assiento" whereby she sold a contract to supply slaves to her colonies. This grant was held in turn by the traders of different nations and in 1713 was given to England where it was turned over to the famous South Sea Company. The holders of the assiento frequently failed to provide the number of slaves desired, and there was always a large illicit trade despite Spain's efforts to check it.

In the seventeenth century, starting with the rapid growth of the colonial possessions largely seized from Spain by England, France, and Holland and their need for slave labor as the cultivation of sugar, tobacco, and other products rose, an additional incentive was given these nations to acquire a stronger hold on the slave trade. To further this, all three nations seized different sections of the Portuguese slave coast and set up their own trading posts, resulting in the most intense rivalry and much violence. In this move the French and Dutch led the English, whose aggressive participation in the trade began only about 1660 but then made rapid progress. Each nation adopted the policy of granting a monopoly of the trade of its African posts to some company, but the management was inefficient and interlopers greatly reduced company profits. In 1698 England canceled the monopoly feature of her grant to the Royal African Company and the English trade rapidly passed into the hands of individuals among whom Liverpool merchants took the lead. In the eighteenth century under this greater freedom, the English soon took first place in the slave trade; the Dutch fell to second and then to third place below the French, and the Portuguese at times had to purchase from others to meet the demand of Brazil. In this trade the British colonists both on the mainland and in the

West Indies sought a share and around 1770 probably had sixty or seventy vessels employed in it.

Though no adequate statistics on the volume of the slave trade are available, it is clear that its growth from about the middle of the seventeenth to the close of the eighteenth century was rapid. As early as 1540 it was stated that 10,000 slaves a year were being carried out of Africa; from 1735 to 1800 the number probably fluctuated between 30,000 and 80,000 a year. Phillips states that "The total transportation from first to last may well have numbered more than five million souls," thus far exceeding the number of whites who came over before 1800, but estimates that less than a tenth of this total came to the North American continent.[1] The imports into the British colonies on the mainland between 1735 and 1775 probably averaged around 3,500 a year.

From the nationalistic point of view the slave trade was valued not only for its direct profits but also as providing a market for the manufactures given in exchange for slaves, as ensuring a supply of labor needed for developing the colonies, as providing employment for shipping and sailors, and in the case of the Spanish colonies as providing a cover for illicit trade in goods.

The Risks Attending Foreign Trade. The foreign trade of the colonies, being almost exclusively overseas trade, enjoyed the great advantage of relatively cheap water transportation which was increased by the low cost and abundant supply of colonial shipping. But overseas trade in those days was beset by numerous risks that were far greater than those of today. There were the various dangers of navigation when the coasts were none too well charted, a lighthouse service was very rarely available, and a weather service was unknown, while ships were small and entirely dependent upon sail. The vessels used in the transatlantic trade around 1775 averaged about 160 tons burden; those used in the coasting and West Indies trade were from 40 to 100 tons. In addition there were the risks arising from frequent wars during which privateers were active, and also the danger of capture by the numerous pirates. It was not until after about 1720 that the pirates were pretty generally driven from the Caribbean region, and they were not exterminated from the coast of northern Africa till nearly a century later.

In view of these great risks and the fact that the loss of a ship and cargo might well crush the owners so that only the very wealthy or the most venturesome would be willing to engage in such trade, it was essential to develop some method for distributing the risks if commerce was not to be seriously hampered. One device was to divide the ownership of ship or

[1] PHILLIPS, U. B., "American Negro Slavery," p. 39, New York, 1918.

cargo among a number of people; thus ownership of a ship might be divided into sixty-four parts. Another device was the institution of insurance, one of whose chief functions is to distribute losses widely, thus increasing the financial stability and credit standing of business enterprises and making people more willing to undertake them. It was because overseas trade involved potential losses which were so much greater than those in most other lines of business enterprise that the first form of insurance to develop was marine insurance. In the colonies, such insurance was available from early in the eighteenth century. Instead of being provided by companies, it was generally secured through a broker who got a number of individuals to underwrite, or agree to be responsible for, a certain sum—perhaps £50 or £100 each—in case of loss. A separate underwriting was secured for each voyage, and the rates of course varied with the differing risks involved, but for an ordinary voyage to the West Indies or from the West Indies to Great Britain they ranged between 2 and 3 per cent.

Another type of risk arose from the lack of quick means of communication with foreign markets. A ship arriving at a West Indian port might find that the arrival of another vessel just before had glutted the market so that it would have to sail to another port, or perhaps several others, in the hope of better luck. To send a letter to Europe and get a reply took from 3 to 6 months or even longer. In the meantime market conditions might have completely changed. Facing such heavy risks a trader might suffer heavy losses on one voyage and reap great profits on another; the risks also hindered the most economical distribution of goods among the different markets. Still it was the successful merchant traders who acquired the greater portion of the large fortunes accumulated in the Northern colonies.

The Organization of Foreign Trade. The organization for carrying on foreign trade was comparatively simple and involved no such extensive specialization of functions as exists today. The larger merchants were commonly engaged in retail as well as wholesale trade; they might buy or sell for others on a commission basis; they were likely to own their own warehouse and wharf and to have a share in, if not complete ownership of, several ships. Often the captain of a ship had a share in the vessel and was allowed to carry some trading goods of his own, thus giving him an added interest in the success of the voyage. The merchants' goods were under the charge of the supercargo whose duty was to sell them in foreign ports, when they were not shipped on previous orders, and also to make such purchases of goods for the return trip as the owner had directed. Often the captain might perform this function, in which case he had to be proficient at trade as well as in navigation. Many merchants in their youth gathered experience in one capacity or another on sailing voyages.

In the New England colonies and generally in the middle colonies, foreign

trade was carried on by merchants living in the colonies and using colonial ships. Some merchants had their own agencies abroad, this being most common in the case of the West Indies, while others established direct business relations with foreign mercantile houses. In the Southern colonies, on the other hand, though to a less extent in South Carolina, foreign trade fell very largely into the hands of British merchants using British ships. These merchants had their own agents or "factors," usually Englishmen or Scotchmen, located in the colonies to look after their interests. The small planter was likely to sell his produce and buy his imported goods through these local agents. The large planter often shipped direct to a London merchant from whom he also ordered an endless variety of foreign goods. The planters often became heavily indebted to these British merchants, and they constantly complained that the merchant's various heavy charges tended to absorb most of the proceeds from the sale of their products. One result of these conditions in the Southern colonies was that the attitude and interest of the mercantile class there were much more dominated by the British point of view than in the North.

Having outlined the more important economic conditions shaping the character, the course, and the organization of colonial foreign trade, we now turn to the second group of factors reacting upon it: the laws designed to regulate it. These included the laws passed by the different colonies, by Great Britain, and by foreign countries. They will be described in the order named.

Colonial Regulation of Commerce. The most important of the colonial laws affecting foreign trade took the form of import or export duties on commodities or tonnage duties on shipping. The chief objective of these duties was revenue, and they were essentially a part of the fiscal system and might be described under that head; still, they were shaped so largely by the conditions of foreign trade and so often included regulative purposes that they may equally well be dealt with here.

All the colonies imposed import duties for a longer or shorter period of time, but the most developed systems were in Massachusetts, New York, and South Carolina while Pennsylvania had a rather simple system. The chief things specifically listed as dutiable were wines, liquors, slaves, sugar, cocoa, molasses, dyewoods, and tea. The rates imposed, except on the first three items, were moderate, and on goods not specifically enumerated a 5 per cent duty was common.

Export duties were much less common and were seldom found in the Northern colonies, New York excepted, after 1750. It was only in Maryland and Virginia, where those on tobacco were one of the chief sources of provincial revenue, that export duties became important. The commodities most commonly subject to such duties were tobacco, skins, furs, and lumber,

that is, goods in the production of which the colonies had such a great advantage that the duty was less likely to lessen sales abroad.

Duties controlling foreign trade were also employed for other purposes. Protection of home industries was sought in some export duties on raw materials to stimulate their being worked up in the colonies. At times of a scarcity of some good, especially during war, a duty or prohibition on export was employed. Import duties sometimes had a sumptuary or moral purpose, as those on rum or slaves. Disputes between colonies sometimes led to duties designed to force concessions.

The wish to stimulate trade led to the granting of bounties on various exports, chiefly in the Southern colonies, where those on indigo, hemp, and tar were the most important. Even where there was a British bounty in addition they failed to accomplish much, except in the case of indigo.

Inspection laws designed to prevent the sale of inferior grades of goods and so to protect buyers and to maintain the reputation of colonial products in foreign markets, existed everywhere and tended to become more numerous and detailed as time passed. Lumber, beef, pork, flour, bread, fish, tobacco, and various minor products were commonly inspected. Such regulation was useful in furthering standardization, protecting buyers, and promoting trade.

Duties levied on the tonnage of ships entering the ports were imposed nearly everywhere. Their chief purpose was to secure revenue, primarily for colonial defense, though sometimes for the lighthouse service. To aid its shipbuilding or shipping interests, a colony might impose higher duties on vessels built or owned elsewhere, but laws discriminating against English ships were usually disallowed by the British authorities.

British Commercial Regulations to 1763. Unlike the commercial regulations of the colonies, which were primarily directed toward securing revenue and had little effect upon the course of trade, those of Great Britain were designed chiefly to control the course of trade, at least down to 1763, though the revenue objective was not ignored and, as far as any laws were effective, they played the dominant part in shaping the course of colonial trade. The general character of the British commercial regulations, like that of other European nations of the time, was shaped by the ideals of the Mercantile System. In the description of this system previously given, the various ways by which colonies could be made to contribute to building up the economic power of a nation were described, and it will be seen that these were all reflected in the regulations applied to the colonies. It was largely through the economic advantages derived from control of colonial trade that the European nations calculated on recouping themselves for the heavy expenditures involved in establishing and protecting their colonies.

The system of control under a grant of a monopoly of the trade of a colony, so common among the European nations of this period, was unusually short-lived in the case of the British colonies in America. With the failure of the early trading companies, such as the Virginia Company and the expulsion of the Dutch from New York, such monopolies disappeared from the colonies, a fact that was important in the later growth of colonial commerce. Elsewhere, however, many such companies still existed, and their economic interests and influence at times reacted upon the colonies. Thus the Royal African Company, even after the ending of its monopoly, opposed any colonial attempts to restrict the import of slaves, and the interests of the British East India Company were reflected in various trade regulations, notably those concerning tea just before the Revolution.

Quite aside from the company monopolies, the policy of general regulation of foreign trade in England dates back to a period long before the colonies were founded. Such regulation started as early as 1381, but the rapid growth of control came with the expansion of overseas trade and the rise of the great trading companies during the latter sixteenth and the seventeenth centuries, a period when the international rivalry for trade and colonies became so intense. In 1621, Virginia was required to send all her tobacco exports to England, and in 1624 the proviso was added that they must be sent in English ships. Subsequent laws provided further regulation and excluded foreigners from trading in the colony. The determined effort to overcome the widespread predominance of the Dutch in the world's carrying trade led to the famous series of Navigation Laws initiated under Cromwell in the acts of 1650–1651 and continued under the Restoration by the more stringent acts of 1660–1663. As this latter series of laws laid down the basic provisions governing England's regulation of trade during the remainder of the colonial period, a clear understanding of their character is essential.

So far as the trade of the colonies was concerned, the provisions of these laws can be grouped under three main heads:

1. The Act of 1660 declared that no goods could be imported into or exported from the English possessions in Asia, Africa, and America except in vessels owned and, under an act of 1662, with minor exceptions, built by English subjects. Also the officers and most of the crews must be English subjects. In the case of England, Wales, and Ireland all products of Asia, Africa, or America had to be imported in such ships, but the products of any other region (notably Europe) might also be brought in by vessels of the country where they were produced or of necessity first shipped. By the extensive monopoly of the carrying trade thus created, in which colonial shipping shared, the British shipbuilding industry and carrying trade were to be fostered and the supply of seamen increased.

2. A second feature of these laws listed certain commodities of the English plantations in Asia, Africa, or America that could be exported thence only to other English colonies or to England, Wales, or Ireland, a bond to this effect being required before shipment. The so-called "enumerated commodities" included in the Act of 1660 were sugar, tobacco, cotton, ginger, indigo, fustic, and other dyewoods. This requirement was designed to afford additional protection to English shipping, to ensure certain raw materials for English industries, to give English merchants the handling of colonial sugar and tobacco, much of which was reexported to the Continent, and to augment the English revenue by such duties as were paid on those products and were not refunded on reexport.

3. A third feature of these laws was embodied in the Staple Act of 1663 which required that all products of European countries imported into English possession in Asia, Africa, or America must first be brought to England or Wales and thence reshipped in English vessels direct to the colonies. Exceptions allowed included the direct shipment of salt for most of the fisheries, of wines from the Madeiras or Azores, and of servants, horses, and food supplies from Ireland and Scotland. Except for the case of raw materials, this requirement promoted the same groups of English interests aided by the enumerated commodities requirement.

Subsequent laws sought to strengthen the provisions for the enforcement of these Navigation Acts, particularly those relating to the enumerated commodities, and during the eighteenth century the list of these commodities was considerably expanded and came to include many more products of the mainland colonies. In 1698 East Indian goods were enumerated; various shipbuilding materials, molasses, and rice were added in 1705–1706; copper ore, beaver skins, and other furs in 1721; whale fins, hides, skins, iron, lumber, raw silk, potash, pearlash, coffee, cacao, and pimento in 1764. Later modifications permitted the direct shipment of rice to southern Europe after 1730 and of sugar to the Continent after 1739. Until 1766, the colonies could ship nonenumerated commodities anywhere, though of course they were subject to such duties or restrictions as England or any other country to which they were sent might impose; thereafter England forbade their shipment to countries on the Continent north of Spain.

A law that, had it been effectively enforced, would have imposed a real hardship on the colonies was the Molasses Act of 1733 levying duties on colonial imports of rum, sugar, and molasses from the non-British West Indies that were virtually prohibitive. The purpose was to aid the British sugar planters and the allied merchants, a group of some influence in Parliament. After 1685, the competition of the French and Dutch in the Continental sugar markets, previously dominated by the English, rapidly increased, and the period between 1720 and 1739 brought great distress to

the English planters. The combination of factors that made the sugar, molasses, and rum of the French West Indies cheaper than the British products naturally led the colonists to buy the French products. The British planters complained not only because their sales were thus reduced but also because, being unable to give goods in exchange for the supplies they took from the colonies, they had to give specie which was carried away and used to buy the products of the foreign islands. The concession of 1739 allowing the export of sugar direct to the Continent was also a relief measure. Thereafter, however, the growing demand in England, combined with the slow increase in the output of the British islands, raised the price of sugar so that little use was made of this concession. The relief afforded the planters by the higher price level and the insistence of the colonists that the British islands were unable to supply their own growing demand help to explain why so little effort was made to enforce the Molasses Act.

The trade of the colonies with England was also affected by the British customs duties. These duties were designed partly to obtain revenue and partly to protect various industrial and agricultural products. The rates imposed for the sake of revenue, being generally moderate, did not appreciably check imports, but the protective duties were high and often prohibitive. Since most products of the Northern colonies, notably the foodstuffs, were also produced in England and therefore usually protected, these colonies had to find a market for their surplus elsewhere. Fortunately for them, these staples were just what were wanted in the growing markets of the West Indies and southern Europe.

The British restrictions after 1763 which played so prominent a part in the agitation leading up to the Revolution will be described later in the chapter devoted to that period. Previous to 1763, however, British control was by no means confined to restrictions on colonial trade but included various measures of benefit to the colonies. The control was far from being so one-sided as was commonly depicted in the older histories, and the measures advantageous to the colonies should not be overlooked.

Among such measures the great advantage, chiefly accruing to the Northern colonies, of including colonial-built and -owned ships within the protective provisions of the Navigation Acts, despite protests by English shipbuilders, has previously been noted. England also admitted various staple products of the colonies at lower duties than were imposed on foreign products and in some cases admitted them free of duty. Thus the duty on foreign tobacco was almost prohibitive while that on colonial tobacco, though an important source of revenue, was much lower. Combined with the prohibition of tobacco growing in England, against which English farmers violently protested, this gave the colonies a practical monopoly of the English market. Colonial sugar and molasses received a similar prefer-

ential treatment, as did tar and pig iron after 1750, and at various times several other products such as whale fins, train oil, indigo, raw silk, potash, and pearlash, which England needed and did not herself produce.

Furthermore, in the case of goods imported into England and then re-exported to the colonies it was not unusual to refund most of the English duty as a drawback, with the result that people in England paid a higher duty on such goods than did the colonists. Finally, there were the various bounties on colonial naval stores, indigo, etc., paid out of taxes levied on the people of England, who more than once protested against the arrangement.

Commercial Restrictions of Foreign Nations. The general prevalence of a mercantilist policy in Europe at this period meant that in trade with other nations and their possessions, as far as this was permitted by England, the colonies commonly faced greater restrictions than in their trade within the British Empire. How extensive these restrictions were and, in view of their existence, what were the various advantages that accrued from being included within the British commercial system were points that were seldom adequately appreciated until after the colonies had attained independence.

The most strict system of trade control was that of Spain. In her colonies only a few ports were open to trade and that trade was confined largely to carefully regulated fleets sailing between Spain and the colonies. The system was so severe that it seriously retarded the growth of Spain's colonies and could not be strictly enforced. The result was a steadily rising volume of illicit trade in which the English secured a growing share, aided after 1713 by the assiento grant. After 1748, when the fleet system was abandoned, some modifications were introduced, but most colonial trade with foreigners continued under prohibition unless wartime needs dictated exceptions.

Holland adopted a policy that allowed more freedom of trade than most countries, except in her Far Eastern possessions and under the short-lived West India Company in the West. It was largely thus that her great commerce was developed.

The system of France was less repressive than that of Spain but generally afforded less opportunity for individual initiative than that of England. During much of the seventeenth century and occasionally later, the trade of the French colonies was under the monopolistic control of various companies and developed very slowly, while the Dutch dominated the carrying trade of France. Under the leadership of Colbert, 1661–1683, many colonies were taken over by the crown and their trade opened to all French subjects, while highly protective regulations were introduced to aid French industry and shipping. A treaty with England in 1698 excluded each country from trade with the other's colonies. The spectacular growth of the French West

Indies during the eighteenth century was in marked contrast to the slow growth of Canada and the negligible development of Louisiana under French control. As these latter colonies failed to provide the foodstuffs and lumber required by the French sugar planters, those islands became largely dependent for such supplies on the British mainland colonies or Ireland. As Pitman well puts it, in the economic development of their colonies in America, France was overbalanced on the side of tropical products, England on the side of products of the Temperate Zone. Under such a situation the regulations of either country designed to restrict the natural course of trade between their colonies were likely to be ignored or evaded if not abandoned.

In general, the enforcement of both British and foreign regulations varied inversely with the strength of the economic interest to which it ran counter and directly with the determination and power used to secure obedience. The volume of illicit trade during this period can only be surmised, but undoubtedly it was very large, both in the colonies and elsewhere, especially during the first of the eighteenth century or in a period of war. The most common violations of British restrictions on the part of the colonists were (1) shipping enumerated products to the Continent by other ways than through England, (2) importing goods from the Continent either directly or through the foreign West Indies, (3) engaging in smuggling trade with the foreign West Indies, chiefly the French islands. It was such violations against which England's more vigorous policy of enforcement after 1763 was chiefly directed. Illicit trade reached its peak in the commerce with the Spanish colonies where it attained enormous proportions and the colonists joined in the general rivalry to secure a share of this traffic. Much of this was carried on between bases in the West Indies and Spain's mainland possessions. There was also a substantial illicit trade between the islands of different countries in the West Indies in which the colonists participated. Though enforcement of the laws was less difficult in Old World countries than in the New World colonies, there too smuggling was widespread.

Despite all the infractions and the frequent modifications of the laws for the control of trade, it must be admitted that the system of control was so universal and comprehensive that it did very appreciably shape the course of trade, besides giving rise to political issues that played a prominent part in colonial history. However, it will still be evident from the following account of the trade which actually developed that the fundamentally determining factors were the underlying economic conditions.

The Character and Growth of Colonial Foreign Trade. The history of colonial foreign trade can best be divided into two periods: one ending about 1700 and covering the years during which all the colonies except Georgia were established and the economic bases of their trade were being

laid; the second, covering the period down to 1775 when a rapid expansion of trade took place.

During the seventeenth century the growth of trade was relatively slow. It took time for the settlements to become firmly established and to learn from experimentation the products in which they enjoyed such comparative advantages that they could profitably sell them in outside markets. As the most rapid growth of population occurred in the two groups made up by the New England colonies and the tobacco-growing colonies of Maryland and Virginia, the trade of these two groups enjoyed much the greatest expansion.

Virginia at the start exported small quantities of such products as were fairly ready at hand, lumber products, furs, and sassafras taking the lead; but with the introduction and rapid spread of tobacco growing this staple soon completely overshadowed all other exports. Maryland from the beginning concentrated on tobacco, and nearly all of its output along with that of Virginia was shipped to England, at least after 1650. The imports of these colonies were chiefly manufactured goods from England, wines, a few tropical products, and slaves, and from neighboring colonies some foodstuffs or other supplies.

The New England colonies produced little that was wanted in England except forest products needed for shipbuilding, ships, and a few furs and so had to look elsewhere for markets. By 1640 they had started to trade with the West Indies and for the rest of the century the rapid growth of that market provided the chief outlet for their surplus foodstuffs, fish, and lumber products. Soon a smaller trade, in which fish, casks, and staves predominated, was opened with southern Europe and the Wine Islands, while the provisioning of the fisheries afforded another growing outlet. The imports of New England consisted chiefly of manufactures, notably textiles and iron products, from England; some tropical products, mainly molasses, sugar, and rum, from the West Indies; and salt and wines from southern Europe and the Wine Islands.

In the other colonies the growth of foreign trade during this century was much slower. In New York under the Dutch, furs and forest products were the chief exports. These continued important after the English took possession in 1664 but were then augmented by growing exports of grains and animal products from the region contributory to New York City which by 1700 came to dominate the colony's foreign trade. It was not until after Pennsylvania had been founded that much trade developed in the Delaware settlements, but by 1700 an excellent start had been made in the export of foodstuffs, chiefly to the West Indies. The imports of the middle colonies were of the same general character as those of New England and came from the same sources.

The Carolinas were even slower in getting a start, the production of rice and indigo not being introduced until later. Small quantities of naval stores and deerskins were among the earlier exports to England together with some farm products sent to the Barbados whence the earlier settlers had come.

A general view of the situation at the end of the century, as far as direct trade with Great Britain is concerned, can be gathered from the accompanying table, though the figures cannot pretend to accuracy.

TRADE BETWEEN GREAT BRITAIN AND THE COLONIES, ANNUAL AVERAGE, 1698–1702
(000 omitted)

Colonies	Exports to Great Britain	Imports from Great Britain
New England	£ 33	£ 92
New York	13	35
Pennsylvania	3	13
Virginia and Maryland	239	192
The Carolinas	12	13
Total	£300	£345

* Based on E. R. Johnson, "History of Domestic and Foreign Commerce of the United States," vol. I, p. 120, Washington, 1915.

Though no definite figures are available, it has been estimated that, except in the case of Maryland and Virginia where nearly all the trade was direct with Great Britain, the grand total of the trade for the other colonies was nearly twice that of their trade with Great Britain. It may have been more.

The Growth of Foreign Trade in the Eighteenth Century. For the eighteenth century, official figures are available for the direct trade between Great Britain and the colonies, and these are the basis of the chart on page 128. Though these figures omitted smuggled goods and were based on fixed official values rather than on market values which were tending upward after 1740, they fairly indicate the marked expansion, especially after about 1745, of the main branch of colonial trade.

In New England, this period was marked by the continued expansion of the fisheries including the rise of the whale fishery, the growth in the export of lumber products and ships, and the rapid advance of the rum trade and the allied slave trade. The exports of agricultural products failed to increase proportionately. Imports rose along with exports and consisted of much

the same types of goods as formerly, except that luxuries were more prominent.

A striking development of the period was the great growth of the export trade in foodstuffs in the middle colonies, chiefly to the West Indies and southern Europe. As the French got more of the fur trade, this fell off after about 1740, but some forest products and ships were sold abroad, while

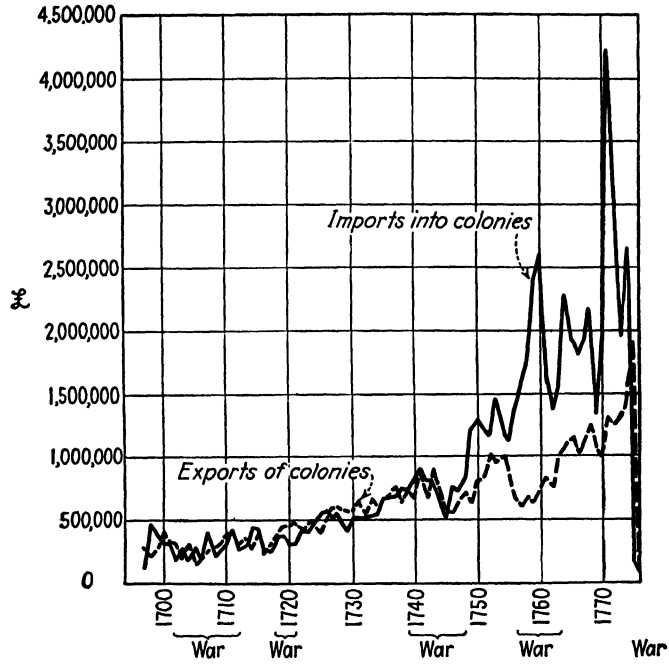


FIG. 6. Trade between Great Britain and the American colonies, 1697–1776.

considerable flaxseed was sent to Ireland. Imports rose rapidly and were like those of New England.

In the Southern colonies, tobacco continued predominant among the exports of Maryland and Virginia, though grain and livestock products from the back country rose in importance, and after 1750 some iron was shipped out. In the Carolinas and Georgia, the outstanding development was the rapid rise of the export first of rice and then of indigo. Naval stores along with other forest products, deerskins, and eventually some upcountry foodstuffs made up the chief minor exports. Except for the addition of slaves, imports into the Southern colonies were similar to those elsewhere.

A good general picture of colonial exports about 1770 is provided by the chart on page 129. The two great exports were tobacco and wheat or wheat flour. They were about equal in value and together made up around half

of the total exports. Next in importance, but far below them in value, came rice, the products of the various fisheries, livestock or meat products, and lumber products. Still lower in value came skins and furs, ships, corn, peas and beans, iron, and miscellaneous products. The great bulk of colonial imports consisted of manufactured goods, notably textiles and iron and steel products, imported from England, though about a quarter originated on the Continent, after which came the products of the West Indies, slaves

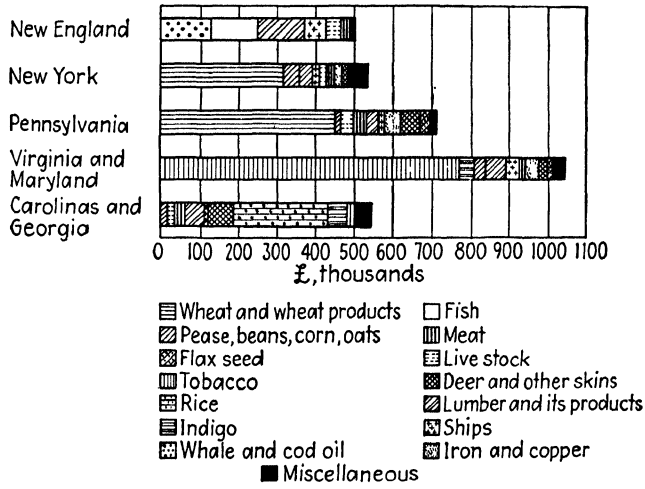


FIG. 7. Exports of the colonies showing chief products. Estimated average annual value around 1768.

from Africa, and wines, salt, and some fruits from southern Europe or the Wine Islands.

A general idea as to the volume and direction taken by colonial foreign trade can be obtained from the chart on page 130 for the year 1769, though allowance must be made for the fact that imports from Great Britain into the New England and middle colonies were then much less than usual because of the nonimportation agreement. Normally probably two-thirds of all colonial imports came from Great Britain and the larger share of the remainder from the West Indies. Of the exports over one-half went to Great Britain, about a quarter to the West Indies, and a fifth to southern Europe.

Ships engaged in this trade were primarily concerned in plying between ports where an adequate cargo was available to avoid the loss of sailing in ballast. Also, being solely dependent upon sail, as well as being more difficult to control than later types of sailing vessels, their course was closely determined by the trade winds. Hence ships sailing from western Europe

went southwestward till off the coast of Africa about the Madeiras and then turned westward toward the West Indies or Carolina. On the return, taking advantage of the Gulf Stream as well as the trade winds, they would sail up the South Atlantic coast and then turn eastward toward Europe.

The resulting trade routes were quite varied but three main divisions can be distinguished: (1) Much the most important of all was the direct trade between the colonies and Great Britain. The greater share of this was with the Southern colonies, carried on mainly by English merchants in English-owned ships. Most of the exports were enumerated products with tobacco far in the lead; most of the imports were manufactured goods.

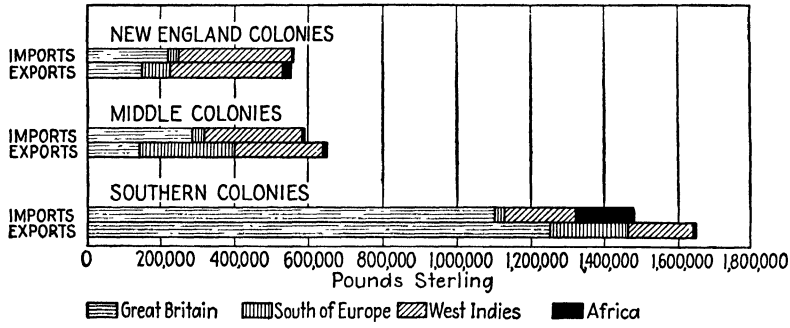


FIG. 8. Imports and exports of colonies in 1769, by regions.

(2) The trade based on the West Indies, most of which was with the Northern colonies and was carried on by colonial merchants in colonial ships. Part of this trade was direct but part followed a triangular course, sailing from the West Indies to England before returning to the colonies, though the ship might be sold in England. This triangular route to secure full cargo was chosen because the volume of colonial exports to the West Indies was greater than the volume of imports thence, while the volume of West Indian exports to England exceeded that of the imports from England. The chief exports to the West Indies were agricultural products, fish, and lumber products; the chief imports thence were sugar, molasses, rum, minor quantities of other tropical products, salt, and slaves. (3) The third main trade route was based on the commerce with southern Europe. Here the volume of imports was insignificant as compared with that of the exports, hence ships seldom returned direct. Some carried Spanish goods to England and then, if the ship was not sold, brought manufactures to the colonies; some carrying salt and wines might return home by way of the Wine Islands and the West Indies. The chief exports to southern Europe were fish, grain, rice, and certain lumber products. Minor routes included the direct trade with the northern fisheries and the slave trade taking out rum and usually returning by way of the West Indies.

The Balance of Trade and of International Payments. The term "balance of trade" refers to the relation between the value of the exports and the value of the imports of a country in its trade with the rest of the world or with a given country. Commonly this balance is the chief factor entering into international payments. But there are numerous other so-called "invisible" items that necessitate international payments such as loans, shipping charges, expenses of foreign travelers, immigrant remittances, insurance in foreign companies, and war outlays abroad. The balance on all these invisible items together with that on commodity trade make up the balance of debits and credits in the account of a nation with the rest of the world or the balance of international payments.

All the foreign credits that a nation secures by the sale of goods, securities, services, etc., to foreign countries provide the basis on which that country can draw bills of exchange on other countries and so determine the supply of such bills. All the debts due abroad for purchases of any sort elsewhere create a demand for foreign bills of exchange to be used to pay those debts, since it is cheaper to make payment by shipping such bills rather than specie. The price of foreign bills or rate of exchange is fixed in the market by the supply created by foreign credits and the demand arising from foreign debits. When the supply is small relative to the demand, the price, when quoted in terms of domestic currency, will be bid up to the point, known as the "gold export point," where it is just as cheap to ship gold as to pay a higher price for bills, and conversely if supply exceeds demand. Thus the international flow of specie is determined by the total balance of debits and credits existing at a given time, and the universally accepted specie is the means for settling any balance not provided by the supply of bills.

In this connection it is important to keep in mind the oft-neglected principle that a nation, just like an individual, cannot continue indefinitely to buy of others as a group more goods or services in value than it can sell to others as a group; conversely, the ability of other countries to buy of it is limited by their opportunity to sell to it or to other nations. A nation, like an individual, may be able for a while to buy more than it sells if it can borrow of others, but in the last analysis its power to borrow will depend on its ability to sell to others.

The failure to give sufficient recognition to this principle was one of the most serious errors of the mercantilists and their commercial policies. In the case of the colonies this principle was involved by the question how the colonies could find means to buy English goods unless England bought an equal amount of them or allowed them enough freedom in their export trade so that they could find a trade elsewhere with a sufficiently favorable balance to cover any unfavorable balance due England. Otherwise the colonies would have to manufacture for themselves; but England did not want

them to do that either. The unwilling and partial recognition of the hard facts of the situation arising from the economic principle involved even forced some of the mercantilists to admit their dilemma and was largely responsible for various modifications of trade regulations and for many failures to enforce the law.

The actual situation as regards the balance of international payments that existed in the colonies can be described only in general terms owing to the lack of adequate data, and the account may be confined to the situation in the eighteenth century. Up to about 1745, the official figures indicate that the total balance in the trade of the colonies with Great Britain was fairly even, but from then on to 1774 a highly unfavorable balance developed, which had risen to an annual average of £1,089,290 in the decade 1765–1774 (see chart on page 128). In this trade with Great Britain the Southern colonies were able to show a substantial favorable balance during practically all of this period; in the Northern colonies the unfavorable balance steadily rose. The more rapid rise of this latter after about 1745 was largely responsible for the growing total of the balance due Great Britain thereafter. In addition to this, the trade with Africa also showed an unfavorable balance.

The rapid growth of this debit trade balance was largely made possible only by the simultaneous advance in the favorable balances in the trades with the West Indies and southern Europe (see chart on page 130 [1]). It was chiefly through these two lines of trade that the colonies obtained the specie, bills of exchange, or goods that were used to pay the balances due to Great Britain.

The invisible items probably furnished some additional credit balances. The sale of ships yielded a substantial credit, and possibly shipping charges showed a credit balance, while that for marine insurance is more likely to have been on the debit side. It is difficult to judge the net outcome resulting from the extension of English trade credit, which was very large in the Southern colonies, and from the investment of English capital with the resulting interest charges, but it seems probable that the new investments and trade credits exceeded the debits arising from interest charges and the repayment of old loans and investments. In periods of war there were also credits arising from the sale of colonial supplies to the British army and navy and any English reimbursement of colonial expenses. Throughout the period, however, the balance of commodity trade was the chief factor in determining the balance of international payments and the movement of specie.

[1] Although this chart for the year 1769 shows a total balance in the West Indies trade that was slightly unfavorable, this was not usual. Also it is to be remembered that in this year imports into the Northern colonies from Great Britain were far below normal.

Chapter IX

COLONIAL FINANCIAL INSTITUTIONS

Introduction. Capital being one of the agents of production, and one that has become increasingly important in recent times, it is socially desirable that conditions shall be such as to foster its accumulation and further its most economical use. This was particularly true of the situation faced by the colonies, for capital was relatively scarce there; in fact it continued to be scarce in the United States relative to the nations of western Europe down to the First World War. It is important in following the subsequent narrative to note the various means by which this disadvantage was eventually overcome.

As they affect the conditions determining the accumulation and efficient use of capital, various financial institutions play a vital role in the economic order. Prominent among these are the various credit institutions, in modern times particularly the banking system, through which lending and borrowing are carried on. Although some loans are obtained for consumption purposes, most loans are to obtain funds for purposes of production. Through credit institutions, the control of economic resources is shifted to those who are likely, though not certain, to make the most economical use of them. As with any commodity so with lendable funds, the more efficient the marketing organization, the easier it is for lenders and borrowers to get together, and the more complete their information, the greater is the chance of promoting the best allocation of the use of such funds. In the colonies such an organization was far from being attained, the total lack of any real banking system being the most serious deficiency.

Wherever trade exists, some form of money or circulating medium is desirable to avoid all the inconveniences arising from dependence upon a system of barter. The types of money that can be used, however, vary greatly in the efficiency with which they function and, unless the monetary system is a sound one, it may cause the most serious derangements in the functioning of the economic order. The colonies constantly suffered from the unsatisfactory character of their circulating medium, and the subsequent history of the country will be found to be replete with illustrations of the difficulties encountered in trying to secure an efficiently functioning monetary system.

The Supply of Capital. The supply of capital possessed by a country is a product of the past savings which have been converted into goods to be used in the further production of wealth. Some of these capital goods, like raw materials, may be exhausted with one use; others, like machines and buildings, may last for years or even centuries; but most must eventually be replaced in one form or another if the total supply is to be maintained.

An increase in the supply of capital beyond such maintenance depends (1) on the amount of wealth produced that it is possible to save—the savable fund—and (2) on the willingness of those who can save to save—the effective desire of accumulation. With a given minimum outlay required to maintain existence, the savable fund will be increased by all the things that tend to increase the per capita productive output of a country. The effective desire of accumulation depends on all those conditions that make a person willing to forego the immediate consumption of wealth and a higher standard of living for the sake of having more for himself or his dependents in the future. Those conditions include such things as the development of foresight for possible future wants, the facilities and opportunities for investment, and such social security as makes it probable that one who saves, or those for whom he saves, will in the future enjoy the fruits of his sacrifice.

As has previously been pointed out, the process of establishing the colonies required a considerable outlay of capital which was provided by the "adventurers," proprietors, and others who promoted colonization and by those who migrated to the colonies with their accumulated savings. Europe thus furnished the initial supply of capital. The subsequent increase came from two sources: the additional inflow from Europe and the accumulation from savings within the colonies.

The first of these sources, though it cannot be measured, was relatively unimportant. The steady inflow of immigrants with their savings brought something, but most of these had little in the way of worldly goods to bring. Some foreign capital went into the development of landed estates and a small amount into manufacturing while other lines of activity doubtless attracted a little. Presumably the largest inflow went into trading enterprises, chiefly in the South, and the total of trade credits outstanding just before 1775 was estimated at from £3 to £5 million.

Most of the increase in the colonies' supply of capital came from what they were able to save themselves. With the advance in all lines of economic activity, the per capita output of wealth rapidly rose and the savable fund was augmented. Another factor contributing to the growth of capital was the comparative freedom from the destruction of wealth through the ravages of war, from which Europe suffered so much. Such losses as occurred

fell chiefly on the colonies' foreign commerce; aside from Indian depredations, war's destruction of wealth in the colonies was slight. Nor did their outlay on war elsewhere or that for defense purposes in time of peace greatly deplete their economic resources. Though a militia system was maintained, the loss of labor involved in keeping a standing army was avoided. In the main, the burden of defense was met by Great Britain.

These conditions favorable to the increase of the savable fund were supplemented by various conditions which strengthened the effective desire of accumulation. Generally speaking, the colonists were an ambitious and thrifty group; most immigrants had come to the colonies to improve their economic condition, and saving for this purpose was made easy by the high productivity of labor and enterprise. The Calvinistic ideal which encouraged thrift inspired large groups and the ascetic morality of the Puritans and Quakers frowned upon extravagant expenditure and high living. The chief exception to this attitude was found among some of the hospitable, luxury-loving planters who may have lived beyond their income. Saving was also encouraged by the comparative absence of property losses through war, the stability of governmental institutions, and the general security of property rights as then recognized. It should be noted, however, that despite these conditions favorable to saving the colonists in general as time went on used an increasing amount of the savable fund for consumption purposes to raise their standard of living. Yet the economic advance of the colonies was so rapid that, even with such deductions, the accumulation of capital advanced at a rapid rate, especially during the eighteenth century.

The Demand for Capital and Facilities for Investment. In the colonies, as in every new and rapidly developing country, the demand for loanable funds to be converted into capital goods or other forms of wealth was great. The facility for investment afforded by savings banks had not yet come into existence, and the general lack of means for buying life insurance deprived the colonists of that device for saving for future needs. Also there were very few securities in which one could invest, those available being practically limited to the provincial evidences of indebtedness, though occasionally English securities were bought. In consequence, most people with money to invest either loaned it to individuals on the security of personal notes and mortgages or put it directly into some business enterprise or a speculative purchase of land. In the absence of credit-rating institutions and easy means of communication, personal loans were largely confined to individuals known to the lender and living in his vicinity, though mercantile credits often had a much wider range.

Direct investment in business enterprises was made much easier and simpler because most lines of business required only a small amount of

capital. Commonly it was possible for a competent person to accumulate from his own savings the capital needed to expand his business, but if not, resort might be had to personal loans or a partnership arrangement. A very common practice was for two or more people to undertake a joint adventure to carry on a specific transaction. The enterprises requiring the largest amounts of capital were those engaged in foreign trade, and in this line a series of successful voyages proved sufficient to build up many a large fortune. Others secured needed capital by organizing partnerships. The equipment necessary for a large plantation also required considerable capital and, when the owner's resources were inadequate, this was likely to be obtained by borrowing. In the Northern colonies a man of wealth, especially if a merchant, often advanced money through the form of personal loans, joint adventures, and partnerships to a great variety of undertakings.

It was previously noted that in 1545 England, abandoning the medieval objection to taking interest, first made this lawful, and fixed the maximum rate at 10 per cent. By 1713, this rate had been reduced to 5 per cent where it remained until the repeal of the usury acts in 1854. Following this precedent, practically all the colonies fixed legal interest rates. In 1661, Massachusetts set the rate at 8 per cent, in 1692 Maryland adopted 6 per cent; during the eighteenth century the latter rate was the one most generally chosen, though by 1776 some colonies allowed 7 or 8 per cent and in Virginia 5 per cent was the maximum. In practice there were numerous ways for evading the law and, in view of the scarcity of loanable funds and the fact that full enforcement of the law in any colony was only likely to increase that scarcity, it is probable that evasion was very widespread. According to Franklin, the prevailing interest rates were between 6 and 10 per cent.

The Circulating Medium of the Colonies. Money facilitates exchange by performing certain functions usually classified as (1) serving as a standard of value or common denominator by which the values of goods are measured, (2) serving as a standard of deferred payments, whereby funds borrowed to be returned later are specified in terms of this standard, and (3) serving as a medium of exchange to obviate the difficulties involved under a system of bartering goods for goods. Sometimes, too, money is used as a storehouse of value, that is, it affords a convenient means for keeping wealth.

The problem of securing a circulating medium that would properly serve all these functions, especially the second, was a serious one throughout the colonial period, and the unsatisfactory character of the various mediums used proved a constantly disturbing factor in the economic life of the period. To understand the history of the colonial circulating medium, at

least three important facts must be kept in mind since each had a marked influence upon that history and, in truth, on much of the subsequent monetary history of the country as well.

1. A currency made up of gold and silver specie is expensive and, as the colonies did not produce these metals, they had to obtain them elsewhere by trade. Since the colonies were poor and wished to lessen this expense, cheaper substitutes, such as paper money, were popular.

2. Capital was scarce and credit facilities poor, while many believed that these deficiencies could be overcome in part by a more abundant supply of money. Also there was a large debtor class which could pay off its debts more easily if the quantity of money were increased so as to decrease its value. This, it will be seen, has been an influential factor throughout the country's monetary history.

3. The revenue of the colonial governments was small and the people were strongly opposed to taxation. Hence, especially in times of unusually heavy expenditures, there was a great temptation to issue paper money or bills of credit which also might enter into the circulating medium.[1] In fact, as will repeatedly be seen, the disturbing reaction of the fiscal needs of the government upon the circulating medium has been an outstanding feature of the country's economic history ever since.

Commodities Used as Money. In the earlier period a very general dependence on the system of barter was almost inevitable, and bartering for goods continued to be very common, especially in the rural districts, throughout the period. The obvious inconveniences and waste of time involved soon led to the adoption of some form of money. Since specie was scarce as well as expensive, resort was had to such commodities as were immediately available and widely exchanged in each section, such as tobacco, wheat, corn, cattle, beaver skins, or the Indian wampum. Laws provided that various dues and taxes could be paid in such commodities, and at times official salaries were set in terms of such goods.

The characteristics desirable in a good circulating medium are well illustrated by the unsatisfactory manner in which these commodities performed the functions of money. (1) Stability of value is the most desirable of all the characteristics of an efficient circulating medium, since lack of it produces far more serious consequences than any other deficiency. Not even gold and silver are ideal in this respect, but the commodities used as money in the colonies were generally subject to wide and frequent fluctuations in value. The laws commonly specified the price at which any commodity could be received in payment for taxes. If the market price fell below this, taxes

[1] "Why tax the people," said a member of the Virginia Assembly, in effect, "when the colony can pay its expenses by setting the printing press at work?" Such an appeal has not lost its force even today.

were paid in the commodity; if it rose above this, the taxpayer sold the commodity and paid in money. Thus the revenues were apt to suffer. The Virginia parsons whose salaries were payable in tobacco suffered similarly. Such an unstable standard of value and of deferred payments tended to upset all business calculations, brought unjust gains and losses to debtors and creditors, and led to endless economic disorders. (2) Homogeneity, or uniformity in quality, is another desirable characteristic of money, but this was also lacking in the commodities used for this purpose. Tobacco, wheat, or beaver skins varied greatly in quality, and when efforts were made to establish standardized grades there was always room for endless dispute. (3) Durability in these commodities was generally lacking as well; most of them were more or less perishable and, unless they were promptly disposed of, much care and expense might be involved in trying to prevent deterioration. (4) Lack of easy portability caused added trouble and expense, while the bulkiness might necessitate warehouses in which to store such commodity money. On the other hand, most of these commodities did possess a fair degree of (5) divisibility, (6) cognizability, and unlike paper, had (7) value independent of their use as money. Though some commodities, notably tobacco, continued to serve as money throughout the period, their inability to perform this function efficiently led to efforts to introduce a better circulating medium.

Colonial Specie Money. Practically no specie money was coined in the colonies, the chief exception being the pine-tree shilling of Massachusetts minted between 1652 and 1684. England opposed such action as infringing upon royal prerogatives, while the lack of any gold and silver production in the colonies combined with the cost of importing and minting foreign bullion gave little incentive for such action. In consequence, such specie as got into circulation was of British or foreign origin.

The British coinage, based on the system of pounds, shillings, and pence, became the money of account in terms of which values were reckoned in all the colonies, but the supply of British coins was always very meager as their export was prohibited by England. The bulk of colonial specie was of Spanish origin, owing primarily to two things: (1) The Spanish colonies were then producing most of the world's output of silver and from this source it was being distributed over the world through the channels of trade. (2) The trade of the colonies with the West Indies showed a favorable balance, and a portion of this was settled in specie, chiefly of Spanish mintage. The favorable balance in the trade with southern Europe doubtless brought in some specie, though it was more likely to be settled by bills of exchange drawn on England or by the purchase of goods to be sold in England.

The basis of the Spanish coinage was the silver piece of 8 reals until

about 1728 when Spain began to coin the dollar in its place. The colonial use of the Spanish dollar was so widespread that this coin, with a slightly smaller bullion content, was later adopted by Congress as the unit of our monetary system. During the eighteenth century, the large output of gold from Brazil resulted in a substantial inflow of Portuguese gold coins into the colonies, chiefly the johannes, or joe, and the moidore, equal, respectively, to about 16 and 6 Spanish dollars. In addition, the colonies received some French coins and a varied assortment from the mints of other countries. Though the total supply of specie in the colonies is unknown, it has been estimated at around $1 million in 1700 and at $10 to $12 million about 1775.

As these foreign coins did not coincide with the English pounds, shillings, and pence, it complicated all reckonings. This also gave an opportunity for passing laws designed to attract foreign coin by overvaluing it. Thus the Spanish piece of eight had a bullion content equal to about 4*s.* 6*d.* sterling; yet the various colonies passed laws specifying that it was to be accepted at a higher value ranging from 4*s.* 8*d.* to 8*s.* Each colony hoped by so doing to attract the Spanish silver; but they either failed to understand or ignored the fact that any such gain could be only temporary, since in the long run the only result would be a higher level of prices, and that in their rivalry they would only counteract one another's efforts. Like so much economic legislation in the country's history, certain results were sought by the easy method of passing a law without first trying to obtain a clear idea of the economic forces and principles involved in the problem upon the action of which the ultimate success of the law would depend. As one governor of New York wrote, " 'Tis not in the power of men or angels to beat the people of this continent out of a silly notion of their being gainers by the augmentation of the value of plate." The colonial rivalry in these measures was most active near the end of the seventeenth century. In 1704, a royal proclamation designed to stop it set 6*s.* as the maximum value at which the piece of eight was to be accepted in the colonies—whence the term "proclamation money"—but outside of Virginia and Maryland this limitation was evaded, despite an enforcing act in 1708.

Complaints about the Scarcity of Money. The colonists were often complaining about the scarcity of money and, as this is a complaint that constantly reappears and had manifold reactions in later history as well, it is essential to understand the causes for the complaint and the extent to which they can be held to justify an effort to increase the supply of money or credit.

The most common reasons back of such complaints may be classified as follows: First, the scarcity of capital and the difficulty which many had in securing loans tended to make interest rates relatively high. Except

temporarily, this difficulty could not be overcome by increasing the supply of money, since in the long run the increase tended to raise the price of goods and necessitated borrowing just so much more to buy the same quantity as before. Second, debtor groups always favor an increase in the supply of money or easy credit, since the resulting higher prices and lower interest rates will enable them to pay off their debts more easily; conversely, creditor groups will lose thereby and so oppose this. Whenever there has

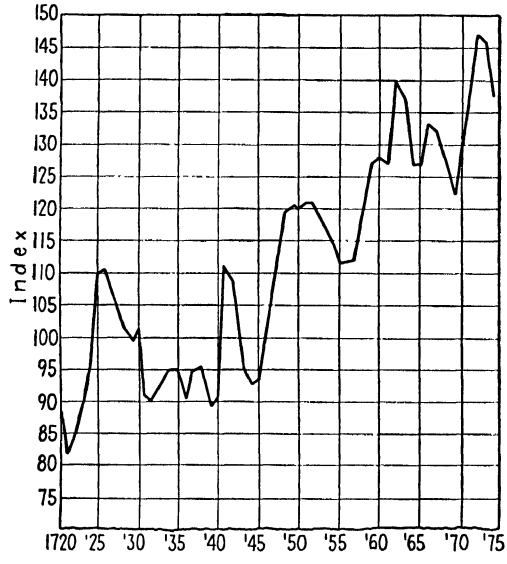


FIG. 9. Annual indices of wholesale prices of 20 commodities in Philadelphia, 1720–1774 (arithmetic average). Base: monthly average, 1741–1745. (*Based on Bezanson, Gray and Hussey, "Prices in Colonial Pennsylvania."*)

been a marked fall in prices between the creation of a debt and the time it falls due, the debtor can justly claim that a measure to raise prices to the former level is equitable so far as the debtor-creditor relationship is concerned. Historically it is under such conditions that the most insistent demands for more money have arisen. Obviously, in a converse situation following a marked rise in prices, creditors could justly claim that prices should be reduced, but historically such claims have been unpopular and received scant recognition. Though an increase in the circulating medium may have little effect in removing the fundamental causes of a depression, its stimulating influence will tend to provide some relief, even if only temporary.

Moreover, there are cases where the immediate cause of the difficulty is a rather sudden decrease in the available supply of money. There has not

been sufficient recognition of the frequency with which such cases arose in the colonies where, in the small communities with poor facilities for securing loans or specie from elsewhere, the effects of war, or a severe drop in the price of a dominant staple, or the retirement of a large issue of paper money, might seriously curtail the available supply of money, and where in consequence an increase might have a beneficial stabilizing influence. Much less frequent are the cases where long-run trends create a relatively enduring scarcity of money and a prolonged decline in the general price level, in which measures designed to increase the circulating medium may be considered justifiable.

A fourth cause of complaint may arise because some particular element in the circulating medium essential for certain transactions has become scarce, such as small change, or one of the metals in a bimetallic system, or specie in any form. In the colonies the last-named was the usual basis for this type of complaint. In the eighteenth century especially, when resort to paper money had driven specie out of general circulation in many colonies, some event, such as the reaction of war on foreign trade, might quickly drain off the small supply of specie kept in private hordes and cause much difficulty in meeting payments where hard money was required.

It will be clear from the foregoing that complaints about the scarcity of money need to be approached in a very skeptical attitude when the question as to their justification is under consideration. Some of the difficulties that are the basis of such complaints, as the scarcity of capital, cannot be remedied by more money; most of the other causes for complaint, where there can be said to be a legitimate basis, justify only a temporary increase. The important thing in such cases is to make sure that any increase is only temporary and not excessive, for experience shows that this is very difficult to accomplish. It is always easy to find large groups that will support inflationary issues while deflationary measures are likely to be highly unpopular, as will frequently appear in the subsequent narrative.

Colonial Paper-money Issues. The first issues of paper money and, later, the largest issues were due, not to an alleged scarcity of money, but to the need arising from heavy war expenditures, the general unwillingness to meet this need by adequate taxation, and the lack of ready facilities for borrowing by other means than resort to the printing press. There then began that disturbing reaction of the fiscal needs of the government upon the monetary and credit system which has continued to be a source of trouble down to this day.

The first issue was authorized by Massachusetts in 1690 to meet the demands of soldiers in the Canadian expedition who threatened to mutiny because of lack of pay. In 1703, South Carolina issued notes to meet the outlay involved by the attack on the Spaniards, and before Queen Anne's

War was over New Hampshire, Rhode Island, Connecticut, New York, New Jersey, and North Carolina had joined the list. Though not generally made full legal tender, these bills of credit were usually acceptable for taxes and commonly entered into the circulating medium. Ordinarily, the laws provided for the levying of taxes to secure funds to retire these issues—a policy favored and usually required by the British authorities. King George's War led to new issues for defense, including the first for this purpose in Pennsylvania and Delaware. Finally, the French and Indian War, during which Virginia and Georgia fell back upon this expedient, led to a larger batch of issues than ever before.

A second type of paper-money issues was the notes put out in response to the complaints about the scarcity of money and credit. Though these were seldom so large as those due to fiscal needs, they appeared in nearly all the colonies. These notes were commonly issued as loans to individuals in limited amounts, bearing around 5 per cent interest, repayable over a period of years, and secured by land or other property. The interest that the colony received on these loans reduced the need for taxes—in New Jersey for a period it even eliminated that need—and so made the scheme the more popular. The first regularly authorized public loan bank of this type was started by South Carolina in 1712, and the plan was so popular that it was soon adopted elsewhere. Massachusetts took it up in 1714; the next year Rhode Island started upon her notorious career which brought forth nine such issues; New Hampshire followed suit in 1717. A period of depression led Pennsylvania, Delaware, and New Jersey to authorize loan issues in 1723; North Carolina followed in 1729, but in Maryland the opposition to such action was not overcome until 1733. In 1737, New York authorized an issue to be used chiefly for loans but partly to pay debts. Georgia adopted the device in 1755, and Virginia would have also but for the governor's veto.

A third form of paper money, similar in character and purpose to the public loan bank issues, was that put out by groups of private individuals. These groups were commonly called "land banks" as their notes were usually secured by land. Such issues were never large in amount and were in vogue only during the decade 1730 to 1740 when they appeared in New Hampshire, Connecticut, South Carolina, and Massachusetts, those of the last-named colony being the most famous. The violent controversy aroused there led to an appeal to England, which in 1741 resulted in prohibiting all such private issues by extending to the colonies the Bubble Act of 1720.

The extent to which these various types of paper money were issued in the different colonies varied greatly. In New Jersey, Pennsylvania, Delaware, and Maryland the issues were rather carefully controlled; at times there was substantial depreciation, but generally this was so moderate that

it has been claimed that the resort to paper there had a beneficial stabilizing influence. In New York the issues were moderate up to 1746 when a marked depreciation set in; in Virginia, though starting late, the issues soon became excessive. The worst excesses appeared in the Carolinas and in New England. In the former, paper money fell to about one-tenth its value in sterling; in Massachusetts and Connecticut by 1750 the depreciation was about the same. Massachusetts then took advantage of the receipt of bullion sent over by England to reimburse the colony for its outlay in the recent war and redeemed all of its paper money at the ratio of about 7½ in paper for 1 in specie. Similar action was soon taken by Connecticut. The most extreme case was Rhode Island, where there were fewer governmental checks on popular demands than elsewhere, and nine issues were authorized before England intervened to stop the process after the depreciation on the early issues had reached 23 to 1.

The experience of the colonies only too well illustrates the temptations and dangers involved in the resort to paper money. Once started on the downward path, the demands to continue were hard to resist. Often new issues were put out before the old had been retired through the receipts from taxes—sometimes they were to retire older issues falling due—and, since the levying of taxes was constantly postponed, the outstanding issues often steadily rose in amount. As depreciation set in, specie was driven from circulation and prices rose. The rise in the price level was likely to cause new complaints of the scarcity of money and demands for still more. As Bullock says, "The experience of the colonies demonstrates conclusively the impossibility of satisfying the desire for 'more money' by issuing paper currency." Theoretically, in such a situation as existed in the colonies, where credit institutions were poorly developed and where the supply of money was subject to rather sudden and violent fluctuations, there was more justification than usual for resort to paper issues as a stabilizing factor provided they were properly controlled. Practically, such control is extremely difficult at best, and in the colonies it was seldom really attempted.

In addition to the uncertainty and disorganization of economic life inevitably arising from an unstable circulating medium, the depreciated paper was primarily, though not in every case, responsible for the actual scarcity of specie of which the colonists so frequently complained. Usually the blame for this scarcity was put on the outflow of specie to England to meet the unfavorable trade balance, thus ignoring the principle that even in those days there was sufficient freedom in the movement of goods and specie in international trade so that the colonies' specie would not have been permanently drained off had they chosen to remain on a specie basis. Though this principle had not secured general acceptance until the nine-

teenth century, there were those in the colonies who clearly recognized the real cause of the scarcity of specie. In proof, among other things, they pointed to the fact that, when Massachusetts retired her depreciated paper and forbade the circulation of that of her neighbors, specie returned to general circulation.

Because of the widespread evils that arose from these paper-money issues and, more especially, because of the resulting losses to British creditors on debts payable in the colonies, England finally resorted to more determined measures to put an end to them than those exercised through the governors. After the private bank issues had been made illegal in 1741, the second step was taken in 1751 when Parliament forbade the New England colonies to issue any more bills of credit and declared that thereafter no bills of credit could be made legal tender. Exceptions allowed issues of treasury notes to meet current expenses or the emergencies of war, but only when accompanied by safeguards to ensure prompt retirement. All outstanding issues were required to be called in at the date of their maturity.

In 1764, Parliament took the third step by extending this prohibition to the rest of the colonies, but without providing the same exceptions. Despite their fundamental soundness in view of the past abuses, the colonists looked upon these measures as a great hardship and an infringement of their rights. It must be admitted that the act of 1764, coming just when a post-war depression was setting in, was unfortunately timed; it increased the difficulties of the next few years and accentuated the hostility toward England. Probably the number of colonists who felt that they were injured by the restrictions on paper-money issues was larger than in the case of any other essentially economic restriction imposed by Great Britain at this period.

Other Forms of Credit Instruments. In addition to the paper-money issues, the colonists used other credit instruments that often functioned as substitutes for money. As there were no commercial banks, borrowing from private individuals was widespread and the promissory notes thus created passed on endorsement from one person to another. More frequently, the provincial treasury bills issued to pay debts were thus used. As trade expanded, domestic bills of exchange came into use. Ordinarily, these were based on a sale of goods but sometimes they represented the making of a loan. The same was true of foreign bills of exchange which were widely used and saved the risks and greater expense in shipping specie.

The Economic Efficiency of Colonial Currency. It is obvious from the foregoing description that the colonies had to deal with a circulating medium which in many ways failed to function in an efficient manner. In some sections, the difficulties of barter or the use of commodity money continued to the end of the period. When specie was used, the numerous

kinds of foreign coin had to be reckoned in terms of the English money of account; where laws fixed the ratio at which such coins were to be accepted, they varied from time to time as well as from colony to colony. If the specie had been clipped too much, as was often the case, it had to be weighed and the value figured accordingly. The paper-money issues were even more numerous and confusing while their value was constantly fluctuating. If a person inquired for the price of a commodity, he might be asked if he were going to pay in hard money (that is, specie), barter, credit, or paper money and the price quoted would vary accordingly. The mere awkwardness and waste of time involved were the least of the evils. The uncertainties and needless financial risks, thus created, affected a vast volume of business transactions; creditors or debtors suffered, trade was hindered, credit impaired, the free flow of capital restricted, and widespread unjust losses and undeserved gains resulted.

Chapter X

THE GOVERNMENT AND ECONOMIC LIFE

Introduction. It was pointed out in Chap. I that an understanding of the economic life of any people involves some consideration of the interaction between the economic conditions and the political, religious, and other social conditions. Of preeminent importance among these other phases of social life because of their influence on economic life are the political institutions that constitute the state or government.

In fact, without the state the economic life of modern society would be impossible; it plays a part in that life in so many and in such direct ways that it might be considered an economic as well as a political institution. It functions (1) in what may be called a "positive" way by itself providing many of the economic goods and services that society wants, and (2) in a negative way through the regulation and control of innumerable lines of economic activity. Since its activities may involve large expenditures, (3) it reacts upon the economic life by the fiscal measures adopted to secure the funds that it requires. In the preceding chapters dealing with different phases of colonial economic life there has been frequent reference to governmental action, chiefly in the form of legislation, which was related to each of those phases. In this chapter the purpose will be to provide a summary account of the general framework of government such as is necessary to understand what it could and did undertake and then to give a very general statement of the character and lines of action actually adopted.

The Framework of Government. The outstanding feature in the development of the political institutions in the colonies was the relatively high degree of local autonomy and self-government that was attained. This was accompanied by an essentially provincial spirit which put loyalty to the individual colony above all else, increased intercolonial rivalries, and minimized the obligations to the British Empire. This was the result of many interacting causes, economic, political, psychological, geographic, and social. In the first place, England never tried to exercise as extensive control over her colonies as did France or Spain over their possessions, and the growth of her colonies was largely a product of private enterprise and individual initiative. The distance from England and the slow means of communication made close supervision of the details of government impossible. Also, in the seventeenth century the mainland colonies were looked

upon as unimportant outposts of the rising empire; in the next century, under the policy of "salutary neglect" which prevailed until 1764, they were rapidly developing a vigorous political life of their own.

This last development represented a second respect in which the British colonies in the New World differed very appreciably from those of other nations—their inhabitants fought far more vigorously than those of other colonies to maintain and to increase such freedom of self-government as England would allow. In part this was a product of English traditions of freedom, but the effect of those traditions was greatly augmented (1) by the selective process which brought to the colonies groups that sought greater political, economic, and religious freedom, (2) by the set of conditions in the colonies that tended to promote the attainment of such freedom. The fact that the white population increased far more rapidly in the British colonies on the mainland than in any other colonies, British or foreign, added to the effectiveness as well as to the extent of their demands for freedom of self-government. The result of these various conditions gave the colonies a more democratic system and a greater degree of self-government than was enjoyed by the people of England.

Franchise Rights. The cornerstone of a democratic government is freedom and equality in enjoyment of the right to vote. The democracy of the colonists fell far short of this ideal. Women were not even thought of as entitled to this right, and of course the slaves had no such privilege. In the case of free males, some property qualification was almost universal and usually took the form of a freehold ownership of land, ordinarily at least 25 to 50 acres, or possession of other property worth £40 or £50. While land was easily obtainable, few were disfranchised, but toward the close of the period, as land in or about the larger communities rose in value, many artisans, mechanics, and common laborers lacked voting rights. Religious restrictions were also common. Catholics and adherents of non-Christian sects were generally disfranchised, and in some colonies the Quakers. In New England, outside of Rhode Island, membership in the Congregational Church was required in the earlier period, though modified later in favor of good moral standing.

Equality of Representation. Real democracy in a representative form of government involves equality in representation as well as in franchise rights. In all the colonies, as soon as the population attained appreciable size and began to spread out so that it was impossible for all the voters to assemble in a general meeting, a representative form of government was set up to control the general affairs of the colony; local matters were delegated to the towns, parishes, or counties, according as the density of settlement made one or another the best unit for local government.

The first representative assembly was established in Virginia in 1619

under the company charter; Massachusetts Bay established hers in 1634. In Rhode Island and Connecticut, assemblies were established by a social compact later confirmed by royal charters; elsewhere the proprietors or the crown granted this right. Above the popular assemblies were the governors and, except in Pennsylvania, Delaware, and Georgia, the small second body known as the council. After 1691, when Massachusetts lost the right, only Rhode Island and Connecticut chose their own governor; elsewhere he was appointed by the crown or the proprietor. The governor appointed the council, except in Massachusetts, called and adjourned the assembly, had a veto over its acts, appointed many officials, and had general oversight of law enforcement. Above the governor stood the proprietor or the British authorities claiming power to disapprove colonial laws, while Parliament could pass enactments applicable to the colonies.

Despite the substantial powers vested in the governors and the authorities in England, the control actually exercised was limited in various ways. In practice, the most important limitation arose from the control exercised by the assemblies over the revenues required to defray most provincial expenses, including the salaries of the governor and most of the royal officials. In the constant struggle between the opposing interests of the colonists and the crown or the proprietors which marked colonial history, this control of the purse was the chief factor enabling the colonists to protect themselves. Often the governors, incompetent or seeking personal gain, ignored the instructions received from England, while those who sought to carry them out seldom obtained the needed support from the British authorities. Thus, aided by incompetence and neglect, the colonists were able to secure an unusual degree of self-government.

The original distribution of members in the colonial assemblies provided a fairly equal representation for the voters in the different units of local government, but as population grew and new settlements arose, there developed a marked unwillingness to grant such sections a representation in the assemblies proportionate to their growing population. With the eighteenth-century movement of settlers into the interior this problem came to the front, especially in the colonies from Pennsylvania southward. In Pennsylvania the older southeastern counties controlled the assembly which, led by the dominant Quaker aristocracy, steadily refused to grant the newer interior settlements a fair representation; much the same attitude was assumed toward the growing group of artisans, mechanics, and common laborers in Philadelphia. Similarly in the Southern colonies the tidewater region, which controlled the assemblies, was unwilling to give the settlers in the upland sections, who were radically different in racial stock, religious views, and economic interests, a representation in proportion to their numbers. These interior groups felt that their welfare in such

matters as the land laws, taxation, roads, monetary affairs, and protection against the Indians, were largely ignored and on more than one occasion threatened revolt, as in the case of the Regulators in the Carolinas in 1769.

Although some of the measures against which these frontier settlers protested could be blamed on the proprietors or the crown, these groups probably suffered much more from the undemocratic character of the provincial governments dominated by the coastal regions than from any action taken by the English authorities. The resulting discontent among the back-country districts and the city working class played an important part in the social unrest and political ferment that finally broke forth in the Revolution.

The Government and Economic Activities. The branch of government that came into the closest and most frequent touch with the daily economic life of the people was the local government provided by the town, city, parish, and county. In New England the town was the important unit, and the county had relatively few functions. In the South the county performed nearly all functions of local government, and the smaller unit, generally called the "parish," was chiefly concerned with the support and management of the church and the poor. In the middle colonies, both town and county might be active, though the latter was the more important.

The New England town where all the voters gathered in the town meeting to elect officers and settle local affairs was the most democratic of colonial political institutions, and it performed more functions and exercised more control over the life of the community than was attempted outside the cities in any of the other colonies. In part, this was a product of the more compact type of settlement which both facilitated united action and created a greater need for social control; in part, it was due to the homogeneity of the group and the social ideals with which they were so strongly imbued.

The town established the schools and the church, provided for the care of the poor, looked after the roads, managed the common lands subject to the proprietors' rights, levied taxes, elected the town officers and the representative in the assembly, and carefully looked after the peace, order, moral conduct, and general welfare of the community.

The mere list of some of the officials to be found in the different towns must suffice to suggest the numerous functions that were assumed by these small but active communities. Besides the chief officials, such as selectmen, treasurer, clerk, and recorder, there were water bailiffs, constables, tithingmen, bellmen, cowkeepers, hogreeves, pound keepers, fence viewers, scavengers, sealers of weights and measures, cullers of staves, measurers of corn and boards, corders of wood, overseers of chimneys and chimney sweepers, and numerous others. In the very largest places there would be additional officials charged with such duties as protection against fire,

robbery or epidemics, supervision of the public markets, the granting of various licenses, or care of waste disposal. The New England county was chiefly significant as a judicial district; in Massachusetts it was also a higher military unit, levied a county tax for the support of the courts, jails, highways, and bridges, and equalized taxes.

In the middle colonies, the representatives sent to the assembly, with minor exceptions, were chosen by the county, which was also the chief judicial unit, had general charge of the construction and maintenance of roads, bridges, and county buildings, appointed many local officials such as the viewers of pipe staves, bread, meat, and fences, and levied and collected taxes. In New York many of the county officials were appointed, but in Pennsylvania they were commonly elected. In the more compact settlements, especially where New England influence was strong, the town organization was fairly common. Its functions varied considerably but were concerned principally with care of the poor, purely local improvements, regulation of local trade, and a few tax levies for these purposes, and were seldom as important as in New England.

In the Southern colonies where the population was more scattered, the county performed nearly all the functions assumed for local government. It generally chose the representatives sent to the assembly, but, since the chief county officers were appointed by the governor, control was less democratic than in the North. The county was the unit for judicial administration; the county court in Virginia had charge of bridges and highways, licensed and regulated the charges of ordinaries and ferries, appointed the tobacco viewers, was the unit of militia organization, and levied and collected the county taxes. The smaller unit of the parish, except in tidewater South Carolina, was chiefly concerned with support of the poor and the established Anglican Church. The activities of local government in general were less extensive than in the North.

Above the units of local government and exercising complete control over them were the popular assembly and the governor and his council constituting the provincial government. Though this exercised a considerable degree of detailed control over local affairs, notably in the early period before local government was well developed and in the South to the end, it was chiefly concerned with matters of more general interest and importance. These included all issues affecting the general economic progress of the colony: the circulating medium, the regulation of trade, the disposition of the public land, roads, the control of indentured servants or slaves, assistance to industry, the courts, military defense, the church where it was established, education where publicly supported, and taxation to meet provincial expenses. Since most of such measures as chiefly affected the economic life of the colonies have been previously noted, it will suffice

here to suggest the general extent and character of the activities of government in the economic life of the period.

The outstanding feature in the relation of the state to economic life in the colonies was the very small number of economic goods and services that the state itself attempted to provide for the people. Of course the services for which government is first of all set up, such as defense, protection of life and property, or maintenance of law and order, were provided, though in a none too adequate manner, but beyond that the range of such activities was meager. Outside of the very limited activity in New England there was practically no public support of education; state care for public health and hygiene was negligible; aside from meager provision for the poor, there was little public aid given the downtrodden and unfortunate; the state assumed no responsibility to provide for public recreation or for the pursuit of purely cultural activities. Even in the few cities, where most was done, the various public services undertaken were likely to be reduced to the minimum. There were, however, numerous ways by which public support was given to such lines of private enterprise as were considered particularly desirable. The provision for religion in the colonies where there was an established church was the one important field in which state support was given where it is not customary in this country today.

The chief explanation for the narrow scope of the government activities of this type is to be found in the poverty of the colonies, in the failure to recognize the social need for the provision of many forms of economic goods and services, and in the economic and social conditions prevailing at this period among an essentially rural population which in many ways reduced both the need for, and the feasability of providing for, such economic wants.

On the negative side of governmental activities, that concerned with regulation and control, much more was undertaken, partly because such lines of action were much less costly. Only a few of the measures of this type have been described and nothing has been said of the elaborate code that made up the seventeenth-century blue laws of the Puritan colonists attempting to regulate the clothing that they wore, their amusements and use of their leisure hours, their moral conduct, and innumerable other matters in the routine of daily life. The scarcity of labor, it has been seen, led to many regulatory efforts designed to increase the supply and keep down wages, to say nothing of the measures relating to the slaves and the indentured servants. The scarcity of various goods and the general weakness of competition led to a series of similar measures to increase the supply of goods, maintain their quality, prevent monopolizing activities, and regulate prices. The difficulties arising from an unsatisfactory circulating medium and poorly developed credit institutions led to another group of

regulatory measures. Local problems confronting the rising cities or the more compactly settled New England towns necessitated an increasing degree of control on the part of these units of local government.

The Fiscal Systems of the Colonies. In the absence of adequate data we can draw only general inferences as to the outlays involved by the activities assumed by the colonial governments. The heaviest outlays commonly arose in connection with wars and the need for defense, even though the main burden of defense, except in the case of Indian wars, was borne by Great Britain. It was because these expenses were so large and so concentrated in time that most of the colonial debt arose in the form of provincial paper money or bills of credit. Occasionally, some other type of outlay also led to borrowing, but the ordinary expenditures of the colonial governments were generally covered by the receipts from revenue. Aside from the salaries and expenses of the provincial and local officials, the largest items of outlay were for roads, bridges, public buildings, care of the poor, and, where state-supported, for churches and schools. How meager the provincial activities must have been can be inferred from the fact that the civil establishment in most colonies just before 1775 was reported to cost between £2,000 and £8,000 a year. How little was undertaken even in the largest cities is indicated by the fact that as late as 1790 the expenditures of New York were less than $2 per capita.

Popular opposition to taxation is universal, but it seems to have been especially strong in the colonists. This can be attributed partly to the general lack of wealth and partly to the fact that in the rural districts, especially in frontier sections, it was difficult for the people to see that the state was doing very much for them; in truth, their interests often were sadly neglected. As direct taxes imposed immediately on the people aroused the strongest opposition, there was a tendency to favor the indirect forms of taxation the weight of which was often unrealized; but the local units of government had less opportunity to employ this type than the provincial government.

The chief direct taxes used were the poll tax, commonly imposed equally on all males and on female slaves above a given age; the faculty tax, imposed on laborers, artisans, and tradesmen roughly in proportion to the supposed earnings of each class; and, most important of all, the general property tax, supposed to be levied on each person according to his wealth. Often this last tax was made up of a levy for town or parish purposes, another for the county, and a third for the province. In New England the general property tax and the poll tax were used; in the Southern colonies more dependence was placed on indirect taxes, though both poll and property taxes were common; the system adopted in the middle colonies lay between the two. Most of the revenue required for the purposes of local

government came from direct taxes, but such taxes were a less important item in the receipts of the provincial governments, especially in the trading colonies.

Among indirect taxes, the duties levied on imports or exports were likely to be the chief reliance of such colonies as were extensively engaged in foreign trade, notably in Massachusetts, New York, Maryland, Virginia, and South Carolina, and to a lesser degree in Pennsylvania. Though these duties often had other objectives, they were imposed primarily for the sake of revenue and fell most heavily on such items as wines, liquors, tobacco, sugar, molasses, tea, cocoa, dyewoods, and slaves. The only export duties yielding a large return were those on tobacco levied by Maryland and Virginia, where they were among the chief sources of provincial revenue. Tonnage duties were common, and their return, though never large, was employed for purposes of defense or a lighthouse service. Among the internal revenue taxes, those on wines and liquors and their sale were the most frequent. Fees for a great variety of services were everywhere in evidence, the receipts generally going to government officials. Commonly the quitrents payable to the crown were available to meet designated provincial expenses, and receipts from the sale of land might be similarly used. In some colonies the interest paid to the public loan banks was an appreciable source of revenue, and lotteries often provided funds for specific public projects.

The general property taxes were not progressive and, except for the faculty taxes and those on luxuries, there was no effort to adjust the system so as to obtain from the rich a levy more nearly proportionate to their ability to bear it. As a whole, therefore, the tax system tended to fall with greater weight on the less well to do—an outcome to be expected in view of the political weakness of this group. Yet the total burden of colonial taxation was relatively light and doubtless much less than was common in the countries of western Europe.

SUMMARY OF THE ECONOMIC DEVELOPMENT OF THE COLONIES

Having completed the survey of the various phases of the economic development of the colonies, we can now look back over that history as a whole, attempt to coordinate the trends in the different fields, summarize the results, and ask the question: To what extent and by what means had the colonists made progress in the effort to supply their economic wants? This, it must be remembered, is the basic problem with which economic history is concerned.

In the first place, the difficulties incident to establishing the colonies and tiding them over the period till they became self-supporting had been

borne partly by the capital and enterprise advanced from Europe, much of which received little or no return, and partly by the capital and labor, with its attendant sufferings and death toll, of those who migrated to America. Once established, the colonies gained in productive capacity through the steady increase in the available supplies of the different agents of production and the development of a more efficiently functioning economic order.

The increase in the economically significant supply of natural resources was obtained partly through the opening up and settlement of the country by the colonists, partly through gaining a better knowledge of resources and climatic conditions which enabled them to determine what things could be produced and which were likely to be the most profitable. The supply of labor was greatly augmented through the rapid natural rate of increase of the population, immigration, and the acquisition of servants and slaves, while various measures helped to improve the quality of the workers. The growth of capital was due largely to its accumulation out of the rising savable fund resulting from increased productive efficiency, though there was some inflow from abroad. The introduction of a few new inventions improved the quality of capital goods, and better knowledge of new processes led to a more economic use of all resources. The entrepreneurs who introduced these technological improvements were also active in adopting more efficient methods of business organization.

These developments all took place in an economic order with an institutional framework that was also undergoing marked changes tending to promote efficiency. Among these the most important were those furthering specialization and division of labor through a widening of the markets. In the early years, many of the households and little settlements were of necessity largely self-sufficing, and there was little opportunity for much specialization. In numerous rural sections, especially along the frontier, this situation continued to prevail till the close of the period, but in the more populous regions the slow development of facilities for overland transportation helped to widen the available markets. Vastly more important, however, was the growth of the markets, both colonial and foreign, made accessible by cheap water transportation. This not only promoted trade between the colonies but, what proved far more important, it promoted an extensive trade with other parts of the world. In consequence, more of the colonists were enabled to specialize in producing those things in which they had a comparative advantage and then exchange them for products of other regions which they themselves could not have produced at all or only at a greater relative cost. The limited extent to which the resources of the colonies were developed and the lack of variety in the commodities produced as compared with the situation in later periods greatly increased

the importance of foreign trade as a factor in colonial economic development.

Since specialization involves exchange of goods or trade, it is in part dependent upon and furthered by improvements in all the devices and institutions by which trade is facilitated as well as by improvements in transportation. Along such lines also the colonies had made progress: marketing methods were improved; wholesaling was beginning to be separated from retailing, and other lines of functional specialization were developing; better means for communication and the spread of market information were introduced; warehouses were constructed; marine insurance was made available; the introduction of money, though of an unstable character, along with such credit instruments as bills of exchange was helping to overcome the difficulties of barter; better facilities for obtaining loanable funds were developed; finally, the growing power and the expanding activities of the state in numerous ways afforded increased stability and support for economic enterprise.

Some of the obstacles that stood in the way of greater success—much the most important in fact—were due to conditions over which the colonists themselves had little or no control; others were such that the colonists might have done much to lessen or remove them. Foremost among the former group was the limited use of the resources and forces of nature, owing to the backward state of science and invention at that time. The scarcity of labor and capital was inevitable in a new, rapidly growing country and in the case of labor proved generally advantageous to the free workers. Despite numerous measures to lessen this difficulty, many of which proved futile or unwise, the results attained were relatively meager. Most of the basic conditions tending to limit specialization and trade could not be altered, while the obstacles to trade were sometimes increased by the provincial spirit of the colonies as well as by the mercantilist policy of England. For the chaotic condition of their circulating medium and its disturbing reactions on business, the colonists themselves were largely to blame. They suffered from the lack of a commercial banking system and means for securing insurance other than that against marine losses, but even Europe had not then gone far in developing such institutions. Economic progress was set back by the disturbances and losses arising from frequent wars, though the destruction incident to actual invasion, except for Indian raids, was negligible. By what means and with what success such obstacles to economic progress were overcome by succeeding generations the following chapters endeavor to explain.

Part II

THE PERIOD OF WARS AND ECONOMIC TRANSITION, 1764–1815

CHAPTER XI

ECONOMIC CONDITIONS, 1764–1775, AND THE CAUSES OF THE REVOLUTION

The General Character of the Period of Transition. Before taking up the specific topic of this chapter, we should note the general character of the period extending from shortly before the Revolution to the close of the War of 1812, to which we now turn. This period is an unusually complicated one and requires a method of treatment somewhat different from that used for most other periods. Also, an understanding of the general character of the period in its relation to the rest of the country's economic history is essential to an appreciation of the broader significance of the detailed facts and movements that are to be described.

The period can best be understood and interpreted as one in which two distinct sets of forces dominated the course of events in the country's economic life. One set is found in the wars, domestic and foreign, which occupied all but a few of the years, together with the political and other changes incident thereto that reacted upon economic life. These were the forces that introduced what we may call an "abnormal" element into the situation—if we can assume that war is abnormal—for these wars reacted in a powerful and spectacular manner on economic life. In some instances, they created tendencies diverse from those prevailing in times of peace; in others, they abnormally hastened movements in line with what was destined to prove the more normal trend of economic development. The second group of forces may be considered as reflected in those trends, not primarily due to war, which were in line with the normal course of economic evolution incident to the introduction of a more efficiently functioning economic order and the slow transition from the essentially provincial basis of colonial times to the more nearly national economy of the succeeding period. Under-

lying all the turmoil of wars and their aftermaths, often lost from sight in the quickly changing and spectacular course of events that for the moment dominated attention in the arena of economic and political life, these less obvious, but generally more enduring and more important, changes were slowly helping to create an economic order which by 1815 had become markedly different from that of 1775.

Were the objectives in this history concerned solely with the evolution of the economic order, much of the detail dealing with the temporary course of economic events arising from war might be omitted. But our objectives are much broader. They are concerned with all the important lessons which can be learned from the past and which may be applicable to present or future problems in the country's economic life. The wartime experiences of this period taught many a lesson which the country had not fully learned even in 1917 and 1941. Since this period includes the winning of political independence and the framing of the Constitution under which the Federal government has been carried on ever since—events that exercised the most basic reactions on the country's subsequent economic development—it is particularly important to understand the interaction between the economic and the political conditions that shaped these events. Finally, it will be found that some of the changes wrought by the wars exercised relatively enduring effects on the nation's economic life which cannot be understood without a knowledge of the wartime conditions under which they were generated.

The abnormal conditions that mark this period as a whole exercised such an overwhelming influence on the immediate course of events and varied so greatly from time to time that it is necessary to subdivide the period into sections corresponding to the changes in the abnormal conditions and so make the account more nearly a chronological narrative than for other periods; only thus can the rapid changes and the interaction of the various developments be explained. To make sure that the less striking but more enduring changes that were taking place in the structure of the economic order are not lost from sight in the kaleidoscopic rush of events that dominated the surface of affairs, those changes will be summarized later.

Economic Events Leading to the Revolution. In the earlier chapters little was said about the course of economic events in the colonies during the decade that preceded the Revolution, since the relationship of those events to that revolt can best be explained in a separate chapter. The problem of analyzing the causes that underlie any such social movement and of estimating the relative importance of any one group of forces is an extremely difficult task, for the forces involved are manifold and almost inextricably interwoven. Furthermore, even if the proximate or immediate causes are clear, there still remains the question as to the deeper underlying

forces—the causes of the causes; and when these are traced back, they are found to spread out into all phases of social life. Although no detailed analysis can be attempted here, an effort to suggest the chief factors involved will help both to explain the Revolution and to provide a better appreciation of the complexity of causal relationships in history.

The Situation at the Close of the Seven Years' War. Previous to 1764, England had made no attempt to tax the colonies directly but had sought rather to regulate trade and commerce. The colonists occasionally had protested and frequently had evaded this regulation, but the general principle had been accepted, as in part justified by the burden of defense which was largely assumed by England. The peace of 1763 which swept the French from the continent removed the foreign menace that the colonies had always feared most, so English protection was less essential. At the same time Great Britain emerged from the war loaded with a vastly increased debt and great additions to her colonial empire, which only made the burden of its administration and defense the greater. Englishmen, who had been greatly outraged by the colonists' disloyal sale of supplies to the French during the war and now faced much heavier taxes, insisted that the rapidly developing colonies should share at least a portion of the growing burden of defense. Furthermore, in 1760, George III had ascended the throne and, unlike his predecessors of the Hanoverian line, he was resolved to rule and soon succeeded in gathering a group of supporters to aid him in a more vigorous assertion of the dwindling prerogatives of the crown. These circumstances led to various measures designed to augment the revenues, tighten up the commercial ties that bound the Empire together, and generally increase the effectiveness of English control over the widely spreading dominions. A similar, but persuasive, effort to strengthen the Empire occurred after 1918.

The American colonies, on the other hand, had shown little loyalty to the mother country or interest in the Empire. In fact they had been constantly wrangling among themselves, and such spirit of patriotism as existed was generally limited to each separate colony. But within each colony from its very founding there had been an incessant struggle for greater freedom of self-government. Thus the new policy of England was diametrically opposed to the whole trend of colonial development and proved so repugnant to the spirit of the colonists that revolt seemed preferable to submission.

British Restrictions and Taxation. The first act of England to arouse opposition in the colonies was the royal Proclamation of 1763 which forbade grants of land and settlement in the region west of the ridge of the Appalachian Mountains. Frontiersmen were just beginning to penetrate parts of this area, and a few land speculators were seeking large grants there.

Although one objective may have been to secure better control of the colonists by keeping them east of the mountains, the chief purpose was to quiet the Indians, gradually acquire title to their lands, and then open up the section to settlement under orderly management, as is shown by the plans England was about to put into effect in 1775.

The acquisition of this western land, including Canada, and the need for control of the Indians furnished a reason for the decision to keep a standing army of 10,000 men in the colonies. This with other provisions for defense of the American possessions was estimated to involve an annual outlay of £200,000 to £300,000, mostly to be spent in the colonies on the mainland. Taxation, to meet at least a portion of this expense, rather than regulation, was the main objective of the acts that followed. The Quartering Act required a colony to furnish barracks and a few supplies for any troops stationed there and fell mainly on New York where headquarters was established. The Sugar Act of 1764 reduced the prohibitive duty of 6*d.* a gallon on foreign molasses levied by the old Molasses Act to 3*d.* and, because of the general evasion of the former duty, included measures to enforce its collection. The New England rum manufacturers insisted this would ruin them, though the importation of foreign rum was prohibited. The act also imposed heavy duties on wines from the Madeiras and the Azores not imported through England (for the benefit of English merchants), and light duties on indigo (to protect the South Carolina output), coffee, wines, silks, and a few other goods; it added various products including whale oil, furs, iron, hides, skins, raw silk, potash, and pearlash to the list of enumerated commodities, and reduced the drawbacks allowed in England on goods reexported to the colonies.

The vigorous measures for enforcing this law led to friction and acts of violence that caused much unrest. The act was expected to yield about £25,000 annually from the duties collected in America, three-quarters coming from the duties on molasses and wines, plus £20,000 from the lower drawbacks in England, though this latter did not accrue to the colonial defense fund. As the revenue from this law provided but a small portion of the defense outlay, more funds were sought by the Stamp Act of 1765 which required that stamps of varying amounts be affixed to a long list of papers such as legal documents, newspapers, pamphlets, and ship papers. The requirement that the stamps be paid for in specie was especially vexatious. It was expected to obtain between £60,000 and £100,000 from this source, possibly half coming from the West Indies. Although these taxes were similar to those imposed in England, the rates were generally lower. To understand the outburst of opposition that followed these measures, other conditions that aggravated the situation must be noted.

Important among these was the economic depression which set in after

the peace of 1763. Such a period always generates social unrest and leads to demands for various measures of relief commonly accompanied by political agitation. The widespread reaction of such conditions on social history is as yet inadequately recognized but will be abundantly illustrated in the subsequent history of the country.

Although this depression has not been thoroughly studied, it is fairly clear that the chief cause was the reaction from wartime conditions and the necessity for economic readjustment such as has followed every serious war in the country's history. Prices had risen rapidly 1755–1762, but this was followed by a marked drop to the middle of 1765 and, after a moderate advance to the end of 1766, the decline continued till the low point was reached in the middle of 1769 (see the chart on page 140). Retirement of the wartime issues of paper money together with the extension to all the colonies in 1764 of the British prohibition on new legal-tender issues contracted the circulating medium while the added taxes imposed to meet the war debts aggravated the troubles. A corresponding depression in the West Indies and other regions with which the colonies traded only made matters worse. Suffering severely from the effects of this depression, it was but natural that the colonists should react the more vigorously against the new taxes and restrictions imposed by Great Britain.

Another cause for restlessness and discontent which, because Great Britain was in no appreciable way responsible for it, has received too little attention was the growing feeling among the masses, particularly among the seaport artisans and laborers and the back-country farmers, that their interests were threatened by the dominance of the wealthy and more privileged classes in the colonial governments. As has been noted, large groups were deprived of the right to vote and of fair representation in most of the provincial assemblies. The local politicians, seeking to overthrow the control of the dominant classes, found ready support among these groups for any agitation that seemed likely to bring extensive changes, and they proved to be a most important factor in the revolutionary movement.

We may now raise the questions: What groups or economic interests were appreciably injured by these various acts of England? Who led in the opposition aroused? What were the results? Doubtless all groups except the relatively self-sufficing rural farmers suffered more or less from the business depression, though it was chiefly felt in the larger trading centers. The tobacco planters were particularly hard hit at this time. Next in importance, judging by the numbers affected, were the debtor classes who suffered from the combined effects of the drop in prices and the prohibition of legal-tender paper-money issues. The Proclamation of 1763, modified by the substitution of the Indian boundary line in 1768, hit only a very small though influential group interested in land speculation; frontier

settlers tended to ignore it. The Stamp Act chiefly concerned lawyers, publishers, and traders, a powerful group in a strategic position to organize opposition. The Sugar Act hurt the traders, the small group of rum manufacturers, and the consumers of some luxuries; besides it threatened to lower the prices of exports to the West Indies and check the inflow of specie from that source, thus spreading the losses to others. Doubtless the losses of most were due chiefly to the depression which was not caused, though somewhat aggravated, by the action of England, mainly by the restrictions on paper-money issues; only a relatively small group was appreciably affected by the Sugar Act and the Stamp Act.

Yet it was these acts, particularly the Stamp Act, the burden of which on the masses could not have been great since the estimated receipts were only between 15 and 20 cents per capita, that aroused the greatest outcry. The taxes involved immediately chiefly hit the well-to-do classes, the groups most influential in colonial affairs and best able to organize, which doubtless helps to explain why these acts became the center of attack. Furthermore, the Sugar Act imposed duties for which, at least in form, there was ample precedent; in spirit it marked a radical shift in policy from regulation of trade to taxation. The Stamp Act was obviously an internal tax imposed from without and so contrary to all precedent—an innovation which, if accepted, opened the way to still further exactions. These facts made the Stamp Act the strategic object of attack against which the organized groups could most easily rally the masses, whose suffering and discontent were chiefly caused, though only half understood, by other conditions. The ignorance of the masses as to the real causes in the complex operation of economic forces from which they suffer, especially in times of depression, and as to the proper remedies therefor has been used throughout history in manifold and devious ways to further the purposes of special groups. Sometimes the results have been beneficial and sometimes harmful.

The Reaction in the Colonies. While the Sugar Act led to vigorous protests by the Northern merchants and rum distillers who were most affected by it, the Stamp Act hit all the colonies and was chiefly significant because it led them to unite in concerted action for the common cause. This first took the form of an economic boycott of British goods by the nonimportation agreements entered into by the merchants of Massachusetts, Rhode Island, New York, and Pennsylvania in 1765, later supplemented by the organization of groups called "Sons of Liberty" who agreed not to use such goods. The power of the boycott was greatly increased by the effects of the depression which cut consumer purchasing power and left the merchants with surplus stocks. In October of that year representatives of nine colonies assembled in New York in the Stamp Congress which

protested against the taxation without representation imposed by the Stamp Act and asked relief from the duties of the Sugar Act.

These measures proved effective. Parliament, astounded by the uproar and importuned by the British merchants who saw their most valuable colonial market vanishing and their colonial debtors unable to pay their debts, repealed the Stamp Act in March, 1766. Soon the Sugar Act was modified. The most important changes cut the obnoxious duty of 3*d.* a gallon on foreign molasses to 1*d.*, but this was now levied on all molasses, thus making it a duty for revenue rather than one to regulate trade for the benefit of the British West Indian planters; also, the direct export of all commodities to ports of the Continent north of Cape Finisterre was prohibited. Great rejoicing followed in the colonies, not only because of the relief thus afforded, but also because of the growing power that the success of their concerted efforts demonstrated.

The Townshend Acts and the Second Nonimportation Agreement. A change in the ministry in England late in 1766 led to a renewed effort to tax the colonies and enforce their obedience. In 1767 Parliament passed the four Townshend Acts providing for a stricter enforcement of the revenue laws including a new authorization of writs of assistance, suspending the New York assembly for not having complied with the Quartering Act, and levying new duties on tea, glass, lead, painters' colors, and paper imported into the colonies. The added tax burden was slight and in the case of the most obnoxious item, the 3*d.* a pound duty on tea, was more than offset by the remission of the duty paid when the tea was imported into England. This made it possible, for the time being, to reduce the price in the colonies; but that hurt the smugglers who found it harder to undersell the legally imported tea. More serious in its implications than the duties was the provision whereby the revenue could be used to pay the salaries of colonial governors and other officials, for this would undermine the hold on them possessed by the assemblies through control of the purse.

There followed a second movement to secure relief by organizing a boycott on the use of British goods. The initial impulse came in the fall of 1767 from a series of New England town meetings led by Boston which sought to discourage the use of imported goods and to stimulate domestic manufactures; but by the spring of 1768 it was clear that this was too ineffective and a general nonimportation agreement among the merchants was needed. The united action required, however, was by no means easy to obtain. After the Philadelphia merchants had refused to join those of Boston and New York, the former, in August, 1768, decided to proceed independently. New York promptly followed the example, but it was 6 months before Philadelphia could be persuaded to do likewise. The rest of the Northern colonies, except New Hampshire which was then more prosperous than

the others, followed suit, though it required the threat of a boycott by the rest before the merchants of Newport could be brought into line. In the South, the merchants and factors dominated by the English opposed the move, but the radicals and debt-burdened planters joined in the spring and summer of 1769.

Though many of the nonimportation agreements did not go into effect until considerably after the first of 1769, the English exports to the colonies for that year showed a marked decline as compared with 1768. In New England and Pennsylvania it was over one-half and in New York nearly six-sevenths. In the South, however, where the initiative in shipments was largely in the hands of British exporters, there was an actual increase.

Though the reaction of this loss of trade by England was mitigated by other favorable events, the British government, which underwent another change in the ministry in 1770 enabling the king to surround himself with ministers of his own liking headed by Lord North, deemed it desirable to quiet the rising discontent in the colonies. Also, it was pointed out that the Townshend duties, except that on tea, were chiefly on English manufactures and tended to stimulate colonial industries. Consequently, in April, 1770, the Townshend duties were repealed, except for the duty on tea; that was retained because it was not an English product and, as the king wrote Lord North, "I am clear there must always be one tax to keep up the right." This determination "to keep up the right," as exemplified by the duty on tea, proved fraught with momentous consequences.

Again the colonies had won much of the relief specifically demanded, except for the repeal of the duty on tea. In addition, New York was allowed to issue £120,000 of legal-tender paper money. When the news of these actions arrived in May, 1770, the colonists faced the question whether the nonimportation agreements should be kept up to secure further concessions. Meanwhile, in 1769, the East India Company had raised the price of tea so that smuggling from Holland was once more profitable and Channing has estimated that nine-tenths of the tea was being imported without paying the duty. By this time, also, the worst of the depression was over; recovery was on the way; the merchants' stock of foreign goods had become seriously depleted and prices were rising. The more radical leaders and the Boston merchants favored continuing the general nonimportation agreements, but the merchants of New York in July, 1770, refused to do so, except in the case of tea and other dutiable articles, and in September their example was followed by the Philadelphia merchants. When news of this break in the line reached the other colonies, they were unwilling to meet the sacrifices involved in continuing the plan and before the end of the year goods from England, except the dutiable articles, were being ordered in all the colonies.

There followed 2 years of comparative political quiet during which prices rose substantially, and fairly prosperous business conditions helped to allay the unrest engendered by the depression which passed away after 1769. The merchants, having seen the dangers to property, law, and order that followed the previous organization and excitement of the masses, were more than ever anxious to let sleeping dogs lie. Under such conditions, the more radical politicians, unable to secure active support from the merchants, found it difficult to stir up the people now basking under the sunshine of prosperity. Some grievances still remained, but they seemed less burdensome under the altered conditions. The customs revenue collected by Great Britain in the colonies, according to Channing's estimate, had risen from about £2,000 a year costing nearly £8,000 to collect in the period just before 1764 to around £30,000 yearly costing £13,000 to collect in the period 1768 to 1774; but the added direct burden involved—less than 10 cents per capita—was insignificant. The prohibition of legal-tender paper-money issues still caused complaints and Maryland put out an issue without the legal-tender quality. The stricter enforcement of the laws controlling trade brought continued protests from the merchants. England still maintained the principle that she had a right to tax the colonies, against which the people had risen; but she had withdrawn so much of the legislation designed to apply it that a general willingness to drop the dispute over the principle involved seemed to prevail, except among the radical agitators.

After more than 2 years of comparative calm, a new move on the part of England, unrelated to colonial taxation but having totally unexpected consequences, caused the politicians and some of the merchants to join in another organized effort to arouse the people to a series of acts which, in conjunction with the stern measures of repression and retaliation on the part of England and several outbreaks of violence in the colonies, soon led to open revolt.

Tea and the Intolerable Acts. By a strange fatality, the trouble arose over tea, the duty on which had been retained chiefly for the sake of the principle involved. Thenceforth this large principle, not merely of taxation without representation but of still greater freedom of self-government, came more and more clearly into view, not simply as a rallying cry to secure unity of action in the demand for relief from vexing regulations and taxes, but as the real and fundamental issue involved.

It happened that, just at this time, the British East India Company, with a large stock of tea on hand, faced bankruptcy. In 1772, an act provided for a remission of only three-fifths of the duty paid in England on reexport of tea to the colonies, which was to the advantage of the smugglers and so reduced company sales. To aid the company, Parliament in May,

1773, again granted a remission of the whole English duty, though still retaining the 3*d.* duty levied in the colonies, and also allowed the company to have its own agents to sell the tea in the colonies instead of selling it to independent merchants through company auctions in London. This act thus not only threatened the business of the legitimate tea merchants in the colonies but also, by reducing the price of tea, that of the smugglers. Furthermore, the act tended to create a monopoly—particularly abhorrent to the liberty-loving colonists—and it was felt that, even if it did temporarily reduce the price of tea, the company would soon raise it; worse yet, the monopoly might be extended to still other commodities.

Their business thus threatened, the merchants were again aroused to action, though with greater misgivings than formerly lest they prove unable to restrain mob violence, and once more they joined the radical leaders of the artisans and laborers to organize an economic boycott such as had been so successful twice before. Meanwhile other events had aided the radicals to awaken the people less interested in trading profits against acts subversive of their liberties. The presence of British soldiers in the cities was a constant source of irritation and such an event as the Boston Massacre of 1770 or the action leading to the burning of the British naval vessel "Gaspée" in 1772 created an ill feeling that was not soon forgotten by the populace. The news received in September, 1772, that customs receipts would be used to pay judges' salaries impelled Sam Adams to stir up town meetings to protests of alarm and again to organize committees of correspondence to facilitate agitation and united action. Thus, when, in 1773, the course of events brought to the more radical leaders the cautious support of many of the merchant class, those leaders found themselves in a stronger position than ever to work for the greater freedom of self-government which they held forth as their main objective.

Late in the autumn, the company's tea began to arrive. At Charleston it was landed, but its sale was not permitted; at New York and Philadelphia it was sent back to England before landing; at Boston, where the governor insisted that it be landed, the Tea Party effectively settled the question by boarding the ship and dumping the tea into the harbor. The king and Parliament, outraged at this mockery of their authority, promptly adopted forceful measures in the form of the so-called five "Intolerable Acts" to punish the offending colony, secure reparation, and enforce obedience. The port of Boston was closed to all except coastwise trade in a few necessities, effective June 1, 1774, till reparation for the tea, estimated at £15,000, had been made and proper submission was shown; the governor of Massachusetts was given increased powers and his consent required for the calling of town meetings; a new Quartering Act was passed requiring the supplying of barracks wherever desired, and more troops were sent to Boston. A

fourth act permitted the trial of British officials accused of violence in enforcing the law in Massachusetts to be removed to England. Finally, the Quebec Act, though in origin it had little connection with the four punitive laws, annexed the region north of the Ohio and east of the Mississippi to Quebec, centralized the government of that province, and, in accord with treaty promises, allowed the French Catholics freedom of worship. This alarmed the colonies having claims to western lands as well as those who were active supporters of the Protestant faith. It should also be noted that opposition to England on religious grounds was widespread among the dissenting sects who feared efforts being made to increase the power of the Anglican Church.

The Colonists' Reaction and the Declaration of Independence. The punitive acts at once brought generous gifts of provisions from the other colonies to Boston, where trade was ruined and a large group of unemployed were in distress. Far more important was the outburst of indignation and alarm at the attacks upon their liberties that the colonists saw in these measures. These attacks clearly involved political principles that concerned all, rather than taxes or trade regulations chiefly affecting small groups; against such infractions of the liberties that they had so long fought to maintain, all could unite. From this time on, the issue of relief from specific acts of economic oppression played a subordinate role and became merged in the broader demands for liberty and self-government designed to assure political and religious as well as economic freedom, which now became the real issue in the minds of all. Recognizing this, the more conservative merchants withdrew from or actively opposed the movement toward revolt; others joined to moderate it; still others gave it wholehearted support. But the actual direction of affairs fell increasingly into the hands of the radical leaders, backed by a steadily growing, though never a major, proportion of the masses whose emotions were insistently played upon by active propaganda.

To put pressure on England a new and more comprehensive economic boycott was proposed and, to obtain the unity of action essential to success, the First Continental Congress was assembled in September, 1774. Among the fifty-six delegates, representing every colony but Georgia, most were lawyers and, although the agricultural interests were well represented, there were only eleven merchants. Though not ready to make a break with England, the Congress drew up a Declaration of Rights and, to enforce a boycott, prepared a plan for a Continental Association.

Substantially the boycott involved an agreement not to import, purchase, or consume after Dec. 1, 1774, any British goods, or dutiable products, or slaves, and not to export any goods except rice after Sept. 10, 1775, to Great Britain or the British West Indies. Also extravagant expenditure

was to be discouraged and domestic production to replace imports aided. The action demanded of England as a prerequisite to withdrawing the boycott was stated in detail; it is significant that, practically, it amounted to a return to the conditions existing before 1763.

The Continental Association was approved by all the colonies except Georgia, though not without opposition from loyalist and mercantile groups. Although it lacked proper legal authority, thoroughgoing plans to enforce it were made. They were carried out with no small measure of personal violence and destruction of property and so effectively that the imports from Great Britain fell from £2,600,000 in 1774 to £200,000 in 1775. West Indian planters joined British manufacturers and merchants in appealing to Parliament for relief; Pitt and Burke counseled conciliation; but George III and Lord North were obdurate while Parliament, antagonized by this challenge of its authority, was subservient to their wishes.

As a result, New England was forbidden to trade with any part of the world except Great Britain and the British West Indies, a prohibition soon extended to all the other colonies except New York, Delaware, North Carolina, and Georgia where the radicals were less dominant. But, before news of this action arrived, British soldiers had come into conflict with the colonial militia at Lexington and Concord where on Apr. 19, 1775, was "fired the shot heard round the world." Events then followed rapidly. The Second Continental Congress assembled in May, assumed functions of government, and proceeded to raise an army. When the nonimportation and nonexportation agreements were found injurious, Congress in April, 1776, opened the ports to all trade except that with Great Britain. Meanwhile Parliament forbade the colonies to trade with any part of the world, and the king declared that they were in revolt. To this they replied with the Declaration of Independence.

Summary of the More Immediate Causes. The preceding narrative devoted to the causes of friction doubtless tends to give an exaggerated impression of the extent to which most of the colonists were appreciably affected economically by the events of this period. Settlers along the frontier heard little of the clamor and were almost untouched by the economic reactions. The large percentage of the people engaged in agriculture and living under an essentially local economy were concerned only as the market for the few products they sold was affected. The smaller groups living in the coastal trading centers together with those in the surrounding agricultural regions largely contributing to their trade and specializing in the staple exports felt the brunt of the economic disturbances and the losses involved. It may well be surmised that, even among these groups, most suffered far more from the effects of the postwar depression than from the new burdens imposed by England.

Particularly important was the fact that in most colonies these places were the centers of public opinion, wealth, and political power. Enjoying a position of leadership, these groups were able, when their particular interests were threatened, to exercise an influence quite out of proportion to their numbers among the colonists, at least during most of the period and before the greater portion of the populace, whose economic interests were far less affected, had become aroused over the fundamental issues concerning political rights which the struggle eventually brought to the front.

Proximately the struggle originated in the problems of the economic and political organization of the expanding British Empire. These led to a series of measures affecting the economic interests of a relatively small but very influential group in the colonies. Though the direct economic burden imposed was not great, the colonists, often confusing its effects with those of the depression, not only exaggerated it but feared it would be increased, and of course acted on this belief. Seeking relief, these groups joined forces with the more radical politicians, many of whom were concerned chiefly in undermining the political power of small groups that dominated most of the colonial governments. These politicians easily worked upon the growing discontent among the masses: the artisans, laborers, and back-country farmers who felt that they were oppressed by these wealthy privileged classes and whose support gave the strength of numbers that was needed. During these years of struggle, there was evolved the organization required to secure greater unity of action, while the successes met with in securing concessions from England made the colonists conscious of their growing power. Thus, when in 1773 the merchants, the debt-burdened planters, and the politicians again joined to enforce a boycott the results of which led to measures that threatened the liberties of all, the economic issues became merged in the broader issue of freedom of self-government in support of which the populace who rallied round the leaders were prepared to face the supreme sacrifice involved in war.

The active supporters of revolt were a minority group—perhaps not much more than a third of the free inhabitants—and the proportion of those more or less actively opposed was nearly as large. As far as numbers were concerned, the former group was chiefly made up of artisans, laborers, and back-country farmers;[1] classes whose economic interests were less affected than most, except for the prohibition of paper money, by British restrictions and taxation. But they were an independent, liberty-loving group. The class most seriously affected by the regulation of trade, the Northern merchants, generally opposed revolt, though there were many exceptions, particularly among the smugglers. Among the most active

[1] The back-country farmers also provided some Tories, notably the Scotch in North Carolina and a substantial group in New York.

leaders, both north and south, were the politicians; and they sought, in provincial as well as in imperial control, greater democracy and freedom in self-government.

The More Fundamental Causes. After all, this summary of the more immediate and proximate causes of the Revolution tells but a portion of the story and explains only some of the factors entering into the problem—perhaps the least important in any fundamental analysis. Back of this decade of rapidly moving events lay some 150 years of colonial development, to say nothing of English traditions and history. In the conditions that surrounded the colonists during that period, as contrasted with those in England, are to be found the more fundamental causes of the Revolution, since it was those conditions that helped to develop in the people that spirit of freedom and liberty which surpassed the ideals prevalent in the mother country. Those conditions were innumerable and, though their reactions were cumulative in effect, they were inextricably interwoven.

Only a few of the most significant conditions can be noted: (1) Most of those who migrated to the colonies were seeking freedom from religious, political, and economic oppression; they were from the start a selected group of active, ambitious, liberty-loving people. (2) The economic conditions in the colonies, combining an abundance of land, a scarcity of labor, a scattered population, and a relatively high degree of economic self-sufficiency among large groups, tended to increase their economic freedom, to foster a spirit of individualism and private initiative, and to make taxation particularly obnoxious. (3) The colonies had been established and developed largely through private initiative and enterprise, with little aid from the government except by way of defense, and for more than a century England had attached scant value to those on the mainland. These facts, combined with the great geographical distance and the resulting difficulties of communication and control, had led to a policy of "salutary neglect" under which the colonies, through a constant struggle, which increased their sensitiveness to encroachments on their liberties in any form whatever, had attained a high degree of local autonomy in their government, any curtailment of which was certain to be bitterly opposed.

This complex of conditions psychological, religious, economic, geographic, and political had developed in the course of 150 years a spirit of individualism and a love of liberty much more ardent than existed in the mother country; the social institutions and political ideals were far in advance of those of England. Yet England, under mistaken guidance at this critical juncture, chose to adopt a policy of even stricter control. These diverging tendencies, once the colonies had grown to a position of strength and attained unity of action, made a conflict inevitable. Whether it started over economic, religious, or political oppression was a question of fortuitous

circumstances. It simply happened to be economic issues over which the first trouble arose; before the decision to revolt, the issues broadened to include political rights in general.

The only thing that could have averted the conflict was a change in imperial policy. This involved a recognition of the fact that eventually a powerful colony would prove a still stronger element in the might of empire, both politically and economically, if allowed greater liberty to develop its own economic, political, and social life under self-government. Also it involved a realization that the prerogatives so insistently upheld by a stubborn king and a blind, unrepresentative Parliament, though in practice allowing the colonists greater self-government than was enjoyed by the people of England themselves, tended to weaken rather than strengthen the fabric of empire. The following century saw England slowly abandon her mistaken position on both of these issues. But in 1775 such a colony was undreamed of; political foresight, the ability to read and accept the lessons of history forecasting the insistently growing demand of the people of the world for greater liberty, economic, religious, and political, was lacking. England chose a diametrically opposite policy and revolt followed.

In the last analysis, therefore, the American Revolution was but a new step in advance in the agelong struggle of mankind for greater freedom. Fundamentally, it involved the same issue that had wrested the Magna Charta from King John, beheaded Charles I, and driven James II from the throne of England. For the next step the scene shifted to the colonies where the progeny of England, nurtured in the freedom of frontier life in a distant land, had developed ideals much more advanced than those of the mother country while, as is so frequently the case, the parent, set in her older ways, failed to understand the change that had taken place in her children or to sympathize with their more advanced ideals and aspirations.

The attempt to exert parental authority taught the mother country a lesson that was not forgotten, though only slowly accepted. The children also had a lesson to learn. For the same spirit of liberty that had led them to fight for independence and to establish the republic soon threatened to destroy it. It was this same spirit of individualism, the same lack of a broad spirit of patriotism toward the Union that they had shown toward the Empire, which in succeeding years, time and again, seemed likely to disrupt that Union and eventually plunged the nation into civil war. Thus this young people had still to learn the lesson—indeed may well be heedful of it yet—that freedom in a great democracy means something more than anarchy and that liberty for all is to be attained only by mutual self-restraint and self-sacrifice.

Chapter XII

ECONOMIC PROBLEMS OF THE REVOLUTION

The Economic Problems of the War. War, if it is prolonged and serious, always necessitates extensive readjustments in the economic life of a country. There are three outstanding economic problems that face a nation at such a time: (1) The foremost is the problem of securing and distributing the economic goods and services needed to carry on the war, (2) the problem of devising means to pay for these goods and services, (3) the problem of supplying the economic wants of the civilian population so as to minimize the suffering involved and check the rise of domestic unrest. Subsequently there arises (4) the problem of readjusting the war economy to peacetime conditions. For the time being the nation sets up one goal as its immediate and supreme objective—the winning of the war—instead of the many, varied, less definitely conceived and formulated objectives that exist in time of peace. All other interests then become subordinate to this single objective; to further its attainment even the sacrifice of life itself may be demanded by the state and cheerfully offered by the citizen.

Experience has shown that the individualistic, competitive industrial society, motivated and guided by the desire for private profit, upon which we so largely depend to supply our economic wants in time of peace, requires extensive modifications if the country's economic resources are to be conserved and quickly mobilized so as to contribute the utmost possible toward winning a war. That system could not be suddenly and entirely cast aside on the outbreak of war; even were this possible, it would not be desirable. Still, it is necessary for the government to intervene in economic affairs far more extensively than in time of peace and, as the subsequent history will show, the growing mechanization of warfare greatly broadens the field where such intervention is needed.

By bearing in mind the character of the three chief economic problems arising out of war together with the resources and organization available to the colonists for meeting these problems, we may obtain a clearer understanding of the significance of the facts and the narrative of events, together with the lessons to be learned, to which we now turn.

The Economic Resources and Organization of the Colonies for Carrying on War. The total population of the colonies, excluding the slaves, upon which they could draw for an army was something over 2

million. How many were actually in the regular army at one period or another is uncertain; probably the number was between 80,000 and 90,000, but at any one time it fluctuated between 7,000 and 30,000. The largest number under Washington's immediate command at any given time was 18,000; ordinarily his force was between 5,000 and 10,000 men. In addition there was the state militia which was called out for temporary local service as the occasion demanded. It became increasingly difficult for the states to keep enlistments up to the quotas requested by Congress, and the bounties offered for this purpose steadily rose. Most would enlist for only a brief period, and their reenlistment was very uncertain even in times of an emergency.

The problem of providing food, clothing, and munitions for the troops was made difficult partly because of deficiencies in colonial production and partly because the economic and political organization then available was so inadequate for the task. Though guns and ammunition were produced in the colonies, the supplies were totally insufficient for the needs of war. Nearly nine-tenths of the powder used till the close of 1777 had to be obtained from imports, and its scarcity seriously hampered the army. The supply of wool had never been sufficient for colonial needs, and army clothing, never adequately provided, had to be sought abroad, some being obtained in a roundabout way even from England. Except for a few items such as salt and certain semitropical products like sugar, molasses, or tea, the supply of foodstuffs was abundant; the chief problem was to get it to the army where and when it was needed. The difficulties here arose in part from the slow facilities for communication and the poor means available for overland transportation upon which the country had to fall back, since the commonly used water route along the coast was generally commanded by the British navy.

In addition there were the difficulties arising from the lack of a well-organized and powerful central government enjoying the unhesitating obedience and wholehearted cooperation of all the people. The Continental Congress, being the only body representative of the colonies as a whole, assumed general direction and control of affairs; but its methods were slow and cumbersome and its actual power was slight. It could try to borrow funds, but it could not levy taxes; it might implore the different states to impose taxes or to do this or that, but they did as they saw fit; it could discuss and plan, but when it came to action most matters still rested with the thirteen separate governments that the states had erected to look after their own interests as well as the common cause. A willingness to make unstinted sacrifices for that common cause was by no means universal among either the state governments or the people at large. Each state seemed to fear that it might have to bear more than its share of the burden

or that the liberties of its people might be endangered by the weak and impotent Congress tottering under burdens far beyond its power to sustain.

Among the populace only a minority—possibly a third—were active supporters of the Revolution. The Tories made up nearly as large a proportion and included many men of wealth as well as the British officials; a substantial group, perhaps another third, remained indifferent to the struggle. Many sold supplies to the enemy for gold more willingly than to the Continental Congress for its paper promises of dubious value, and few relished the taxes or requisitions imposed by the states any better than the taxes that had been imposed by Great Britain. In fact, the very conduct of the war only too well exemplified the spirit of individualism and liberty that brought on the revolt.

Great Britain's Economic Resources and Organization. The contrast between the resources and organization of Great Britain and those of the colonies was marked. The population of Great Britain proper was around 9 million and she already had a fair-sized and well-disciplined army of 30,000. In addition, she was able to hire some 20,000 mercenary troops from Germany, to secure the enlistment at one time or another of some 50,000 Tories in the colonies, and to obtain the aid of various Indian tribes. Possessing the most powerful navy of the time, England could strike at a vulnerable point of the colonies, their extensive foreign and coastwise trade, for the small navy eventually built up by the colonists—made up of thirteen frigates and some thirty converted merchantmen plus the little navies of eleven states—was never able to do more than harass the British fleet or convoy merchant ships, though privateers took a heavy toll of British merchantmen.

In the economic resources at her command, Great Britain was rich as compared with the colonies; she herself produced or could obtain from elsewhere all the supplies that were necessary and her credit was good. Her government was sufficiently strong and centralized so that, even if not particularly efficient, it gave her a decided advantage. At the start, practically the whole country supported the war, though in the later years, as taxes rose and other opponents entered the conflict, increasing opposition to its continuance developed. In addition, England was able to count upon some assistance from the Tories in the colonies, though this did not prove particularly effective. Finally, the conflict being waged in the colonies, the ordinary economic life of England was not seriously disturbed, the loss of the colonial market being largely offset by the increased demand for war supplies both in England and on the Continent.

On the other hand, the distance that separated England from the colonies and the slow means of communication helped to offset her advantages. Similarly, the scattered population and the essentially provincial organiza-

tion of economic life greatly increased the difficulties faced by England in trying to subdue the colonies. Although her navy could blockade the ports and, with the aid of a small army, occupy the chief cities or even a considerable portion of a state, this produced little effect on the more self-sufficing farmers or on the other states. Most of the colonists could continue at their usual activities and then quickly spring to arms at the approach of the enemy, only to disperse as soon as the danger had passed. Still, had England acted quickly and efficiently, throwing all her energy and superior resources into the contest from the start, the result might have been very different. But she had to watch France and failed to act decisively to take advantage of her opportunity, with the result that the colonies, despite their limited resources and weak organization, were enabled to continue the struggle, not without considerable success, until aid was forthcoming from outside sources.

Outside Aid for the Colonies. The outside aid that was given the colonies was due primarily to the wish to hurt England rather than to a desire to help the colonies or to any admiration for the principles for which they fought. Though French philosophers might praise those principles and a few men like Lafayette fling themselves into the struggle for liberty, Louis XVI and his minister, Vergennes, saw in the colonial revolt only an opportunity to take revenge on France's old rival, perchance to secure a share of the colonies' commerce, and to recover some of the losses suffered through the Seven Years' War. From the first, France had secretly helped to supply the colonies with desperately needed guns and ammunition. Following the news of Burgoyne's surrender, which gave hope of colonial success, France early in 1778 recognized the independence of the colonies and entered into treaties for a commercial and military alliance. Similar reasons led Spain in 1779 to declare war on England rather than to extend much direct aid to the colonies. In 1780 England declared war on Holland, which had joined the threatening Armed Neutrality, formed by the nations of northern Europe to protect their commerce, and had in various ways given indirect aid to the colonies.

France at that time was the most powerful nation in Europe; her population was more than double that of Great Britain; her wealth much greater and, though her credit was already seriously strained, she was still able to lend considerable sums to the colonies. Moreover, she could provide them with nearly all the needed war supplies except woolen goods. Also she had a powerful navy, which had been rapidly built up since 1763, and could dispute England's control of the sea. This was of the utmost importance for it not only helped to open up the coastal waterway and the ocean to American shipping but aided the Americans and checked the British in the movement of troops and supplies. Washington's statement in 1780 that

"a decisive naval superiority . . . is the basis upon which every hope of success must ultimately depend" was borne out by the French naval operations preceding the surrender at Yorktown. In addition, French ports provided a convenient basis of operation for the raids on English commerce by American naval vessels and privateers. Thus, at the same time that the resources of the colonies were augmented by these various forms of French aid, England was compelled to divert her resources to fight against France and later Spain and Holland in other parts of the world.

Getting Supplies for the Colonial Army. Under these conditions how well were the troops provided with the necessary war supplies? Early in 1776 Deane was sent to France to secure cannon, arms, ammunition, and clothing for 25,000 men and before the year was over these supplies began to arrive, though the English captured a considerable portion. In addition to these things, there was great need of salt, blankets, duck and sailcloth, lead, flint, tin, copper, medicines, and surgical instruments. Before long, means were devised for securing these either indirectly through the West Indies or directly from the Continent. Often the ships captured by privateers yielded cargoes that helped to alleviate the scarcity. As far as supplies not produced in sufficient quantity in the colonies were concerned, it would appear that, except for woolen clothing, a fairly adequate amount was obtained from abroad, at least after 1777, by which time experience in developing new trade routes and the aid of the French navy made evasion of the British blockade much easier.

At the same time, the colonies made a great effort to increase their own output of the most needed supplies. Special attention was given to wool growing and to the search for saltpeter with which to make powder. The manufacture of iron, steel, guns, and clothing for army use was stimulated in various ways, while the cutting down of imports gave an impetus to the expansion of various craft and household industries to meet civilian needs. In the case of the two vital food products that were scarce in the colonies, salt and sugar, imports had to be relied upon almost entirely, though there was some increase in local salt production.

The Distribution of Army Supplies. Throughout the war, the difficulties incident to the acquisition and distribution of the supplies actually available proved the most serious problem as far as economic factors were concerned. The chief difficulties arose from the poor facilities for communication and transportation, and the inefficiency of the governmental organization in charge of the task. A voyage of a ship along the stormy coast might take weeks instead of days, even if the vessel escaped the ever-present danger of capture. When thrown back on overland transport, movement was certain to be slow, difficult, and costly. Good roads were few and far between and often became well-nigh impassable. Draft animals and wagons

were seldom available where needed and farmers were loath to part with them. It took 17 days for relays of express riders to carry the news of Bunker Hill to South Carolina.

The problems of organizing a new government, setting up its administrative departments, and securing an efficient coordination of efforts between it and the thirteen state governments, most of which were also undergoing reorganization, proved to be an almost insuperable task. In July, 1776, the Continental Congress authorized a committee to draw up a plan for a confederation between the states. This delicate task with all the compromises involved necessitated prolonged discussion; more urgent matters led to continued delays so that it was not until the last of 1777 that the Articles of Confederation were finally agreed upon and referred to the states for ratification. It then required over 3 years more of negotiation and compromising before the last state, Maryland, had ratified, in March, 1781. By that time the war was nearly over. In the meantime Congress exercised only such powers as the tacit consent of the states permitted. It was little more than a committee where delegates of the thirteen states—often absent in such number as to prevent action—could discuss, plan, and make recommendations to the states, each of which claimed independent sovereignty and felt free to act as it saw fit on the requests of Congress. Moreover, the Congress itself was always reluctant to delegate any of such few powers as it possessed to others, and its committees were constantly interfering in matters that might better have been left to the military authorities. Such lack of centralization of power, combined with state or personal jealousies and the fear that one state might have to make greater sacrifices than another, made it impossible to conserve, mobilize, and distribute the available military supplies without great delay, waste, and inefficiency.

During the early years, army supplies were bought through the quartermaster and commissary departments set up by Congress, but the results often fell far short of what was needed. There was constant competition with the states seeking supplies for the militia or for local civilian needs, as well as with those buying for the French and even the British army, while various state embargoes prevented the movement of goods to the places where they were most needed. When the depreciation of the Continental paper money became so great that few would accept it in payment, Congress in desperation in the winter of 1779–1780 threw the burden of gathering and forwarding army supplies on the states, a system that Washington declared "the most uncertain, expensive, and injurious that could be devised," and such chaos and suffering ensued that it had to be abandoned. Finally, early in 1781, after a more centralized organization was set up under Robert Morris who introduced the contract system, a marked improvement took place.

In view of the inefficiency of the government and the conflicts between selfish state or private interests, which could be only partly offset by the indomitable energy and patriotic self-sacrifice on the part of some, it is not surprising that the needs of the army were often most inadequately supplied and that this frequently threatened to result in serious disaster. Proper clothing was almost always lacking, and insufficient supplies of food, fuel, soap, and medicines were common. The suffering of the troops at Valley Forge during the winter of 1777–1778 became notorious. Lafayette then said, "The unfortunate soldiers were in want of everything. They had neither coats nor hats nor shirts nor shoes. Their feet and legs froze till they grew black and it was often necessary to amputate them." In February, 4,000 were unfit for duty for lack of clothes. A more efficient organization wrought a marked improvement during the following year, but as great if not greater suffering reoccurred in the winter of 1779–1780. In January, 1780, Washington wrote, "For a fortnight past the troops both officers and men have been almost perishing for want." Naturally they were riotous and fell to robbing the country people of food from sheer necessity. Even later, though conditions were greatly improved after the first of 1781, there were occasions of marked distress. At the battle of Eutaw some fought without clothing, having pieces of moss tied on their shoulders and flanks to keep the musket and cartridge box from galling. In July, 1782, General Greene reported that for over 2 months more than a third of his men were practically naked, having nothing but a breechclout, and that they constantly suffered from a shortage of food.

When, on top of the physical suffering that such conditions involved, there was added frequent delay of the pay that rapidly dwindled in its purchasing power, it is not surprising that men hesitated to enlist or reenlist, that others deserted, and that threats of mutiny arose. That, in spite of all this, the general morale was so well maintained shows the spirit that was back of the Revolution.

The Financing of the War. In no small measure, the difficulties that developed in securing war supplies had their origin in the second great economic problem of war—its financing—and the methods chosen in trying to solve that problem. The Continental Congress could borrow money, but having no power to levy taxes to pay its debts, its credit was soon impaired and its ability to borrow seriously circumscribed. During the war about $8 million was borrowed abroad, over three-quarters being obtained from France and the rest from Holland and Spain. France also advanced subsidies—practically a gift—of about $2 million. Most of this money was spent abroad for supplies, but a portion was used to pay interest on the debt in the hope of sustaining this form of credit, and a small amount was sent to the colonies in the shape of specie.

From domestic sources Congress succeeded in borrowing over $67 million, though the specie value amounted to less than $11 million. The different states, generally unsuccessful in their attempts to borrow abroad, raised about $25 million from domestic sources, according to Hamilton's estimate. Congress also issued certificates of indebtedness in payment for army supplies or other purposes, the amount outstanding in 1790 being estimated by Hamilton at nearly $17 million. Borrowing from domestic sources was made difficult, partly because of the general scarcity of capital and the fact that so many men of wealth were Tories and partly because of the lack of any institution for mobilizing the credit resources such as is provided by a modern banking system. It was to overcome the latter deficiency that Morris organized the Bank of North America in 1781—the first modern bank in the country—based chiefly on a government subscription of $250,000 in specie obtained from a French loan, and during the remainder of the war it greatly facilitated fiscal operations. Previously, appeals for loans had to be made to private individuals, especially to those furnishing supplies, and often men such as Washington or Morris had to use their personal funds or credit to obtain immediately needed goods. But the most serious obstacle to borrowing was the impaired credit of both Congress and the states, partly because of the uncertainty as to the outcome of the conflict, but chiefly because of the inability of Congress and the unwillingness of the states to impose and collect the taxes necessary to maintain their credit.

Taxation during the Revolution. Taxes have always been peculiarly obnoxious to people. So in time of war, when so many additional sacrifices are called for, a government always hesitates to increase taxes for fear of arousing greater opposition to the war. In the colonies, moreover, there was an unusually strong dislike of taxes and protests against taxation by England were prominent among the proximate causes of the Revolution. Thus, the levying of heavy war taxes, however desirable, was hardly to be expected.

The Continental Congress, having no power to levy taxes, could only apportion the sums that it needed among the states and request them to remit. The states were free to raise the money and to make any remittances as they saw fit. They also faced the problem of raising money to meet their own war expenses. Between November, 1777, and October, 1779, Congress requisitioned the states for $95 million in paper money but obtained barely half this amount, and the specie value of the sum received was less than $2 million. When, in 1780, because its paper money had so shrunk in purchasing power, Congress started to requisition the states for specific supplies, such as provisions, the system proved very wasteful and less than $1 million worth in specie value was obtained. There followed up to April,

1781, three requisitions for $10 million in specie, but less than $1.6 million was paid in, and succeeding requisitions up to the close of 1783 yielded a slightly smaller return.

To obtain the funds needed to meet their own expenses and the requisitions of Congress, the states during the early years relied largely upon the sale of their notes or the issue of paper money and, failing to levy adequate taxes, rapidly undermined their credit. It was not until 1777 that any general movement to enact tax laws developed, but enforcement of collections was extremely lax and, previous to 1781, actual receipts were small. The best financial records were made in New England, New Jersey, and Maryland. Some of the states, sooner or later, secured substantial sums from the confiscation of Tory property.

The Issues of Paper Money. Under these circumstances, both the Continental Congress and the states fell back upon the easy and time-honored device, so common in colonial times, the issue of paper money. Massachusetts started the movement in May, 1775, with an issue to pay the soldiers, and the rest of the states soon followed her example. Additional issues were put out as the needs of each state seemed to dictate though, following the request of Congress in 1778 that the flood be stopped, there was some letup, only to be followed by a vastly greater outpouring in 1780–1781. By the end of the war, the total of the states' issues had mounted to nearly $210 million. Of this total Virginia issued more than half and the two Carolinas nearly a third, mostly during 1780–1781; the amount put out by the rest was relatively small. Virginia and Georgia finally made their notes redeemable at 1,000 to 1 and North Carolina at 800 to 1; the other states did much better, the ratio in most being between 40 and 100 to 1. Some issues were redeemed at par.

The issues of Continental currency by Congress even surpassed the total put out by the states, amounting in all to over $240 million. Starting in June, 1775, $6 million was put out before the close of the year, $19 million the next year, and $13 million during 1777. After that year, the rapid decline in the purchasing power of this money necessitated much larger issues and $63 million was put out in 1778, followed by $140 million in 1779. By that time this money was practically worthless, and Congress had to devise new measures of relief.

In March, 1780, in order to withdraw and cancel the outstanding issues, Congress requisitioned the states for $15 million for 13 months to be paid in Continental currency; under this law some $119 million was received and destroyed. At the same time provision was made for another issue, called "new tenor," not to exceed one-twentieth of the old money turned in, and about $4 million was put out. Also, it was provided that the old issues should be accepted in place of silver at the ratio of 40 in paper to 1 in silver.

Such action was virtually a repudiation of its money debt and a confession of bankruptcy on the part of Congress. As Franklin said, "This currency as we manage it is a wonderful machine. It performs its Office when we issue it; it pays and clothes Troops and provides Victuals and Ammunition and when we are obliged to a Quantity excessive it pays itself off by Depreciation." Eventually under the funding Act of 1790, the old Continental money was accepted in exchange for new government bonds at the ratio of 100 to 1 and about $6 million of the $78 million then estimated to be still outstanding was thus redeemed; the remainder died an inglorious death in the hands of the holders. But the phrase "Not worth a Continental" still survives to remind us of the outcome of this resort to paper money.

Some Effects of the Paper-money Issues. As soon as the paper money started to depreciate, specie began to disappear from circulation and prices to rise. All sorts of measures were adopted to prevent depreciation and, although some doubtless slightly checked the decline in its value—often at the cost of other evils—they proved powerless in the long run because of the unwillingness to levy adequate taxes.

The scarcity of some commodities, owing to the cutting off of the usual sources of supply or to the abnormal war demand, was responsible for a rise in prices quite independent of the rise due to the depreciation of the currency. Also, as is usual at such times, there were hoarding and speculative buying which for the time being boosted prices still higher. As it was impossible to distinguish clearly between the advance in price due to each cause, many insisted, at least in the earlier years, that speculative efforts to monopolize supplies were the chief cause of the high prices. This belief led to numerous state laws prohibiting the forestalling and engrossing of goods, which the governments were generally too weak to enforce effectively, and also was in part responsible for numerous state embargoes on the export of goods and efforts to fix prices.

To increase its general use and so check its depreciation, Congress asked the states to make the Continental money legal tender in payment of debts. Despite the injustice done to creditors as this money depreciated, the states complied with this request, and many passed laws forbidding people to ask higher prices for goods when payment was made in paper instead of in specie. People violating these laws were denounced as enemies of the country and often subjected to boycotts, fines, imprisonment, and actual violence. Such action only hastened the disappearance of specie, led people to withhold goods from the market, and failed to check the rise in paper-money prices. Therefore the next expedient was to try to fix those prices.

As early as December, 1776, the four New England states held a convention which drew up a tariff of maximum prices and wages. The effort failed

because not all the states enforced it, and the prices fixed overvalued the paper money, so goods were hoarded or sent to states where price fixing was not enforced. The resulting greater scarcity of goods in the enforcing states soon led them to abandon the measure. Inability to agree led to the failure of a similar convention among the middle states a little later. Following a recommendation of Congress, a convention of the New England states in January, 1778, drew up a new list of prices and wages fixed at a level about 75 per cent above the prices of 1774, but as only Connecticut tried to enforce the schedule the plan failed. When Congress next passed resolutions advising price fixing in November, 1779, the currency had so depreciated that it suggested a level not over twenty times that of 1774, but by that time the paper was so nearly worthless that the states felt that action was futile. The Massachusetts General Court declared that the previous attempts had "shut up our granaries, discouraged Husbandry and Commerce and starved our Sea Ports . . . created such a stagnation of Business and such a Withholding of articles as has obliged the people to give up its measure or submit to starving."

At this period, the states repealed their legal-tender laws, and by the close of 1780 the Continental paper practically ceased to circulate. Thus trade was thrown back upon barter till specie came out of its hiding places, and the supply was augmented by a large inflow brought in from the West Indies trade and by the military expenditures of the French and the British. Thus the legislation designed to prevent depreciation proved a dismal failure. As is so often the case, the lawmakers underestimated the power of the economic forces that they sought to control, and the weakness of the government made any prospect of success quite vain.

Aside from the gross injustice in the distribution of the burden of war that followed from the failure to prevent inflation, there were other results that impeded the war effort. One result was to discourage enlistment or reenlistment in the army and to undermine the morale of the troops. A private received about $7 a month at the start, but by May, 1778, this pay was worth only about $1.50 in specie. The pay was then raised, but depreciation was so rapid that by August, 1779, its specie value was barely a third of a dollar; so it went on, still another increase being more than offset by depreciation. When soldiers saw many civilians making large profits through trade or privateering while their own families suffered from want and their meager pay was often long overdue, it is not surprising that desertions and threats of mutiny developed or that steadily increasing bonuses had to be offered to secure enlistment.

Another result, due chiefly to the decline in the government's credit and the methods chosen to keep prices down, was to increase the difficulties in obtaining supplies for the army. The more patriotic might continue to sell

their supplies despite a loss, but others refused or sold to the British army or, when threatened with impressment of their goods, did their best to hide them; and the government was too weak to prevent it.

A third result was the tendency to increase the cost of the war to the government. The great rise in prices under depreciation increased the amount of money or bills of credit that both Congress and the states had to put out to buy supplies. Although most of the paper money was practically repudiated and the governments escaped this expense by shifting the loss to individuals, most of the bills of credit of Congress and the states were finally redeemed at par and the holders thus commonly received more in value than the governments had obtained when the bills were issued. In addition to impeding the war effort in these ways, the resort to depreciated paper money caused many unfortunate reactions upon the economic life of the civilian population, as will appear in what follows.

Economic Life of the People during the Revolution. The third great economic problem of war—providing for the economic needs of the civilian population—was made much simpler than today, partly because warfare required so much less in the way of resources and partly because of the relative self-sufficiency of the economic order prevailing in large sections of the country, particularly in the rural districts.

Except in the sections temporarily occupied by the armies or subject to Indian attacks, the activities of the interior agricultural regions went on much as usual. After 1776, the farmers of the New England states suffered little inconvenience, and in the South the rural population was left almost undisturbed until 1780. Along the frontier, sporadic Indian raids caused frequent alarm and some sections were abandoned, but the general effect was slight. The most serious dislocation threatened in the case of agriculture was the loss of the export trade in Southern staples and the foodstuffs of the middle states. Though the British occupation at one time or another of all the chief ports was a serious obstacle, it was still found possible to ship out considerable quantities of these products, while the armies increased the domestic demand for foodstuffs. Although the war afforded the debt-burdened planters a temporary respite from paying their English debts, many suffered heavy losses of their slaves.

Much more serious than the dislocations in agriculture were those in foreign trade and the fisheries, though the number directly employed in these pursuits was relatively small. The New England fisheries came nearer to being ruined for the time being than any other important industry, while whaling almost ceased. The fishermen often joined the crews of privateers, and this opening attracted so many landsmen as to endanger enlistment quotas. Many merchants also diverted their ships to privateering, in which pursuit large fortunes might be won or lost on a single voyage.

At the outset of the war, commerce was seriously disorganized through the loss of the direct trade with England and the British interference with the trade with other regions. By 1778, however, new routes seem to have been developed, either direct to the Continent or through the West Indies, that made possible a considerable trade. Certainly, numerous contemporary observers indicate that after 1778 the old commercial centers, Newport excepted, showed little signs of distress and often appeared very prosperous. Probably the heaviest losses in commerce fell upon the merchants who became Tories. In the latter years of the war especially, their property rights were often treated in a way that today would be unhesitatingly condemned. In the end nearly 100,000 of this group left the country. After the war, Loyalists claimed property losses of £10 million of Great Britain and were finally awarded nearly a third of this sum.

The Effects of Depreciated Paper on Civilian Economic Life. For a large portion of the people the difficulties and derangements caused by depreciating money proved far more serious than those due to the actual operations of war. When this money was made legal tender and debts were paid off in depreciated paper, it was grossly unjust to the creditors. As a contemporary writer said,[1]

> He was reckoned the honest man who from principle delayed to pay his debts. . . . In many instances, the earnings of a long life of care and diligence were, in the space of a few years, reduced to a trifling sum. . . . A hog or two would pay for a slave; a few cattle for a comfortable house, and a good horse for an improved plantation. The dreams of the golden age were realized to the poor man and the debtor, but unfortunately what these gained was just so much taken from the others. . . . Truth, honor, and justice were swept away by the overflowing deluge of legal iniquity.

Another group that suffers in a period of inflation is that dependent upon wages and salaries, since their pay seldom rises so rapidly as prices and they are commonly forced to lower their standard of living. As previously noted, the Revolutionary soldiers' families were thus affected, and other groups frequently complained of the rising cost of living. However, the suffering from this cause was greatly decreased by the fact that the proportion of hired employees in the total population was so very much smaller than in subsequent periods.

Though depreciation injures some groups, it works to the advantage of others. Not only are debtors relieved but rising prices bring abnormal profits in many branches of industry and trade, which thus receive an artificial stimulus. Those thus making money easily are apt to spend it

[1] RAMSAY, DAVID, "History of the American Revolution," vol. II, p. 136, Philadelphia, 1789.

freely while anybody possessing paper money will want to exchange it for goods as soon as possible, otherwise it may depreciate on his hands. Consequently, speculation and extravagance are promoted, and a superficial appearance of prosperity is created.

Such conditions explain in part the basis for the contemporary statements concerning the luxurious expenditure and the evidences of prosperity that were observed during the Revolution. Franklin's daughter, writing to her father from Philadelphia in 1779, declared "There was never so much pleasure and dressing going on" and asked him to send her some French finery. Washington, after visiting Philadelphia late in 1778, declared "That speculation, peculation and an insatiable thirst for riches seems to have got the better of every other consideration and almost every order of man," and 6 months later R. H. Lee wrote similarly. Jefferson deplored "the disposition to luxury" and in 1782 Pickering wrote that "the citizens in general of the United States indulge a luxury to which, before the war, they were strangers." In 1780, Joseph Reed said, "The country not the immediate seat of either army is richer than when the war began." Others commented similarly, for the losses that fell upon some were apt to be overlooked because of the attention attracted by the more spectacular prosperity that fell to the lot of others. Besides, the full effects of the orgy of depreciation were not fully realized until the return to specie and the subsequent depression with its widespread losses.

Finally, it is to be noted that the steady depreciation of the paper money was really a tax on those who held it while it declined in value. Though resorted to largely because of the dislike of taxes, it did not enable the people as a whole to escape taxation; it only altered the method of imposing the burden and enabled some to gain at the expense of others. So far as the method adopted can be said to have fooled the people because they did not fully understand what was taking place, it lessened the opposition to carrying on the war; but the war burden instead of being distributed in a more equitable manner, as might have been done by systematic taxes, actually fell upon different groups so as to work the grossest injustice.

It is sometimes urged that, since the government was weak and the people hated taxes, paper money was the best device available and therefore justifiable. To accept such reasoning is to assume an attitude toward economic problems that is fatalistic and subversive of social progress. To say that, because people are ignorant, shortsighted, or foolish, they will do unwise things may be an explanation of their action, but it hardly justifies approval of their ignorant procedure. The resort to a depreciating circulating medium during the Revolution increased the difficulties in waging the war, disorganized civilian economic life, and resulted in a most inequitable distribution of the cost of the war. Had the people foreseen all

these evils and realized that taxation in one form or another was inevitable, they might have acted more wisely. But these are among the lessons of history which, as the events of both World Wars indicate, the people have not thoroughly learned even today.

The End of the War. Practically, the war came to an end after Cornwallis's surrender at Yorktown in October, 1781. In England growing opposition to the increasingly burdensome war and the king's influence led to a defeat of the Tory party, which had supported the king's policy, and a Whig ministry came into power determined to arrange a peace. Although provisional terms of peace with England were agreed upon in November, 1782, the final treaty was not signed until September, 1783. The favorable terms of peace granted independence and, by making the Mississippi River down to West Florida the western boundary, secured to the country the rich trans-Allegheny region. The navigation of the Mississippi was made free, but as Spain, who was given back the two Floridas, controlled both banks of the river in Louisiana, this later proved a source of difficulty. The United States was fortunate to secure valuable fishing rights off Newfoundland and in the Gulf of St. Lawrence, but failed to obtain a treaty of commerce with England. It was also agreed that nothing should be done to obstruct the collection of debts contracted before the war, and that Congress would recommend to the states the restoration of confiscated loyalist property.

The total direct cost of the war to the United States has been estimated at between $100 and $140 million in specie value, a sum which in those days seemed very large, though before the end of the First World War the country was spending a larger amount every 2 days. In addition, France is estimated to have spent $60 million for or in America directly and nearly $250 million in all, while the debt of Great Britain was increased over $500 million. With independence attained at this heavy cost and through much sacrifice on the part of patriots, it remained to be seen how this newly won freedom could be made of advantage to the country. In the period that followed, the economic problems facing the people centered about the readjustment of their economic life to peacetime conditions under the new status of independence, and the organization of a framework of government adapted to promoting the economic and social development of the country in accordance with the people's ideals.

Chapter XIII

ECONOMIC CONDITIONS UNDER THE CONFEDERATION AND THE ADOPTION OF THE CONSTITUTION, 1783–1789

The Chief Economic Problems of the Period. The years from 1783 to 1789 are frequently spoken of as the critical period in our history. The critical issue was whether the particular economic and other interests of the different states and the general spirit of individualism would so undermine the power of the central government that the country would degenerate into an impotent confederacy of sovereign states; or whether, through a spirit of cooperation and mutual sacrifice of special interests, furthered by a vision of the greater gain that eventually might accrue to all, these disintegrating tendencies could be overcome and the people could agree to establish a central government sufficiently strong to promote the general welfare and to command the respect of the world. Portentous as the issue was for the future of the country, the decision often appeared to be hanging in the balance. In determining the outcome, economic conditions and forces played a vital part, and an appreciation of their influence is essential to an understanding of the Constitution under which the nation has been governed ever since.

In its economic life the new nation faced two outstanding problems at this period. One was that of readjustment to peacetime conditions such as follows every protracted war but in this case was further complicated by the economic changes involved by the attainment of independence. The second problem included (1) the establishment of a form of government that would, among other things, best promote the economic development of the country and (2) the enactment of suitable legislation for furthering this objective. Before we describe how these problems were worked out, it is desirable to note various social changes produced by the Revolutionary movement.

Some Social Changes of the Revolutionary Period. When the Articles of Confederation finally went into effect in March, 1781, they created a "perpetual union" and "league of friendship" among the thirteen states. Each state was given one vote in Congress. On many important matters the approval of nine states was required, and that of all states for any amendment. These provisions were designed to protect the small

states who believed that they were necessary to safeguard their interests and rights against the power of the larger states. This same fear of the large states had been responsible for delaying ratification of the Articles until the states with extensive claims to western lands had agreed to turn most of those lands over to the central government. The actual carrying out of these cessions was slow, but by 1786 all states except the two Carolinas and Georgia had acted; Georgia delayed until 1802. Thus was established the public domain which was expected to prove a most valuable asset to the central government and, by giving the states a greater interest in that government, to strengthen it by developing a stronger spirit of nationality. The legislation for the government and disposition of this domain, to be described later, was one of the few important achievements of Congress during these years.

Meanwhile the various states, except Rhode Island and Connecticut, were engaged in drawing up new constitutions and passing new laws most of which, reflecting the Revolutionary spirit, showed a marked tendency to provide for greater freedom and a more democratic form of government. The new constitutions vested more power in the popularly elected branches of the government and granted representation much more nearly in proportion to the population, thus meeting some of the demands of the pre-Revolutionary radical groups. Although the franchise was generally broadened, property qualifications were still retained and Catholics and Jews were excluded. In most states where the church had been supported by public taxes, it was disestablished and eventually a complete separation of church and state was secured, along with freedom of religious worship. Several states in time shifted their capitals to points in the interior, partly to escape influences dominant at the commercial seaports. The lands, ultimate title to which had formerly been vested in the crown or a proprietor, were taken over by the different states; all quitrents were abolished as well as the system of primogeniture and entail, as being undemocratic in character. There was also a strong movement favoring the abolition of slavery; and in New England, but not until later in the middle states, measures were taken which either immediately or eventually ended that institution.

For a great many individuals, the most important reaction of the Revolutionary period was the great shift in the distribution of wealth which events brought about. Between the effects of currency depreciation, the varying wartime reactions on different lines of business, and the losses suffered by the Tories, many people of wealth lost heavily while others acquired riches. Though this is a common phenomenon of prolonged war, it is quite likely that, taking the country as a whole, the shift among the individuals who made up the wealthy class was greater than at any other

time in the country's history. Together with the other changes noted, this tended to promote a greater degree of economic as well as political freedom and democracy.

Economic Changes Following Independence and the Return of Peace. To understand the immediate course of events in the years 1783–1789, it is essential to realize the changes wrought by the return of peace. The most important effects arose from two sources. The first was the drop in prices and the subsequent business depression incident to deflation and the return of peace. The second was the attainment of independence which put the country outside the British Mercantile System and necessitated extensive changes in shipping and foreign trade.

The period of economic readjustment and business depression that has followed every prolonged war has been an important phenomenon in the country's economic history. In the case of the Revolution, unlike later wars, the great drop in prices occurred before the war ended, as the depreciated paper had practically ceased to circulate by 1781. However, it took several years for the full effects of this drop, later augmented by the ending of wartime demand for goods, to work themselves out. People who had borrowed money when prices and wages were high—in many lines wages dropped from between $10 and $20 a day to 50 cents—saw little prospect of paying off their debts. Such conditions soon led to a widespread demand for a reduction or cancellation of debts or an issue of more paper money.

Finally, the return of peace let in a flood of imports, notably British manufactures, which further depressed prices, drew much of the recently acquired specie out of the country, and threatened to exterminate many of the war-fostered manufacturing enterprises. The postwar depression seems to have been most acutely felt about 1785–1786, though prices in general continued a moderate decline until 1789. Starting in 1787, however, numerous signs of improvement in the general situation were observable.

Foreign Commerce. Apparently many people believed that on attaining independence the country would continue to enjoy all the advantages enjoyed as British colonies under England's Mercantile System and, at the same time, be free from all the restrictions of that system. Also it was assumed that other nations would offer valuable commercial concessions in an effort to secure more of the country's trade. Underneath this was the common belief that commerce could be rather easily controlled and diverted from nation to nation by mere legislative enactments—a belief still widely held and illustrating the popular tendency to exaggerate the power of legislation in economic affairs. These delusions were destined quickly to be dispelled.

1. The Continental nations showed little eagerness to offer trade concessions to the United States. France and Spain now withdrew many of the favors accorded during the war and reverted to the old exclusive mercantile

policy. In 1784, however, France did open her chief West Indian ports to American goods, salt pork excepted, brought in American ships; but these ships could take only molasses and rum away, and the duties imposed were rather burdensome. Also, Spain allowed more freedom in the trade at Havana, and commerce with the Danish and Dutch West Indies remained unrestricted. Commercial treaties were made with Holland, Prussia, and Sweden; but, as Congress lacked power to control the commerce of the states, it could offer little, and hence could obtain little, in the way of concessions.

2. Far more important was the attitude of Great Britain, for it was with that country and her possessions that the colonies had always carried on most of their trade. In Parliament some advocated concessions to ensure that the profitable American trade would be retained; others insisted this was unnecessary as conditions were such that the United States would find it most advantageous to trade with Britain in any case, an argument which, after this general policy was adopted, proved substantially correct.

Thus the old Navigation Laws were put into force against American trade and shipping, subject to such changes as the king in council might authorize. One of the chief restrictions confined the carrying trade between the British West Indies and the United States to British ships, and another prohibited the import into the islands of any American salted meat and fish, though that of lumber and breadstuffs was allowed. The shipbuilding industry lost an important market since American-built ships were no longer admitted to British registry. In the direct trade with Great Britain, on the other hand, some valuable concessions were granted. American ships were allowed to bring American goods and without paying the additional duty imposed when brought in foreign vessels. Manufactured products, fish oil and whale excepted, were admitted at the same rates paid on like products from British possessions, and tobacco and rice, destined for reexport, and wood were admitted free.

Although statistics on most branches of trade for this period are lacking, the official British figures indicate that the average annual value of the exports to Great Britain, 1784–1789, was some £900,000 or barely half the average for the 6 years before the Revolution. In part, this loss was offset by increased exports, especially of tobacco, direct to the Continent. Apparently a heavy loss in exports to the West Indies during the first years of peace was soon followed by a return to the level before 1775, the decline in shipments to the British islands being offset by an increase in those to the rest of the group. Most of the trade to Africa for slaves was lost, but these years witnessed the small beginnings of the very lucrative China trade. The New England fisheries appear to have regained their former size by 1790.

In the import trade the chief changes resulting from the country being

no longer subject to the British Navigation Laws were rather less marked than in the export trade and consisted in the growth of imports direct from the Continent and from the non-British West Indies. The advantages of buying in England were reflected in the fact that the average annual imports from Great Britain for 1784–1789 were £2,333,643 or only one-seventh below that for the 6 years preceding 1775. The very heavy imports in the first 2 years of peace glutted the market, hit the war-developed American industries severely, and drained the country of about £1,500,000 in specie, thus aggravating the business depression. These difficulties, combined with the hope of forcing commercial concessions from other countries and the need for revenue, led to various attempts to regulate trade.

The Regulation of Commerce. The desire of the colonies for greater freedom of trade had been a prominent factor in the Revolutionary movement. Furthermore, in Europe there was a rising school of thought opposed to the Mercantile System and demanding greater freedom of trade. In France the Physiocrats upheld such views and in England Adam Smith's epoch-making "Inquiry into the Nature and Causes of the Wealth of Nations," published in 1776, attacked mercantilistic regulation and expounded the advantages of free trade. Such views found wide acceptance in the United States at this period among the country's leading statesmen, Hamilton excepted.

On the return of peace, nearly all the states, following the common practice of the colonies, imposed import duties primarily designed to provide revenue rather than protection. But, beginning in 1784, a change in attitude developed; the influx of British manufactures, the business depression, and the failure to secure the anticipated trade concessions from other countries led to a reaction and a demand for duties that might provide some protection and could be used to force concessions from foreign nations. Massachusetts increased duties in 1784, raised them still higher the next year, and in 1786 prohibited the importation of a considerable list of goods. New York and Pennsylvania along with some of the smaller states raised their duties, though New Jersey and Delaware, having little foreign trade, showed slight interest in duties generally. The three southernmost states, having few manufactures, were content with revenue duties, while Maryland, Virginia, and Georgia reverted to their earlier practice of levying export duties, that on tobacco being the most important. Distinctly protective in character was the series of state acts imposing discriminatory tonnage and customs duties and designed to aid the shipbuilding industry and the merchant marine. Both these and the regular import duties were a cause of much friction and wrangling among the states.

In 1784, Congress made another attempt to secure some power over foreign commerce from the states and asked the right to prohibit for 15

years the import or export of goods except in vessels owned by Americans or by subjects of foreign powers having a treaty of commerce with the United States. It was hoped thus to enact retaliatory measures which would force concessions from other countries, especially Great Britain. Unfortunately, just as with earlier requests of a like character, it proved impossible to get the states to agree upon any such grant of power.

Agriculture and Manufactures. In the trying years of readjustment after 1783, agriculture, the main pursuit of nearly 90 per cent of the people, suffered from the decline in prices resulting from the loss of the abnormal wartime demand and the new restrictions on foreign trade as well as from the preceding deflation. However, the essentially local or regional economy that still prevailed in many farming sections made the difficulties less serious than in other sections or in many other pursuits. The Southern plantations, for whose staples there was a strong foreign demand, benefited by the return of peace, though some experienced difficulty in replacing lost slaves, and the loss of the British bounty was a severe blow to the indigo growers.

The manufacturing industries most hard hit were those which had sprung up to produce war munitions or goods the importation of which had been interfered with by the war. The former, though only a rather small group, naturally suffered most since their market almost disappeared. The latter group had to face the deluge of British manufactures that flooded the country on the return of peace and often sold at very low prices. In cases where the manufacture had been taken up as an addition to the household or plantation industries, as was common in the case of cloth, no hardship was involved in dropping this activity, but where considerable capital had been sunk in a new plant and machinery, the threatened loss was much more serious. It was chiefly from this latter type of enterprises that the demand for protection arose—a demand that was later to reappear after every serious war. At this period the duties granted were very moderate, commonly between 5 and 15 per cent, but additional aid was often provided by other means, like bounties or exemptions from taxation, such measures being fairly common after 1784.

Paper-money Issues. The most popular and urgently advocated measure of relief was the oft-tried panacea of cheap money in the form of new paper issues. The need for revenue to pay expenses and the new heavy debt obligations combined with the dislike of taxation supplied one motive for such issues, but the desire to pay off debts easily and to provide business with the stimulus of rising prices was the main basis for the popular clamor. Many issues were put out as loans to serve these purposes. At the same time, there was a demand for laws to postpone the payment of debts or even to cancel them. The fact that in those days people could be sent to prison for

nonpayment of an insignificant debt and, once in prison, had little prospect of release unless somebody came to their rescue, greatly strengthened such demands.

Though Rhode Island was the only New England state to resort to this device, it indulged in the worst abuses. People refusing to accept the paper were subject to heavy fines and the loss of their rights as freemen; as a result shops were closed, farmers refused to bring their produce to town for sale, and creditors fled from their debtors for fear of being paid in depreciated paper. To cap the climax the judges, who refused to uphold these laws, were summoned before the legislature and denounced for their decision, though eventually the unwise statutes were repealed. Such issues as were put out by other states generally depreciated, but it is significant that enough had been learned from sad experiences of the past so that the rest of the New England states along with Delaware, Maryland, and Virginia refused to authorize paper money. In New Hampshire a mob threatened the legislature because of such refusal, and in Massachusetts the paper-money party resorted to violence in Shays' Rebellion, necessitating the raising of an army of 4,000 men to suppress it.

This outbreak, reflecting the general restlessness, the desire for greater freedom and equality, and the impatience of all political and social restraints that accompanied the Revolutionary movement, caused widespread alarm among the more thoughtful and conservative groups who felt it was indicative of tendencies that threatened to undermine some of the fundamental institutions upon which the existing economic and social order was based. It thus gave a decided impetus to the movement to secure a stronger government.

The Finances of the Confederation. Meanwhile Congress was struggling with the problem of finances, and conditions were going from bad to worse. In February, 1781, before the war was over, Congress had asked the states to give it power to levy a duty of 5 per cent on most imports to obtain desperately needed revenue. Within a year, every state except Rhode Island had consented; but that state feared that this would injure her commerce, endanger the liberties of her people, and tend to make Congress too powerful; so she refused her consent and, as unanimous approval was necessary, the plan failed. In 1783, Congress made a second request for power to levy certain duties and, after waiting for 3 years, the approval of every state but New York was obtained, though subject to varying conditions. As New York, fearing a loss of revenue, persisted in her refusal, nothing could be done. To what an extreme condition such selfish action was reducing the country is shown in the culminating disgrace of the period when, in 1783, a small body of soldiers, made mutinous from lack of pay, so threatened the impotent Congress that it fled from Philadelphia, where scarcely a hand was lifted to protect it.

From 1784 to 1789, the condition of the Confederation's finances grew steadily worse. The chief source of income came from the requisitions made on the states, but the states paid in less than a third of what was asked for. Less than $1 million was received from the sale of public lands, but, fortunately, loans of nearly $2.3 million were obtained in Holland. As receipts were totally inadequate to meet obligations, the arrears of unpaid interest on the debt increased by some $10 million. Clearly the Confederation was headed toward bankruptcy unless a drastic financial reform could be secured. This weakness constituted the second outstanding defect in the existing government and together with the first—the lack of control over domestic and foreign commerce—exercised a vital influence in creating the demand for a change in the Articles of Confederation.

The Movement for the Constitutional Convention. The situation of the Confederation was indeed desperate. Relieved from the pressure for action imposed by war, Congress became increasingly impotent and often lacked the quorum necessary for action for weeks at a time, while the states, still self-centered and provincial in their outlook, wrangled among themselves oblivious to the urgent needs of the country. Well might Washington say,

> Experience has taught us that men will not adopt and carry into execution measures the best calculated for their own good, without the intervention of a coercive power. I do not conceive we can exist long as a nation without having lodged somewhere a power, which will pervade the whole Union in as energetic a manner as the authority of the state governments extends over the several states.

Immediately, the movement that led up to the calling of the Constitutional Convention of 1787 had its origin in the difficulties arising from lack of more centralized control over commerce. In 1785, Maryland and Virginia, having long had trouble in controlling the commerce on the waters between them, drew up an agreement on the subject. It was then proposed to extend the plan, and all the states were invited to send delegates to a convention to be held at Annapolis in September, 1786. Typically, when the time came, delegates appeared from only five states and, as little could be done, it was decided to call another convention to meet at Philadelphia in May, 1787, "to take into consideration the situation of the United States, to devise such further provisions as shall appear to them necessary to render the constitution of the federal government adequate to the exigencies of the Union. . . ." This helped to galvanize Congress into enough life to issue its own call for a convention to meet at the same time and place to revise the Articles of Confederation so as to "render the federal constitution adequate to the exigencies of government and the preservation of the union."

Among the forces back of the movement that led to the Constitutional

Convention, those of an economic character played an extremely important part, though they were often bound up with political considerations as well. Although not all the economic ills of the years 1783 to 1787 were to be attributed to the form of government, it was in some ways fortunate that the economic depression came when it did, for it greatly stimulated the demand for a stronger government at a most critical period. Unquestionably the decentralized control, the insistence upon local autonomy, and the provincial outlook that prevailed under the Confederation with the resulting conflicts between the states threatened serious injury to the economic life of the country. Clearly a stronger central government could in numerous ways promote the economic development of the nation. More specifically, it could aid both domestic and foreign commerce, protect the infant manufacturing industries, further the opening up and orderly settlement of the western lands, better safeguard property rights in slaves, restore the government's credit, thus benefiting its creditors and increasing its powers, and in general establish those conditions of law and order essential for the protection of private property and the maintenance of social stability.

It was therefore natural that the movement for the Constitution was most actively supported by such groups as the merchants, the manufacturers, the slaveowners, the government creditors, and those interested in western lands, who believed a stronger central government was desirable because it would promote either their own pecuniary interests or the general welfare or, as most doubtless felt, both. That any constitution, if it is to function properly, must reflect economic interests is obvious, since the promotion of the economic interests of a nation is one of the main purposes of government. If one agrees that the resulting Constitution, even if not perfect, was in general harmony with the best interests of the country as envisaged at the time, he can hardly hold that those favoring it, whatever their personal interests, should have acted otherwise than they did.

Although the movement represented a reaction, most marked among the conservative, property-owning classes, against the more extreme demands for freedom reflective of the revolutionary spirit, it must also be recognized as progressive in character. It was progressive because the greater power and centralization of control in government which the Constitution provided were directly in line with the needs of the existing economic order and also with similar needs that were destined to grow as that economic order subsequently evolved. The way in which that evolving order was constantly creating new needs for increasing the powers of the Federal government at the expense of states' rights is a point to be observed in the study of later periods. It may also be noted that basically the growing need for various types of international controls which the world faces today

is a problem essentially similar in its origins and character. In 1787 the really vital, and most of the more important, needs of the time were met by the Constitution, and it contained sufficient elements of elasticity so that it has continued to serve, even if not perfectly, the needs of the nation down to this day.

The Constitutional Convention. The Constitutional Convention, which held its secret sessions from May until mid-September, 1787, had delegates from all the states but Rhode Island, and these included most of the ablest statesmen of the country. As Beard says, "The specific task of the convention was to remedy a series of perfectly definite defects revealed in the experience of the ten years preceding," and the proceedings were dominated by eminent common sense and practicality rather than by abstract political theories. Yet the problem faced involved devising not only remedies, but remedies that would meet sufficient approval to be adopted; otherwise the whole effort would be futile.

To do this was exceedingly difficult, for there were many divergent opinions and conflicting interests to be reconciled. The small states feared the power of the large states; the commercial and shipping interests might run counter to the interests of the small farming and plantation classes; the slaveholders and nonslaveholders, the debtors and creditors, the poor and the rich, each saw visions of possible dangers against which they must be protected to secure their approval. To work out the needed compromises at a time when the whole economic, political, and social organization of the country was so provincial and decentralized and the ties of common interests so much weaker than they have since become was doubly difficult. It required a clear vision of future developments, a tolerant attitude of compromise, and a spirit of self-sacrifice for the common good. That in the end such traits dominated must appear little short of miraculous to one conversant with the spirit of the times; this meant more for the ultimate welfare of the country than can well be described.

Economic Aspects of the Constitution. Since the defects in the Articles of Confederation arose largely from the lack of powers needed to promote the country's economic development which, as previously noted, is one of the main functions of government, it was to be expected that the provisions of the new Constitution would be largely influenced by economic considerations. As Madison himself wrote in *The Federalist*,

> The diversity in the faculties of men, from which the rights of property originate, is not less an insuperable obstacle to a uniformity of interests. The protection of these faculties is the first object of government. . . . A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations and divide them into different classes, actuated by different sentiments and views. The regulation of these various

and interfering interests forms the principal task of modern legislation and involves the spirit of party and faction in the necessary and ordinary operations of the government.

To understand the Constitution, which has ever since exercised a vital influence upon the country's economic life, it is essential to appreciate the way in which its specific provisions were shaped by the economic conditions during both the colonial period and that of the Confederation and by the necessity for working out compromises of the various conflicting economic interests.

The most serious defect in the Articles of Confederation was remedied under the Constitution by giving Congress power "to lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States, but all Duties, Imposts and Excises shall be uniform throughout the United States." All direct taxes were to be levied in proportion to the population as fixed by the census, but excluding untaxed Indians and counting slaves at three-fifths of their number, the same basis upon which representation in the House was apportioned. The population base for distributing direct taxes was considered favorable to the agricultural class which feared that any other base, such as wealth, would put the tax burden chiefly on those having landed property; also, as was shown by difficulties met with in trying to measure for other bases under the Confederation, population was easier to determine. The House of Representatives, since it was most closely in touch with the people, was granted the sole right to originate revenue laws, but as events proved, the power of the Senate to propose amendments gave it about equal influence over legislation. The power to levy taxes was of course the basis for maintaining the government's credit, but that credit was strengthened by the requirement that the new government assume the valid debts of the Confederation.

Lack of control over domestic and foreign commerce had been the next most serious weakness of the Confederation. This was now remedied by giving Congress the power "to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes"; a power which, as later defined by the Supreme Court, was destined to prove of ever-growing importance. At the same time "no Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another; nor shall Vessels bound to, or from, one State be obliged to enter, clear, or pay Duties in another"; and the states were prohibited, without the consent of Congress, from levying duties on imports or exports, except where necessary for executing their inspection laws, and from levying tonnage duties. Thus substantial freedom of interstate commerce was assured.

The power to impose duties granted the Federal government under the tax clause obviously could be so employed as to regulate trade, but certain of such uses were prohibited. Import duties must be uniform throughout the country and no export duty or tax could be levied. The latter prohibition was due chiefly to the fear of the Southern states, particularly those growing tobacco which had previously made the chief use of this device, that such duties would be imposed on their staples. It was also provided that the importation of slaves was not to be prohibited before 1808; until then no import duty exceeding $10 a person was to be levied on them. This clause was to protect the rice and indigo planters of South Carolina and Georgia, for by this period the tobacco planters were becoming dubious as to the advantages of slave labor. These restrictions formed elements in the compromise whereby the Northern mercantile and shipping interests won the abandonment of the proposed two-thirds vote requirement for the passage of navigation laws. The requirement of a two-thirds vote of the Senate for ratification of treaties, while designed to protect minority interests of all sorts, had the more immediate purpose of protecting New England's interest in the fisheries and the South's interest in the navigation of the Mississippi, both of which depended on treaty rights. Closely related to the protection or development of commerce were the provisions which gave the Federal government the power to establish post offices and post roads, to fix the standard of weights and measures, and to enact uniform laws on bankruptcies.

The unsatisfactory state of the circulating medium and the paper-money issues in particular had been a perennial source of trouble both during the colonial period and under the Confederation. The new Constitution gave Congress the sole power to coin money, regulate its value, and punish counterfeiters. The states were prohibited from coining money, emitting bills of credit, or making anything but gold and silver coin a legal tender in payment of debts. Congress was not specifically given the power to issue paper money, a proposal to that effect having been defeated. Whether it was believed that this power had not been granted or was instead implied in other powers, is not altogether clear, though the latter view was eventually sustained by the Supreme Court in the case of the Civil War greenbacks. Undoubtedly it was supposed that the iniquitous state issues had been eliminated; but, in an indirect way through the charter of state banks with the power to issue notes, they later returned to plague the country.

Property rights were protected by a wide range of provisions for it was felt that many such rights were inadequately safeguarded under the Confederation. Certain provisions related to specific forms of property: fugitive slaves on escaping to a free state were not to be freed but delivered to their owner on claim; copyright and patent laws were authorized to

promote literature, science, and the useful arts; no state could pass a law impairing the obligation of contracts; and Congress received the power to dispose of and make all needful rules and regulations respecting the territory or other property of the United States. Citizens of each state should be entitled to all the privileges and immunities of citizens in the several states. Other provisions of a more general character, such as those for courts, the army and navy, protection against piracy, and the maintenance of law and order, served to protect property along with other rights.

Finally, without stopping to indicate some of the minor economic influences on other provisions, it is important to note certain features of the general frame of government, which were in part determined by economic forces and were destined to exercise the greatest influence upon the later functioning of the government in its relations to the economic life of the country. (1) The fear of the small states lest their economic interests and general liberties should be endangered by the larger states was met by "the great compromise" under which each state secured equal representation in the Senate while population was the basis of representation in the House. (2) The Federal government was granted only such powers as were specifically or by implication delegated to it or denied to the states, and all other powers remained with the states or the people. Though a specific provision to this effect was included among the first group of amendments, partly as a matter of caution, its spirit permeated the whole Constitution. The provincialism, economic, political, and social, and the intense spirit of liberty inherited from colonial times led the states to refuse to grant to the Federal government any powers beyond those which previous experience had shown were absolutely essential for the common good. (3) The whole framework of government with its division of functions between the legislative, the executive, and the judicial branches, deriving from colonial and English institutions, combined with the elaborately worked out system of checks and balances, including the written Constitution at the top, interpreted by the Supreme Court; the powers of the President and the method for electing him; the arrangement of the different terms of office and systems for choosing Senators and Representatives; and the cautious provisions for amending the Constitution—all these and others reflected a fear of the power of majorities and an insistence upon protecting minority interests of any sort from their tyranny, a danger that the experiences during the Confederation had made appear very real. The result was a government in which radical changes, although always possible if a sufficiently large number could be convinced of their desirability, were likely to come slowly and only after much discussion; a government less quickly responsive to the momentary whims of the populace but more stable in its forward movements.

Nothing affords stronger proof of the foresight and wisdom of the men who drew up the Constitution than the fact that it has survived to the present time with so few amendments, though aided by a broadening interpretation, in spite of the revolutionary changes in the economic and social life of the nation. That under such undreamed-of changes it should function to perfection is not to be expected; various ways in which it has tended to retard social progress will later become evident; but the surprising thing is that, considering the period and the conditions under which it was drawn up, this bundle of compromises "extracted from the grinding necessity of a reluctant nation," as John Quincy Adams later characterized its origin, still functions as well as it does.

The Ratification of the Constitution. It was provided that the ratification of the Constitution should be left to special state conventions and that the approval of nine states should be sufficient for its adoption, thus ignoring the provision of the Articles of Confederation requiring unanimous approval of any amendment, since there was no hope of securing such approval. That the approval of even nine states could be obtained was extremely doubtful. It has been estimated by Beard that about one-third of the adult males were disfranchised and that only between one-fourth and one-fifth took part in the election of delegates to the state conventions, possibly 160,000 in all of whom about 100,000 favored ratification.

The study of the vote for the state conventions made by Libby well illustrates the sectional and class interests that were involved in the issue. The seaboard sections, especially the centers of wealth, commerce, and manufacturing, together with the tidewater plantation region and a small portion of the better settled parts of Kentucky and Tennessee interested in Western lands and Federal protection of trade down the Mississippi, generally favored ratification. On the other hand, the less densely settled rural sections occupied by the more self-sufficing farmers and the regions where the paper-money party had been strong were for the most part opposed. Even along the coast region and in the cities, there were influential men who feared the powers granted the central government and believed that in taking their stand with the opposition they were protecting their liberties.

Though the opposition was relatively unorganized and scattered as compared with the groups favoring ratification, it required much propaganda and the most astute political maneuvering on the part of the latter to accomplish their purpose. Often the outcome of the issue seemed to hang in the balance, and a shift of from two to twelve votes would have defeated ratification in Pennsylvania, Massachusetts, Virginia, and New York. Ratification by the ninth state, New Hampshire, came in June, 1788, and was immediately followed by that of Virginia; New York, where at

the start two-thirds of the delegates were opposed, swung into line in July by a vote of thirty against twenty-seven. The inclusion of this vital link assured success, and in September Congress resolved that the Constitution had been ratified and that the new government should go into effect in March, 1789. North Carolina finally ratified in November, 1789, while obstreperous Rhode Island, since she could not successfully obstruct as on previous occasions and feared that to be left out would prove more disastrous than the endangering of her precious liberties if she joined, finally approved in May, 1790.

However, in order to meet the demand for a Bill of Rights and the generally expressed wish for further safeguards for the people's liberties which had developed in the discussion over ratification, the first ten amendments were drawn up, proposed to the states in September, 1789, and declared ratified in December, 1791—a final concession to that all-pervading spirit of freedom and liberty.

The new government began its existence at a favorable moment, for the disappearance of the business depression and the rise in prices after 1789 did much to allay popular discontent and secure added support for the Constitution. Yet the old sectional interests and spirit of individualism still remained to vex the young nation. In the decades that followed, diverging economic interests and the spirit of states' rights repeatedly gave rise to threats of secession in different sections and the question whether the Union that had been created was indissoluble was only finally settled by an appeal to the arbitrament of war. A slower but more potent factor in developing unity was the steadily growing economic interdependence of the different sections which, in the course of the following century through the growth of a national economy and the rapid increase in the number of ties of common interests, bound the different sections together so that a willingness to make sacrifices for the common good prevailed and the Union became a Union in spirit as well as in form.

Chapter XIV

ECONOMIC CONDITIONS UNDER THE NEW GOVERNMENT AND WAR'S REACTIONS, 1789–1815

The Chief Characteristics of the Period. Though the crisis had been passed with the attainment of independence and the adoption of the Constitution, the quarter century that followed was destined to prove a trying one for the young nation under its new government. For not only were there the problems of putting this government on its feet and providing the aids to economic development which were expected of it, but these problems were greatly complicated by the outbreak of the protracted wars into which all of Europe was plunged, resulting in widespread reactions upon the course of both economic and political events in the United States and eventually drawing this country also into war.

These wars brought an abnormal and complicating factor into the situation and, in order to untangle and understand the forces that shaped the economic history of this quarter century, it is essential to keep in mind these two separate groups of forces: (1) the abnormal influences arising out of wars which largely dominated the immediate course of events and were spectacular in character and (2) the changes incident to the establishment of the new government and the more normal evolution of the country's economic life which were less conspicuous but in the long run more fundamental and important. In the following account, the reaction of the European wars will be described first, as helping to explain some aspects of the record of the underlying trends in economic development that follows, and conditions during the War of 1812 will be treated separately.

The Reaction of European Wars upon Foreign Commerce to 1812. Events following the outbreak of the French Revolution in 1789 drew France into a war with her neighbors in 1792 which soon involved the whole of Europe and continued with but a year's interruption, 1802–1803, until Napoleon's final defeat at Waterloo in 1815. The chief immediate impact of these wars upon the economic life of the United States up to 1812 was felt in the fields of foreign trade and shipping and in the resulting changes in the demand for the products of the country's agriculture and manufactures. These wars made the United States the chief neutral carrier of the world and gave a tremendous stimulus to the shipbuilding industry

and the merchant marine; at the same time they considerably increased the foreign demand for American foodstuffs. The country has never experienced such extreme relative shifts in its foreign trade as occurred in the quarter century after 1792. As is indicated by the chart on this page, the total exports rose from $20 million in 1790 to over $108 million in 1807, though in part this was due to a higher price level. In 1790, practically all exports were domestic products, but in 1807 over half the total

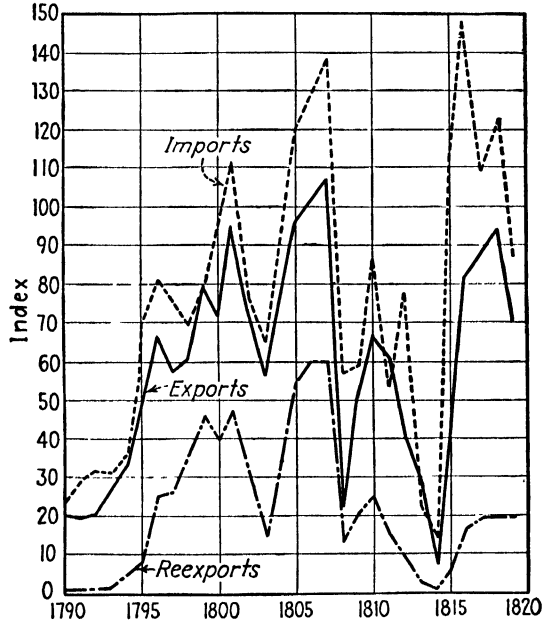


FIG. 10. Imports, exports, and reexports of the United States, 1790–1820.

consisted of reexports of goods imported from other countries, as many products of foreign, especially West Indian, origin and destined for foreign nations were being carried by way of United States ports to take advantage of this country's position of neutrality. This was partly responsible for the rise in imports between these two years from $23 to $138 million. During the same period, the American shipping engaged in the foreign trade jumped from 127,000 to 1,089,000 tons and carried 92 per cent of the value of the foreign trade in 1807, as compared with 24 per cent in 1789. But the year 1807 marked the high point of this remarkable advance; the Embargo caused a drastic decline in 1808 which was followed by a substantial recovery up to 1812 after which the country's entrance into the war resulted in its foreign trade being practically annihilated by 1814. Thus, after 1807, war's reactions on the country's economic life

tended to become just the reverse of those resulting from the previous abnormal stimulus.

When war broke out between England and France, the latter opened the trade of her West Indian colonies to neutrals, fearing that otherwise England's dominance on the sea would destroy it. No sooner had American ships rushed to engage in this trade than England issued an order subjecting such vessels to seizure under the Rule of 1756 that trade not open to neutrals in time of peace could not be opened to them in time of war. Further restrictions followed, resulting in the seizure of many ships and cargoes, while English-born seamen found on American ships were impressed by the British, who denied their right to become naturalized Americans. As war seemed imminent and it was realized that the country was in no condition to fight, Jay was sent to England in 1794 to negotiate a treaty to settle these disputes, together with other questions concerning the carrying out of various provisions of the peace treaty of 1783, and to secure more favorable trade regulations.

The resulting treaty was a great disappointment to the United States. It provided that Great Britain should give up the Western posts which she still held and established commissions to settle claims for the seizure of ships and for the old unsettled debts due English merchants. Nothing was said about payments for slaves carried away in 1783, or about impressment and the right of search of American ships. The commercial clauses admitted American vessels to ports in British India, but the concession admitting those of not over 70 tons to the British West Indies was accompanied by such severe restrictions that this clause was finally eliminated. It was only with difficulty that Jay's treaty was finally ratified in 1795 and France considered it a hostile act.

Though commerce expanded rapidly in the following years, both England and France tried to restrict it where it was of any advantage to the other. Washington took a strong stand in favor of strict neutrality and had the support of the Federalist party, which included many partisans of England or those fearing French radical tendencies and most Northern merchants who felt trade and shipping would suffer if the country entered the war. In opposition was the party then called Republican led by Jefferson, with its chief strength among the farmers, but including those opposed to the growth of Federal authority as well as the friends of France. When French intrigues for aid were rebuffed, France increased her reprisals on American shipping. This was carried so far and the treatment accorded the commissioners sent over to France was so humiliating, that in 1798 the country began preparing for war with France. Actual hostilities did occur, though open warfare was avoided by an agreement of 1800 which relieved the strained relations.

The navy which began to be built up at this time proved useful in the war against Tripoli which broke out in 1801 following the demand of that country for an increase in the tribute paid as a condition for ceasing the piratical raids on American commerce. The peace secured in 1805 put an end to these raids, though tribute was paid to some of the other Barbary coast states up to 1815.

The Treaty of Amiens in 1802 brought a year of peace resulting in a severe drop in American foreign trade, but the rising ambitions and power of Napoleon led to a renewal of the conflict which soon involved all Europe. The American carrying trade and commerce now mounted to even greater heights; but this only led to greater encroachments on our neutral rights on the part of England and France. Napoleon developed his Continental System designed to cut off all British trade with the Continent and drain England of her specie. As his control over the Continent was extended, the success of his efforts increased. When he tried to cut off all British trade under the Berlin decree of 1806 and the Milan decree of 1807, which declared a blockade of the British Isles and made all ships touching at British ports or permitting British search subject to capture and confiscation, he was less successful, for the English navy had by that time obtained fairly effective control of the seas. Meanwhile Great Britain, seeking to cut off all commerce with France and the countries subject to her control, was issuing Orders in Council which practically declared all such trade illegal and all vessels engaging in it without British permission subject to confiscation.

These decrees and orders, if enforced, would have ended practically all trade between the United States and Europe and most of the American carrying trade as well. Although they could not be strictly enforced and Americans proved quick to take advantage of any loopholes, extensive confiscation of valuable ships and cargoes resulted while England continued to impress American seamen.

American Measures of Retaliation. Despite its humiliating position, the United States was still reluctant to resort to war, partly because the country was unprepared and wished to avoid the costs involved, partly because the position as neutral had brought great prosperity to many despite the losses of ships and cargoes. President Jefferson, a lover of peace and economy, believed economic pressure might force concessions, as it had done before the Revolution. In April, 1806, an act was passed, to take effect the following November if Great Britain did not make concessions before then, which forbade the import of certain British goods that could be produced at home or obtained elsewhere. Pending negotiations with England, which led to such a distasteful treaty that Jefferson would not even submit it to the Senate, resulted in suspending the effective date of this act until Dec. 14, 1807.

In the meantime, foreign restrictions had so increased that Congress on Dec. 22, 1807, on Jefferson's recommendation, passed the Embargo Act which prohibited the sailing of any vessel from the United States to any foreign port. This hasty and rather foolish law threatened to destroy the country's foreign trade, despite some evasions, and caused no slight uproar. The shipping industry faced ruin, and there was widespread suffering and unemployment among the commercial states; a sharp decline in the prices of farm products hit the agricultural class generally; New England began to talk of secession. So general was the outcry that in March, 1809, the Embargo was replaced by the Nonintercourse Act which only prohibited all trade with France and Great Britain, but provided that, if either country repealed its obnoxious acts, trade with it might be reopened.

Commerce and shipping at once revived, but even in 1810 the value of foreign trade was only three-fifths that of 1807. Continued opposition led in May, 1810, to the repeal of the Nonintercourse Act with the proviso that if either France or England withdrew her objectionable acts and the other did not, the Act should be revived against the latter. As this worked rather to the advantage of England, Napoleon retaliated by wholesale confiscation of American ships in ports under his control. Further negotiations, marked by great lack of straightforward dealing on the part of both England and France, finally led to the revival of the Nonintercourse Act against England in March, 1811. By this time the popular discontent with the ineffectiveness of economic reprisals and the humiliating position in which the country had been placed was sufficiently general, especially in the South and the West, so that in June, 1812, Congress voted for war, not knowing at the moment that England had finally decided to withdraw her Orders in Council. The economic aspects of the war period will be treated later.

Commerce on the Mississippi and Spain. There remains to note one other way in which the European wars reacted upon the country with results that eventually were of a momentous character, though at the time the real significance was little realized.

After the Revolution, the movement of settlers over the Appalachians into Kentucky, Tennessee, and western Pennsylvania had resulted in over 100,000 people being located in this region by 1790. The cost of transport eastward over the mountains was so great that scarcely any products could stand it; hence the only outlet for bulky products was by flatboat down the river to New Orleans. But New Orleans and both banks of the lower Mississippi belonged to Spain, which could thus bottle up this outlet.

Spain was not unmindful of this advantage and willingly shared in the intrigues to foment the dissatisfaction existing among the Western settlers,

who felt that the government was not adequately protecting their interest in commerce down the Mississippi or in suppressing Indian raids, and talked of secession. The situation threatened to become serious until in 1795 a very favorable treaty was obtained from Spain which fixed the 31st parallel as the northern boundary of Florida, acknowledged the right of the United States to the free navigation of the Mississippi throughout its course, and, what was almost as important, granted the right to deposit goods at New Orleans for transshipment free of duties for 3 years, which right was to be subsequently renewed either at New Orleans or elsewhere near the mouth of the river.

This quieted the movement for secession, and trade down the river soon mounted so rapidly as to alarm the Spanish officials. The right of deposit at New Orleans lapsed in 1798 but soon was practically restored, until orders from the king of Spain led to its withdrawal in October, 1802. News of this caused consternation in the Western settlements; there was talk of seizing New Orleans; and, though the government counseled delay, it was clear some action was imperative. Meanwhile, events in Europe had created a situation that provided an easy and most fortunate solution of the problem.

The Purchase of Louisiana Territory. In the year 1800 the king of Spain, under the influence of Napoleon, who had visions of rebuilding a French colonial empire in America, secretly signed a preliminary treaty turning over Louisiana to France. Though the actual cession was not made until 1802, rumors of it spread abroad and caused much disquiet in this country, which greatly preferred that possession of Louisiana should remain in the weak hands of Spain. Jefferson felt that "New Orleans was the one single spot on the globe the possessor of which was the natural and habitual enemy of the American people" and, that if France should acquire it, the United States would be driven to joining with England against her. So, after the news of the withdrawal of the right of deposit reached him, he appointed envoys to France to negotiate for the purchase of New Orleans and West Florida.

Meanwhile Napoleon's plans for rebuilding a colonial empire were going awry. In America the attempt to reconquer Santo Domingo had proved a disastrous failure. As Napoleon was contemplating a renewal of the war against England, in which case Louisiana was likely to be seized by England, and as money was badly needed, he suddenly decided to offer to sell the whole of Louisiana Territory to the United States. The astonished American envoys, only authorized to purchase a small bit of territory, had a veritable empire thrown at their feet. No negotiation was necessary except as to price, once the envoys had summoned sufficient courage to exceed their instructions and take all that was offered. The price was fixed at

$15 million out of which $3.75 million was deducted to settle American claims against France for confiscations of shipping.

To acquire control of the outlet down the Mississippi was of the greatest importance for the development of the Middle West and it was the only motive for the purchase of Louisiana, since the far more significant long-run consequences of this act were entirely overlooked in the consideration of the statesmen responsible for it. The purchase of Louisiana has been said to mark the turning point in the movement that made the United States a world power. It prevented any other nation from acquiring this valuable region, paved the way for further expansion to the Pacific, and eliminated the possibility of the growth of powerful neighboring states. It added the western half of one of the largest and richest agricultural river basins in the world and doubled the size of the country. Yet of the ultimate significance of this acquisition for the future economic and political development of the country the statesmen of the time had almost no conception.

The resources of most of the territory acquired were practically unknown and contemporary opinion of the West showed little understanding of its future growth and value. Monroe, who had visited the Old Northwest just after the Revolution, wrote to Jefferson in 1786 that

> . . . a great part of the territory is miserably poor, especially that near Lakes Michigan and Erie and that upon the Mississippi and Illinois consists of extensive plains which have not had from appearances and will not have a single bush on them for ages. The districts therefore within which these fall will perhaps never contain a sufficient number of inhabitants to entitle them to membership in the confederacy.

A few years later Jefferson predicted that it would be a thousand years before the country would be thickly settled as far west as the Mississippi, and Livingston, who helped negotiate for the purchase of Louisiana, said, "We shall not send an emigrant beyond the Mississippi in a hundred years." Jefferson, aghast at what his envoys had agreed to and doubtful as to its constitutionality, questioned whether it would be wise for the nation to keep most of the territory north of New Orleans.

When wise men held such views as to the future of the West, we must admit that it was only a fortuitous combination of circumstances, largely a product of the European wars, that determined the outcome of this event. Perhaps in time the expansive power of the country might have wrought similar results, but never on such easy terms. It was indeed a kindly fate that shaped the destinies of the country at this time. This incident of history, like England's acquisition of Canada in 1763, affords another illustration of the lesson that, when statesmen lack the scientific imagination that provides a clear insight into the trends of human developments,

events the most momentous in shaping the destiny of nations may be decided by that complex of conditions and forces, often of purely momentary character and significance, which we call "blind chance."

Summary of the Reaction of European Wars. Of the outstanding reactions of the European wars on the country's development, that resulting in the acquisition of Louisiana Territory was of little immediate significance, except as it quieted the fears of the Western settlers and furthered the growth of the West and its trade. Of far greater consequence immediately, though less important in the long run, were the reactions upon the country's foreign trade and shipping with the resulting repercussions on shipbuilding, agriculture, manufacturing, and the general price level.

Up to about 1808, war's abnormal stimulus to foreign trade, shipping, and agriculture tended to continue and to accentuate the same main lines of economic activity that had been dominant in the colonial period. Starting with the temporary Embargo Act, but not becoming marked until after the country entered the war in 1812, the reactions of war were exactly the reverse of those during the preceding period. Before the end of the war foreign commerce, the carrying trade, and the foreign markets for farm products had practically vanished, but the cutting off of imports had given a great impetus to domestic manufactures. Thus, increasingly cut off from economic intercourse with the rest of the world which had been abnormally stimulated during the 15 years preceding 1808, the United States was compelled to secure a greater degree of economic self-sufficiency and independence and a more completely rounded national economy than had prevailed theretofore. The hastening of this transition was a particularly important reaction of the latter portion of this period of war.

One other reaction to be noted is the very high general level of prosperity that prevailed from about 1794 down to 1812, despite brief reactions in 1802 and 1808. The abnormal foreign demand for American goods, shipping, and trading service created a strong sellers' market and brought a large inflow of wealth to the country despite the higher prices paid for imports. The nation, when at peace, has never had such a prolonged and relatively high level of prices as prevailed from 1794 to 1812. It was a period of rapid accumulation of wealth for many and the resulting savings helped to provide the capital needed for the expansion of domestic manufactures.

Bearing in mind these wartime reactions, we can now turn to what we have called the more normal trends of development in the economic life of the country.

Economic Problems of the New Government. Since the two most serious defects of the government under the Confederation had been lack of taxing power and of control over commerce, the first Congress under the new Constitution was at once occupied with the problems incident to

using its new powers to remedy these defects. It was largely under the very able leadership of Alexander Hamilton, first secretary of the treasury, that the constructive program for this task was developed in a series of reports issued from 1790 to 1795 which dealt with the questions of public credit, a national bank, a mint, and manufactures.

The Government's Fiscal System. Revenue was the most pressing need, and the problem was how to raise it so as to minimize the inevitable popular opposition to taxes and not alienate the much-needed supporters of the administration. As direct taxes were particularly unpopular, indirect taxes were preferred and Congress very naturally chose customs duties since people were accustomed to them and they had provided one of the main sources of colonial revenues. Other reasons for this choice were the belief that such duties could be used to force concessions from other countries, as was impossible under the Confederation, and also the desire to provide some protection for the country's rising industries. Hence the first act of the new Congress was the Tariff of 1789. This law imposed specific duties (so much per physical unit) on some thirty products and ad valorem duties (a given percentage of their value) on other commodities. The rates were very moderate the average being estimated at 8½ per cent; on a few items the duty rose to 15 per cent but on most it was only 5 per cent. Though having some protective elements, it was primarily a tariff for revenue.

In the succeeding years, the changes made in the customs duties were almost entirely determined by the need for more revenue. Up to 1800, the government generally faced deficits and duties were raised. Thereafter, up to 1812, the mounting volume of imports so increased customs receipts that, combined with greater economy in expenditures, there was a surplus in every fiscal year but 1809, when trade was restricted. Consequently customs duties were left almost stationary at a very moderate level. Also, the remarkable prosperity of agriculture and commerce up to 1808 tended to lessen the demand for protection; thereafter the growing restrictions on foreign trade automatically provided more protection. It may therefore be said that this first period in our tariff history, which continued through 1815, was characterized by a tariff primarily for revenue. The heavy reliance upon this source of income is reflected in the fact that up to 1812 nine-tenths of the Federal government's receipts came from customs duties.

For over a decade, however, the customs revenue proved insufficient to meet expenses and other sources of income had to be sought. The receipts from the sale of the public domain, which had been expected to yield a substantial revenue, proved most disappointing at this period and so resort was had to internal revenue taxes. In 1791, an act placed a tax on spirits distilled from foreign or domestic products, the proceeds to be used solely

to pay interest on the public debt or to reduce the principal. This tax proved particularly obnoxious to the farmers who were accustomed to distill whisky from their grain, especially those that lived on the frontier who found that the less bulky and more valuable whisky was the only form in which they could afford to send their produce to market. This was the cause of the Whisky Rebellion in Pennsylvania in 1794, which eventually required troops to put it down. In 1794, as deficits still faced the government, new taxes were imposed on carriages, the sale of various liquors, the manufacture of snuff, the refining of sugar, and auction sales; in 1797 a stamp tax on legal documents was added. Finally, in 1798, when war with France seemed imminent, a direct tax of $2 million was levied.

When the Republican party with President Jefferson as its leader came into power in 1801, it advocated strict economy and the repeal of the internal revenue taxes as inquisitorial and undemocratic. Both of these purposes were carried out in 1802 under the efficient treasury administration of Albert Gallatin. This only involved a loss averaging around $600,000 a year in revenue, for the tax yield had never been large, and this was more than offset by the rising receipts from customs duties. As a result, in spite of the greater outlay later necessary for defense, from 1801 until 1812 the treasury had a surplus in every year but 1809, and the debt was substantially reduced (see the charts on pages 402 and 403).

The Question of the Debt. In his first Report on Public Credit made in January, 1790, Hamilton estimated that the principal and arrears of interest on the foreign debt amounted to $11,710,000 and that the domestic debt including arrears was some $42 million. This debt he proposed to refund; that is, to issue new bonds either to be sold and the proceeds used to pay the old bondholders or to be exchanged directly for the old debt. His plan involved paying the old debt at its face value plus any arrears of interest so as to maintain the government's faith with its creditors.

That this policy was proper in the case of the foreign creditors nobody questioned, but the proposal to pay the domestic debt at its face value aroused much opposition, chiefly because many of the original holders of the evidences of debt had sold them at much below par to speculators who would make a large profit if they were paid off at face value. In fact, as soon as Hamilton's plan became known, speculators hastened to send agents through the country districts to buy up the debt before the holders heard of the plan. In spite of the opposition, Congress decided to maintain the faith of the government and redeem the debt at its face value, the only exception being the old Continental paper money still outstanding which was to be accepted for the new bonds at the ratio of 100 to 1.

Hamilton's plans also included the assumption by the Federal government of the outstanding debts of the states incurred in carrying on the

Revolution, this to be done by exchanging new government bonds for the old state debts. This proposal met with even more opposition as not being fair to all the states, since some had already paid off much of their debt and others had met a large proportion of their war expenses by issuing paper money instead of bonds. This was notably the case of the Southern states and, in order to overcome their opposition, a bargain was made under which it was agreed to locate the seat of government on the Potomac River in return for the Southern votes for assumption. The amount of the state debts finally taken over was about $18 million. Thus the number of people financially interested in the success of the Federal government was considerably increased; this result, in fact, was one of Hamilton's chief reasons for the scheme.

The outcome of this action was to give the nation a debt of some $75 million in 1791. In the years immediately following, generally marked by deficits, additional borrowing was necessary so that by 1801 the debt had risen to $83 million. Thereafter the welcome appearance of a surplus made it possible, in spite of the borrowing incident to the payment for Louisiana, to reduce the debt to $45 million by 1812 (see the chart on page 402). Thus the credit of the new government was well established. The chief weakness in the fiscal system was the almost exclusive reliance upon customs duties for revenue, since they were subject to great fluctuations, as was made evident in 1809 and during the War of 1812.

The First United States Bank. It was partly as a means for facilitating the fiscal operations of the government that Hamilton in December, 1790, issued a report favoring the establishment of the United States Bank. The lack of any banking system had been one of the defects in the colonial economic organization and the financing of the Revolution had been much hampered thereby until Morris established the Bank of North America in 1781. Further progress in meeting this need was made by founding the Bank of New York and chartering the Massachusetts Bank in 1784, but Hamilton believed that as an aid to the government as well as to private business a larger institution was desirable. Opposition to the bank was based chiefly on the popular fear of a powerful financial monopoly, while some objected that it would increase the power of the Federal government and that its establishment would be unconstitutional. Despite the opposition, which came chiefly from Southern members, Congress passed the proposed law in 1791.

The act chartering the United States Bank provided for $10 million capital stock, one-fifth of which was to be subscribed for by the government through a loan from the bank, and the rest by the public. The charter ran for 20 years and authorized the bank to issue notes, carefully limited in amount, and to establish branches. As Hamilton anticipated, the bank

proved extremely useful to the government both by advancing loans to it and by serving as its chief agency for the deposit and disbursement of funds. The eight branches which it eventually established in the chief seaports from Boston to New Orleans greatly facilitated this service as well as the transfer of funds from one region to another. Also, the government made a handsome profit when it sold its bank stock. In similar ways, the bank aided private business for, though state banks increased very rapidly during these years, few were so soundly managed as the United States Bank; its note issues, unlike those of most state banks, circulated freely throughout the country and thus provided an important and sound addition to the circulating medium.

Nonetheless, when the question of renewing the bank's charter arose in 1811, the opposition was stronger than ever. The state banks, now numerous, feared its power and competition and so fought it. Also, more than half of its stock was owned abroad, and an outcry against foreign domination arose, though it was without basis since foreigners had no right to vote their stock. Finally, there was the old popular dislike of anything in the nature of a money power. The bill to renew the charter was finally defeated in the Senate by the deciding vote of the Vice-President and the bank wound up its affairs in 1811. This was a most unfortunate time as events turned out, for its services were especially needed during the war years that followed.

The Mint and Coinage. Since the Constitution gave the Federal government the exclusive right to establish a mint and provide a coinage, Hamilton in May, 1791, presented a report with a plan for carrying out this function. During the Confederation, Congress had recommended that the Spanish milled dollar, so widely used in colonial times, be adopted as the unit of a decimal currency system, but no action had been taken to provide a coinage. Hamilton substantially adopted these ideas in his plan (the silver dollar had a trifle less silver than the Spanish coin) and the Mint Act of 1792 in the main followed his plan. It provided for the establishment of a mint and a coinage of gold, silver, and copper. The system was a bimetallic one with free coinage of gold and silver at the ratio of 15 to 1; that is, there was to be fifteen times as much pure metal in a silver dollar as in a gold dollar, the actual amounts being 371¼ grains of silver and 24¾ grains of gold. Both silver and gold coins were made legal tender.

Since the United States was then producing no silver and little gold, the mint was largely dependent upon the use of foreign bullion or coin. As the ratio of silver to gold in the bullion market was fluctuating around 15½ to 1, the coinage ratio of 15 to 1 undervalued gold and overvalued silver, which, under the operation of Gresham's law, not only tended to check the flow of gold to the mint but helped to drive gold coin out of circulation. Further-

more, when it was found that the new silver dollars were being exported to the West Indies, where their brightness gave them an added value in trade with colored people, it was decided to stop their coinage in 1806. Consequently, the number of coins minted during this period was relatively small, the total gold coinage previous to 1812 amounting to less than $4 million and that of silver to about $5 million. Since this was inadequate for the country's needs, foreign coins continued to be used and complicated the processes of exchange; but at least a beginning had been made in securing a better circulating medium. Long-established habit, however, resulted in the widespread continuation of the use of the English system of pounds, shillings, and pence in quoting prices; in fact this lasted well into the nineteenth century in spite of the inconvenience involved.

With the enactment of this series of measures dealing with government finance, control over commerce, banking, and money, the most pressing economic needs of the new government had been provided for. Other measures for promoting the country's economic progress can best be described in connection with the account of the more normal economic developments of this period, to which we now turn.

Chapter XV

ECONOMIC CONDITIONS UNDER THE NEW GOVERNMENT AND WAR'S REACTIONS, 1789–1815 (*Continued*)

Population and Immigration. The first census was taken in 1790 and indicated a population of nearly 4 million including some 700,000 slaves. For the next two decades the population increased at a rate that would have doubled it every 26 years, or practically the same rate of growth as prevailed before the Revolution. The influx of immigrants, interrupted by that war, was soon resumed and it is estimated that the number of arrivals averaged about 4,000 a year between 1784 and 1794, but rose to around 6,000 from 1795 to 1810. Most came from the British Isles, as migration from Germany was checked by war, which was also responsible for a small influx of refugees from France and Santo Domingo. The importation of slaves continued until it was prohibited in 1808. Augmented from these sources plus the small addition obtained in Louisiana, the rapid natural increase raised the total population of the country to over 7 million in 1810, more than one-seventh being slaves.

The Westward Movement of Population. Following the return of peace in 1783, the movement of settlers to the trans-Appalachian region first assumed substantial proportions. It was furthered by the acquisition of title to various sections through treaties with the Indians, by the sale of land belonging to the states or the Federal government, and by some improvement in the means of transportation.

At first most of those moving west came from the Southern uplands and followed the Wilderness Trail through Cumberland Gap to the small settlements previously made in Kentucky and Tennessee. After about 1800, with the growing number migrating from the middle states and following the roads through Maryland and Pennsylvania, Pittsburgh became the immediate objective of an increasing proportion. There, such necessary supplies as had not been brought along were purchased and the emigrant embarked on a boat which was floated down the Ohio to the point nearest which he wished to locate. Thus settlements spread out from both banks of the river as well as downstream.

Settlement along the north bank of the Ohio may be said to have started after the Ohio Company made its large purchase of land and founded

Marietta in 1788, largely with people from New England. Shortly afterward another group, chiefly from New Jersey, founded Cincinnati. The land in northeastern Ohio known as the Western Reserve was owned by Connecticut, and its sale led to the founding of Cleveland in 1796, but to the west there were almost no inhabitants in the region bordering on the Great Lakes until after the War of 1812 except for the little trading settlement at Detroit. Nor outside of Ohio were there many any appreciable distance north of the Ohio River; even the old French settlements in the vicinity of St. Louis showed little growth. Out of a total of over 1 million people in the Western states in 1810 over two-thirds were located south of the Ohio River, for the most part in Kentucky and Tennessee. In the Far South the westward advance was checked in central Georgia by hostile Indians, and Louisiana had 76,000 inhabitants. During the first of this period the growing population of New England could still move into northern New Hampshire or Vermont, and as that region was taken up they turned to settle most of western New York. By 1812, except for the interior of Maine, these sections were fairly well occupied. As a result of this westward movement, four new states, Vermont, Kentucky, Tennessee, and Ohio, had been admitted to the Union before the close of 1802 and the rise of western influence in Congress had begun (see maps on pages 258 and 259).

The Public Land System. The determination of the basic features of the country's public land system was one of the real achievements of Congress under the Confederation. An elaborate plan of Jefferson's for the government of the territory ceded by the states was embodied in the Ordinance of 1784, but before this became effective it was superseded by the famous Ordinance of 1787 which laid down the general principles that subsequently prevailed in the government of territories and their eventual admission as states, though it applied specifically only to the Northwest Territory. This ordinance prohibited slavery in that territory and ended the system of primogeniture by providing that the estates of those dying intestate were to descend in equal parts to their children or other heirs after the widow had received a one-third share, thus tending to check the growth of large landed estates and to secure a more even distribution of wealth.

Meanwhile settlers had been moving onto the public domain, and it was necessary to adopt some plan for surveying and selling it so that land titles would be secure. The basic features of the system adopted were laid down in the Ordinance of 1785, which authorized a rectangular system of surveys of the land in townships 6 miles square, divided into 36 sections 1 mile square each containing 640 acres. The sixteenth section of each township was reserved for the support of public schools, an important step in

promoting free education. In this feature, as well as in the township system of survey, the influence of New England institutions was reflected, though sale in small sections was a concession to the individualistic methods of settlement that had characterized the South.

After title from the Indians had been secured by the government and the land had been surveyed, it was to be offered for sale at public auctions, half in lots not less than 640 acres and half in whole townships, at not less than $1 an acre with cash payment. It was under this plan that the Ohio Company in 1787 purchased 1.5 million acres on the Muskingum River. Though payment was made in Continental certificates of indebtedness, then worth about one-tenth of their face value in specie, it at least served to reduce the public debt. Large tracts in Ohio were also purchased by the Scioto Company and by the Symmes group, and a considerable amount was disposed of in fulfillment of the bounties that Congress had promised the Revolutionary soldiers.

The public domain was looked upon as an important asset from the sale of which it was hoped to derive a considerable revenue that could be used to pay off the debt, and this attitude was reflected in the conditions governing its sale. But this idea was opposed to the wants of the Western pioneers and the speculators who wished to obtain the land on the easiest possible terms and they also began to demand free grants of land to be used to promote various phases of Western development. For the next century these wants of the West were destined to exercise an ever-increasing influence in shaping the public land laws. In 1796, though the minimum price was advanced to $2 an acre, a year's time was given to complete payment, and two offices for sale were opened in the West. Since most pioneers lacked the money required to buy a whole section, in 1800 the minimum purchase was reduced to half a section or 320 acres, and the minimum down payment was cut to 50 cents an acre, the balance being payable in three equal installments within 4 years. From then until 1820, there were no important changes except that in 1804 certain regions were made salable in quarter sections.

The Act of 1800 considerably increased sales and also fostered speculation under the long-term credit allowed, for many took up more land than they were finally able to pay for, and the government was constantly asked to afford them relief. Yet the sale of government land and the revenue thus obtained fell far below what had been hoped for. The chief reason was that many of the states still had land for sale which was offered at prices below the government minimum, and holders of warrants for government land given as military bounties or for other reasons were also ready to sell at a lower price. Consequently, only a portion of those who went west at this period—up to 1820 only one-quarter according to one estimate—were directly affected by the laws controlling the sale of the public domain.

Improvements in Transportation. As settlers moved away from the seaboard waterways into the interior, the need for better means of inland transportation became increasingly pressing. Wherever there were navigable rivers, they were used to the utmost; at points where obstructions existed they were removed if possible, or a canal might be built around them. The first important canal was around the falls of the Connecticut River at South Hadley, Mass., which, with the aid of Dutch capital, was finished in 1794. The same year work was started on the 27-mile-long Middlesex Canal designed to draw the traffic of the Merrimac River to Boston, and it was finished 10 years later. A similar purpose led to the building of a canal from the Santee River to Charleston, S.C., which was completed in 1800. A few other projects were started at this time, but the great era of canal construction did not come until after 1815. Although an event destined to prove of the greatest importance in river transportation occurred during this period—the introduction of the steamboat—its effects were not appreciable at the time and will therefore be described later. Consequently, the chief improvements in transportation during these years took the form of bettering the highways.

The cost of transportation overland was so great as to prove a most serious check upon the country's development when people began to settle any appreciable distance from navigable waters. Those so located were largely confined to producing things that could be used in the neighborhood, so division of labor was limited and an essentially local economy prevailed. It was stated that "over an ordinary horse path or trail a horse may carry about two hundred pounds; on a cart, over a good dirt road, the same horse may draw one thousand pounds." By 1824, it was estimated that the cost of moving freight over turnpikes had been reduced to 13 cents per ton-mile, though over ordinary roads it was two or three times as great. In many sections it was unprofitable to transport corn as much as 25 miles or wheat more than 50 or 75 miles, and Fulton said flour could not be carried over 150 miles. To send a ton of goods from Buffalo to New York cost $100 as late as 1817. Freight sent from Philadelphia or Baltimore to Pittsburgh or Wheeling cost from $6 to $8 a hundredweight; ginseng, saltpeter, and beeswax were said to be the only products of Kentucky that could profitably be shipped overland to the East. It was pointed out that, although a ton of goods could be carried across the Atlantic for $9, it could not be sent over the ordinary roads at that price for more than 30 miles.

Passenger travel was also expensive and, like the movement of freight, very slow, the rate on stage lines being about 6 cents a mile. To go from Philadelphia to Pittsburgh in 1812 cost $20 and required 6 days; freight required 4 to 6 weeks. During the War of 1812, when coastwise traffic was interrupted, it took freight wagons 26 days to go from Boston to Baltimore and 33 days more to reach Augusta, Ga., even when the roads were good.

At important ferries during the war, people sometimes had to wait 3 days for their turn, for at one time 4,000 wagons and 20,000 horses and oxen were employed on the route from New England to the South.

Under such conditions, the demand for better roads was universal; but the problem assumed a different aspect when it came to paying for them. The task of building the ordinary roads was almost everywhere left to the counties and towns, and they would seldom levy more road taxes than were required for the most essential highways of the poorest grade that could be used while maintenance and repairs were sadly neglected. The construction of the better class of highways was largely left to private enterprise. This took the form of turnpike companies chartered by the states and allowed to charge tolls, but subject to fairly careful regulation. Such roads cost from $900 to $10,000 a mile and were confined to regions with a relatively dense traffic. Similar reasons led to the building of private toll bridges over the larger streams to replace the slow and more expensive ferries.

The first important turnpike thus completed was opened in 1794 between Philadelphia and Lancaster to draw traffic from the Susquehanna Valley. It cost about $7,000 a mile and toll rates varied from ½ to 13 cents a mile, 2 to 4 cents being the most common charges. Several hundred turnpike companies had been chartered before 1812, the states often subscribing to their stock, but most were located in the more populous sections of the North.

A difficulty arising from road construction by local governments was the neglect of through routes unless they happened to coincide with local needs. Also poor communities, especially the less populous back-country and frontier sections, could not afford much outlay for roads and their economic development was often much delayed. Hence arose the demand, especially in the West, that the Federal government undertake or aid in the construction of various internal improvements.

The first important action taken was the provision in an act of 1802 admitting Ohio as a state which set aside 5 per cent of the net proceeds from the sale of public lands in that state to build roads to the East; later a portion of this fund was made available for roads within Ohio. Thus means were provided for starting the Cumberland Road or National Turnpike beginning at Cumberland, Md., and extending westward to Wheeling on the Ohio and later continued through Columbus and Indianapolis to Vandalia, Ill. Yet construction did not start until 1811, and it was not completed to Wheeling until 1818. Meanwhile, in 1808, Gallatin had drawn up an elaborate plan for a national system of internal improvements by canals and roads to promote long-distance traffic between different sections of the country. Yet the results were slight as far as action by the

Federal government was concerned. This was due in part to the opposition of sections unlikely to gain from the outlay and in part to the objection of the strict constructionists.

The Post Office and Means of Communication. There was no question, however, concerning the government's power to establish post roads and a postal service, and these facilities were rapidly developed. In 1791, there were only 89 post offices and less than 2,000 miles of post roads; nine-tenths of the service was provided by riders on horseback and 324,000 letters were carried. By 1811, the service covered over 36,000 miles, there were over 2,400 post offices and 4.1 million letters were carried. It was under this authority that Congress in 1789 established Zane's Trace, the first post road in Ohio, and later provided a regular mail route from Wheeling to Lexington, Ky. By 1813, mail was carried at a rate of 40 miles a day on crossroads and from 60 to 120 miles between the larger cities. The letter rates fixed in 1792 varied from 6 cents for a single sheet carried up to 30 miles to 25 cents for one carried over 450 miles. These high rates led to common resort to travelers whenever available for carrying letters. The minimum newspaper rate was 1 cent a paper up to 100 miles. The fact that in 1790 the per capita expenditure for postage in the country was about 1 cent best indicates the limited use then made of the post office.

By 1792, the increase in newspapers had brought the total number of copies printed in a year to some 4.5 million, but no single paper had over 3,600 subscribers. Most were published once or twice a week, but there were two daily papers, *The Pennsylvania Packet, and Daily Advertiser* started in 1784 being the first. Magazines along with books were excluded from the mails, and their publication was thus somewhat limited. By 1810, the total number of newspapers had risen to 364 of which 25 were dailies. Their growth marked an advance in the facilities for communication and also promoted social development.

Internal Commerce. Although the improved transport facilities promoted the growth of domestic commerce, there was no very marked change in the general character of that commerce except where turnpikes were built and the Ohio-Mississippi waterway was opened up. Much of the trade was still confined to a rather limited area, but the most significant development was the very substantial expansion of the trade between different sections of the country. Agricultural products moved more freely from the interior to the chief seaports, either for export or for local consumption, and imported goods or domestic manufactures went back to rural and frontier districts in greater volume. The coastwise trade involving an exchange of goods between the Northern and Southern states enjoyed a marked growth, especially after the rise of cotton growing, and during this period it was extended to include the rapidly rising trade of New Orleans.

Northern manufactures went to the interior sections of the South in increasing quantities, and throughout the rural districts the tin peddler distributed a miscellaneous assortment of small wares.

The rapid rise of the trade of the Western settlements and Louisiana during this period marks the beginning of what was to become an increasingly important branch of domestic commerce. Except for the droves of hogs and cattle to Baltimore and Philadelphia, nearly all the surplus produce of the trans-Allegheny region was sent down the river to New Orleans. By 1807, the receipts there from up the river were over $5 million of which one-third originated in Louisiana. At this time there was almost no up-river traffic; some 20 barges carried all that could stand the heavy cost. Hence practically all goods sent to the Ohio Valley settlements, consisting chiefly of manufactures and semitropical products, were obtained from the eastern seaports of Philadelphia and Baltimore.

Agriculture. In 1790, agriculture was the main pursuit of over 90 per cent of the population, and conditions during most of this period tended to maintain its preponderant position. Contributing to this were the opening up of fertile Western land, lower transport charges, the remarkable development of cotton growing, and, above all, the long-continued high price level between 1794 and 1817. Within 5 years after war broke out in 1792, the prices of most great export staples had increased from 75 to 100 per cent and, with but brief reactions, this level was well maintained throughout the period. Though farm products chiefly consumed within the country seldom rose as much, there were few that did not share in the common advance. Moreover, although the rise in prices was general, farmers benefited more than most producers since their costs rose much less rapidly.

Aside from this marked prosperity of agriculture, the most significant event in this field was the spectacular rise of cotton growing. Small quantities of short-staple cotton had been raised before 1775, but not enough to meet the rather limited colonial demand. The crop was so meager that in 1784, when eight bags were sent to Liverpool, they were seized by the customs officers on the ground that the United States could not have grown that amount. About 1786 the cultivation of long-staple sea-island cotton first began to attract serious attention and its production grew rapidly, over 8 million pounds being exported from South Carolina in 1801. But the area where this grade could be grown was very limited as compared with that available for the short-staple upland cotton. Yet in 1793 less than 3 million pounds of upland cotton were raised, the great obstacle to its use being the cost of extracting the seeds, for it took a day's labor to clean a pound. This obstacle was overcome by Eli Whitney's invention of the cotton gin in 1793, which, even with hand operation, could clean 50 pounds

a day. Cotton, theretofore a relatively expensive textile fiber, soon became relatively cheap. What a blessing this has brought to succeeding generations is seldom appreciated today.

Cotton at once began to displace flax and wool, and to some extent silk, in many products of common use and a great market promptly appeared. Under the stimulus of the high prices that prevailed—from 16 to 44 cents a pound in New York between 1790 and 1812—the country's cotton crop rose from 1.5 million pounds in 1790 to 85 million pounds by 1810. This

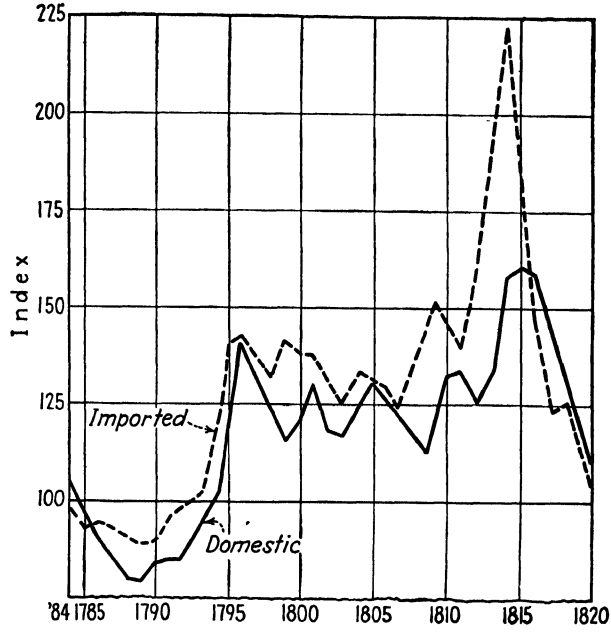


FIG. 11. Index numbers of wholesale prices of domestic and imported commodities in Philadelphia, 1784–1820 (100 = average 1821–1825). (*Based on Bezanson, Gray, and Hussey, "Wholesale Prices in Philadelphia, 1784–1861."*)

gave the upland region of the Lower South a new staple, led to the extension of the plantation system to that section, and created a new demand for slave labor, with consequences that have ever since dominated most of the agriculture of that region.

Although far less important than cotton, cane sugar was another staple crop that was successfully established in the South during this period, though practically confined to Louisiana. Despite various earlier efforts, it was not until about 1796 that the output began to increase rapidly, aided by the introduction of a better type of sugar cane and the influx of French refugees from Santo Domingo. The raising of indigo was generally abandoned at this time following the loss of the British bounty, the ravages of a

pest, and keener foreign competition. The growing of rice continued, but the output showed little change. The older tobacco-growing plantations were suffering from soil exhaustion and many were diverted to other crops, but the loss here seems to have been offset by the rise of this crop in Kentucky and Tennessee, where hemp and flax were also introduced along with considerable livestock.

During this period, the agriculture of the Northern seaboard states underwent fewer changes in products and general character than occurred in the South. New England continued to raise much the same crops as formerly and chiefly for the domestic markets. The middle states greatly benefited from the war demand for foodstuffs. The organization of various agricultural societies reflected the increased attention being given to better methods in agriculture, though the results were very limited in scope. Better systems of fertilization and rotation of crops began to be adopted and the war in Spain gave the chance to import a few merino sheep that later provided the basis for flocks producing the finer grades of wool. Yet, for the most part, farming methods remained rather backward.

Manufacturing Industries. Despite the setback given to various branches of manufacturing by the influx of British goods on the return of peace, continued efforts to make the country more independent economically had brought moderate progress by 1790. It was then stated that Southern plantations in particular were supplying more of their own needs than ever and had begun to clothe their slaves with their own homespun. Tench Coxe estimated that families in the middle and interior counties of the South produced more manufactured goods than they imported. Outside the household industries, much more was accomplished in the North where there was frequent resort to local aid or state bounties and tariff duties.

As previously noted, the conditions arising out of the European wars up to 1808 tended to divert enterprise into other lines than manufacturing. Though spread over a far longer period of time, it was during these years that manufacturing first began to feel the real impact of the rapid advance in technological methods in Great Britain after about 1770, notably those in the textile and the iron and steel industries the products of which made up a very large proportion of the imported manufactures. These inventions, for the time being, gave England a greater advantage in comparative costs than she had enjoyed theretofore. Up to 1845 Parliament continued, with modifications, the policy of forbidding the exportation of these new machines or their plans and, although it proved impossible to prevent the ideas from being carried to this country, this did slightly delay the introduction of the new methods. By this time, however, Yankee ingenuity was contributing its own inventions.

In spite of these unfavorable factors, manufacturing in general continued

to expand, even in the years before 1808, and apparently at a very fair rate. For the most part this growth must be attributed to the same conditions responsible for the steady rise of manufacturing during colonial times—the high costs of transport tending to narrow marketing areas, the growth of population, and the rising standard of living. Obviously such reasons were responsible for the spread of manufacturing into the interior sections. Pittsburgh and Cincinnati rapidly developed a variety of industries to meet many needs of settlers in the Ohio Valley region and scattered through the smaller towns were the grist mills, lumber mills, forges, distilleries, and similar enterprises commonly found in rural districts throughout the country, not to mention the ever-present household industries.

Most of the growth of manufactures during this period was in these household industries or the small workshops, mills, and plants producing chiefly for local markets. Some of these industries, however, had a nearly nation-wide market. Thus New England linens, boots and shoes, clocks, and tinware were being sold from New York southward to Georgia and in the West.

In a very few industries this period witnessed the beginnings of the factory type of organization, though the use of steam power to drive the new machinery was very rare, and it can hardly be said that the modern factory had appeared before 1814 when the power loom was introduced at the Waltham cotton factory. A start was made in 1790 when Samuel Slater, attracted to the country by the rewards offered for improved cotton machinery, set up an Arkwright mill for spinning cotton at Pawtucket, R.I. This relieved the difficulty in the industry due to the scarcity of yarn, and the success of this mill soon led to the erection of others so that, despite numerous failures, there were about 70 such water-power mills in the country in 1810, mostly located in southern New England. Though the supply of cheap cotton yarn thus made available greatly increased the use of cotton, "flax still outranked cotton in the ratio of 4 to 3 and wool in the proportion of more than 2 to 1 among the fabrics whose composition is sufficiently specified by the census for classification." Although the application of power in the spinning of wool was delayed until the 1820's, the introduction of power-driven carding machinery after 1793 helped to provide cheaper woolen yarn. The abundant yarn thus obtained was almost entirely woven into cloth in the household or in small shops, for in 1810 only 2 per cent of the cloth made in the country was produced in factories; yarn was often "put out" to be woven in homes. The rise of the modern factory did not come until the following period.

A good general survey of the state of manufacturing before it had been much affected by the abnormal stimulus arising from the war conditions of 1808–1815 is provided in Gallatin's "Report on Manufacturing" of 1810.

In view of the rapid increase in the two preceding years, he concluded, it was "probable that about two-thirds of the clothing, including hosiery, and of the house and table linen, worn and used by the inhabitants of the United States, who do not reside in cities, is the product of family manufactures." In the iron and steel industry, the value of the domestic manufactures was estimated at from $12 to $15 million, or between three and four times that of the imports. In certain industries the domestic output was declared more than sufficient to meet the country's needs; these included manufactures of wood, leather, soap, tallow candles, spermaceti oil and candles, flaxseed oil, refined sugar, and coarse earthenware. Other industries supplying a considerable part of the domestic needs were those manufacturing iron, wool, cotton, flax, hats, paper, printing type, books, spirituous and malt liquors, hemp, gunpowder, window glass, jewelry, clocks, straw hats, lead, and wax candles. The total value of all manufactured products in 1810 was estimated at nearly $200 million.

The Rise of Commercial Banking. One of the chief contributions to the economic order made during this period was in the field of banking. In 1790, there were only three banks in operation, all started within the preceding decade; the next year saw the organization of the United States Bank, as previously described. The growth of state banks remains to be covered.

Starting in 1791 when eight were organized, the development of state banks proceeded rather rapidly; by 1800 the number had risen to twenty-eight with a capital of over $21 million and, when the charter of the United States Bank expired in 1811, there were eighty-eight with a capital of over $42 million. The greater number were located in the seaboard section of the North, but by the latter date they had spread to the West as well as the South. Frequently a state would subscribe to a portion of the stock, partly with the idea of securing more control and assuring aid in its fiscal operations, partly to obtain a share of the profits and partly to help provide the needed capital.

The rise of these institutions aided economic development by promoting saving, increasing credit, mobilizing loanable funds, and facilitating the processes of trade and exchange. In these days, before the system of granting a loan in the form of a deposit credit against which checks were drawn had been appreciably developed outside a few cities, banks generally extended their credit in the form of note issues and could not ordinarily carry on business without such issues. Though the Constitution prohibited the states from issuing their own notes, the courts held that the states could charter banks and give them the right to issue notes. In certain respects this practically nullified the purposes of the Constitution's prohibition, and it provided a means whereby the groups who wanted easy credit and

cheap money could meet these wants. As a result, these notes were put out so freely that they soon became the chief element in the circulating medium. By 1811, the issues had risen to $22 million besides the $5 million issue of the United States Bank, while the total specie supply of the country was estimated at between $10 and $15 million.

Unfortunately the potential advantages that might have been derived from the introduction of banking were considerably diminished by the unsound character of many of the practices that prevailed at this period. A more detailed analysis of these defects will be given in the account of banking developments during the succeeding period. Here it will suffice to note that the chief evils were the making of loans on security that was inadequate or improper for sound commercial banking, the failure to maintain sufficient cash reserves, and the overissue of notes resulting in their depreciation. Ignorance as to how to conduct this new business could explain only a few of the abuses, and the United States Bank was able to exercise some measures of salutary control, but when it disappeared, a period of the most reckless banking ensued.

The War of 1812. The declaration of war on Great Britain in June, 1812, was carried through Congress largely by the influence of the young "War Hawks" of the South and the West. In addition to the general humiliation felt because of the failure of the efforts to prevent European exactions and depredations on the country's commerce and shipping, this group was incensed by their belief that British authorities in Canada had incited Indian attacks on the frontier, and they thought that Canada could be easily conquered, while they also wished to maintain the access to foreign markets where their produce had been yielding such high prices. The middle states were generally inclined to favor peace and New England, Vermont excepted, was violently opposed to what was there called "Mr. Madison's War." The opposition springing from the commercial interest was such that the section practically refused to lend money to the government and talked of secession, a threat that had its culmination in the Hartford Convention of 1814. Thus effective prosecution of the war was hampered by lack of a spirit of patriotism sufficient to rise above sectional economic interests; the provincialism of colonial times had not yet been fully outgrown.

Though the country was but ill prepared for the conflict, the Congress that had voted for it adjourned without providing for any war taxes or for strengthening the sadly neglected navy which, with 16 warships against England's 600, was so weak that as a unit it could not hope to compete with that of England. A few brilliant victories obtained in encounters between individual ships brought prestige but, except for those on Lake Erie and Lake Champlain, they had little bearing on the outcome. In its land

operations the country had expected to overrun Canada quickly; but the regular army of less than 7,000 men at the start was poorly organized and the state militia failed to cooperate effectively, so that none of the invading expeditions proved successful.

For England, still engaged with her allies in the desperate struggle against Napoleon, the war in America was a very secondary matter. Her activities were primarily directed toward defending Canada, harassing attacks on the American coast, and the destruction of American commerce. As neither nation was able to achieve any decisive military successes and the commerce of both suffered severely, they were quite ready, as the war in Europe that had brought them into conflict drew to a close, to agree upon terms of peace in December, 1814. These terms left matters much as they had been at the start; the practices that had drawn the United States into the war were really ended by the close of the European conflict. Thus, from the point of view of the country's ultimate economic development, the results were of slight significance. However, during the war and the years immediately following, the economic life of the nation was greatly altered and at least a brief account of the more important reactions is desirable.

The Financing of the War. For financing the war, the first and chief reliance of the government was borrowed funds obtained from the sale of short-term treasury notes or long-term bonds. The note issues up to March, 1815, totaled $36 million, but, as they were constantly being retired, the amount outstanding was always much smaller, though it showed a dangerous tendency to rise and had passed $10 million by the beginning of 1815. The notes remained at par in specie until the suspension of specie payment in August, 1814. Since they were not made legal tender and only a relatively slight amount put out in small denominations appears to have entered into general circulation, their use did not result in the evils consequent on the use of Continental paper money during the Revolution.

The long-term loans issued totaled over $75 million. Though the first loan, put out just before the war and bearing 6 per cent interest, was sold at par, the decline in government credit was such that later issues had to be sold at from 5 to 20 per cent below par. Acceptance of depreciated bank notes for some payments added to the government's losses, and it was later estimated that the loans netted only $34 million in specie value. The decline in the government's credit can in part be attributed to the lack of success in the war and the meager financial support received from New England, but it was due mainly to the failure promptly to adopt adequate taxes.

Customs duties, previously the chief source of Federal revenue, were doubled at the start, but as imports dwindled, the receipts from this source fell to about half the usual sum. It was a year after the war started before Congress acted to levy internal revenue taxes estimated to yield $2 million.

Also a direct tax of $3 million was assessed on the states, but its collection was postponed until 1814. The difficulties met with in raising loans led in September, 1814, to a doubling of the direct tax and of postage rates and increases in the internal revenue taxes. Only $4 million was received from the direct and the internal revenue taxes before 1815, but they yielded more during the next 3 years as they were not all repealed until 1817. The failure to meet more of the war outlay by taxation resulted in a net increase in the debt during the 4 years ending with 1815 of some $86 million. The fact that this war did not involve more of a financial strain is an indication of the halfhearted way in which it was carried on.

Commerce and Shipping during the War. The impact of the war upon the economic life of the country was most marked in the field of foreign commerce and shipping, whence the reactions spread to other fields. The impact was the more violent since in 3 years it completely reversed the abnormally favorable conditions that had prevailed during most of the preceding two decades. In April, 1812, as a measure preliminary to war, Congress enacted an embargo for 9 months. When war broke out, the English navy commanded the seas and blockaded the coast from Connecticut southward. The rest of New England was not blockaded until the summer of 1814, partly in the hope of detaching that section from the rest of the country and partly because supplies from that region were needed for the British forces in Canada. At first, the British also permitted exports of foodstuffs from the middle colonies for their army in Spain. But the foreign trade rapidly dwindled, and by 1814 exports had fallen to $7 million as compared with $61 million in 1811 and imports were $13 million against $53 million in 1811 (see the chart on page 202). Never has the country's foreign trade come so near to being annihilated. Even vessels engaged in the coastwise trade remained idle in the harbors, and goods had to be shipped overland if they could stand the heavy expense involved. Oxcarts took 46 days to go from Philadelphia to Charleston; in New York rice sold for nine times the Charleston price, and flour in Boston for nearly three times the Richmond price.

Some ships escaped the blockade but often only to be captured later by a naval vessel or by one of the many privateers. All told, some 1,300 American vessels were captured during the war. A slightly larger number of British merchantmen fell into the hands of 500 or more American privateers. This activity afforded some outlet for American shipping, but the valuable neutral carrying trade was lost, and the decline of commerce added to the distress of shipping. The total tonnage of vessels engaged in the foreign trade fell from 950,000 tons in 1811 to under 60,000 tons in 1814.

The Reaction on Other Lines of Business. The sudden and almost complete reversal after the country entered the war of the abnormally

favorable conditions for foreign trade that had generally prevailed for so many years inevitably involved a widely ramifying reaction on many domestic lines of business and on prices. Within less than 2 years, wholesale prices, which ever since 1795 had been fluctuating around a level about 50 per cent above those existing on the outbreak of war in Europe in 1792, increased some 50 per cent, reaching a peak in 1814 such as was surpassed on only four other occasions in the country's history. The outbreak of the war brought a sudden rise which was followed by a moderate increase for over a year until late in 1813 when another and still greater rise carried prices at the beginning of 1814 to a peak which, after a slight drop, was barely exceeded at the close of that year. In this wartime advance, however, different groups of commodities shared to a greatly varying degree. At the peak in 1814, imported goods in Philadelphia were about 70 per cent above the level of 1811 while domestic products were only about 28 per cent higher (see the chart on page 221). Moreover, among domestic products those of the farm rose much less than the industrial products. The return of peace in 1815 brought a precipitate drop in the price of both imports and domestic industrial products while farm products, after a brief reaction, enjoyed a very marked rise up to the first of 1817. Thereafter, the trend of all groups, accentuated by the panic of 1818–1819, was downward till, by 1823, the general level had been restored to that prevailing in 1792.

These shifts in relative prices meant that during the war years agriculture was much less prosperous than it had been, except in sections where produce could be shipped to the British. On the other hand, the reduction of imports and the demand for munitions of war added greatly to the stimulus to manufacturing which had started with the Embargo of 1808. The idle labor and capital previously employed in trade, shipping, and shipbuilding, notably in the North, were extensively diverted to manufacturing enterprises, many of which were organized as corporations. So great was the scarcity of goods and so complete the protection afforded by the reduction of imports that, even with antiquated methods, relatively unskilled labor, and poor management, it was often possible, for the time being, to carry on these enterprises at a good profit. The growth of the household industries at this time was less rapid than that of the workshop crafts or the industries just beginning to introduce factory methods, notably the textile manufactures. The greater possibilities afforded for securing a rapid increase in output considerably hastened the shift to the factory system.

The war also brought important reactions in the field of banking. The winding up of the United States Bank in 1811 broadened the field for the operation of state banks and forced the government to fall back on them for carrying on its fiscal operations, which were greatly expanded by the war. Its deposits with them facilitated the increase of their note issues and

loans, while the abnormal demand for loanable funds, by raising interest rates, made banking more profitable and gave an added impetus to expansion. As a result, the number of state banks rose from 88 in 1811 to 246 in 1816 and the note circulation, which had been around $22 million in 1811, increased to some $100 million in 1817.

The conservative influence of the United States Bank having been removed, reckless banking methods and expansion of credit were more than ever in evidence, at least outside of New England. There had been a large inflow of specie in the prosperous years before 1808, but $7 million had been sent abroad to pay off the foreign stockholders of the United States Bank and specie became increasingly difficult to obtain, the drain upon the supply in the South and the West being especially marked. Hence, when in 1814 the British burned the Capitol at Washington, the shock was too much for the overextended credit structure and specie payments were suspended by the banks outside of New England. This facilitated a further expansion of note issues and specie rose to a premium of 15 to 20 per cent. To supply the need for small change, merchants and tavern keepers put out illegal issues of paper. Inability to get specie seriously embarrassed the government, and it lost heavily through the depreciation of paper money. This inflation of the currency was also a factor in the rise of prices during the war, and the reckless banking practices of the period increased the demand for the reestablishment of the United States Bank, which was finally provided for shortly after the war ended.

The close of the war, necessitating a rapid readjustment to more normal peacetime conditions, inevitably resulted in a widespread reaction during the succeeding years. The difficulties of those years, however, can be more conveniently described in connection with the account of the following period in which they merge.

SUMMARY OF THE ECONOMIC DEVELOPMENT, 1765–1815

Before turning to the new epoch in the economic history of the country which begins with the year 1815, we should summarize the results of the development that had taken place since the close of the colonial period. The variety of the factors that exercised an important reaction on the country's history make this half century the most complex with which we have to deal; in no period of similar length have essentially political developments been more momentous or more dominant in shaping that history, the nearest approach is that since 1914. Since, in consequence, the underlying and less conspicuous economic changes are apt to be lost sight of, there is the more need for a summary of the chief developments in the economic order tending to promote the efforts of the American people

to raise their standard of living which, it must always be kept in mind, is the main problem with which we are here concerned.

The revolutionary changes in the framework of government during this period were destined to prove of the most fundamental importance economically as well as politically. The Revolutionary struggle helped to break down the strong colonial provincialism, independence ended all British control, and the infant republic provided the ideal about which the new spirit of nationalism could rally. When the weak government under the Articles of Confederation, still reflecting the spirit of provincial autonomy, was finally replaced, through what seems little less than a miracle, by the adoption of the new Constitution, the Federal government had acquired the minimum of powers then deemed essential to its successful functioning in furthering the economic and political development of the nation.

Fortunately, too, the first three administrations, being under the control of the Federalist party, were devoted to building up the power of the central government. Even the succeeding Republican administrations, founded on opposition to such a policy, often found it expedient in practice to accept what had been accomplished, while the more enduring influence of the decisions of the Supreme Court under the leadership of Chief Justice Marshall greatly strengthened the Federal authority. Though internal dissension still existed, and even threats of secession, as in the West or New England, these had a broader basis than the narrow provincialism of colonial times. The "era of good feeling" after 1815 may be said to have marked, at least for the time being, the general acceptance of the authority and most of the powers then exercised by the Federal government. The replacing of the relatively autonomous thirteen colonial governments, still subject to some British control, by an independent nation under a central government was the first step toward the working out of a national economic order that could advance the economic well-being of all.

Another political development during this period which was certain to have important reactions upon the economic order was the marked trend toward a more representative and democratic type of government. The discontent of the unenfranchised or inadequately represented masses, which had played no small part in the Revolutionary movement, had resulted in securing extensive modifications of the evils of colonial times in the new framework of government, both state and Federal, that emerged from the upheavals of the struggle for independence. Although most of the statesmen of the time still evinced a marked distrust of the masses, so that property qualifications for franchise rights were generally retained until swept away by the subsequent wave of Jacksonian democracy, it must be recognized that by 1815 the government was better representative in character and much more responsive to the popular will than in 1775. That

such a shift in power would inevitably lead to important reactions on the economic life, since in no small measure it had been sought for that very purpose, was to be expected. Very naturally it was promptly employed to secure a more equitable distribution of wealth and of economic opportunity.

It is also to be noted that, besides securing more political power to the masses to effect such changes, this period was notable for the growth of a much more general demand for such changes. The social ferment engendered by the American struggle for independence was powerfully supplemented by the French Revolution with its emphasis on the rights of man and by the closely related growth of the humanitarian spirit. These rising social ideals were certain to involve economic changes.

With independence and the new Constitution, the nation was in a position to further economic progress in many ways. The power to tax enabled it to attain a fairly sound fiscal position and gave it resources to finance many useful activities otherwise impossible. The acquisition of a vast public domain furthered the orderly development of the West and enhanced the power of the Federal government. The establishment of complete freedom of domestic trade was of the utmost importance, and the centralization of control over foreign trade, shipping, and treaty arrangements was employed to promote national economic interests. The provision of a uniform coinage, the creation of the United States Bank, the construction of important roads, the development of the postal system, the authorization of patents and copyrights, the adoption of a uniform system of weights and measures, and the setting up of the Federal courts were all measures whereby the new government was able to further economic progress.

In regard to the economic resources of the country, it is to be noted that this period was one which brought notable gains. The acquisition of Louisiana, doubling the area of the country, added vast and rich natural resources, though immediately this was chiefly important for giving control of New Orleans and the Mississippi River. The continued rapid growth of population, both through immigration and the natural increase, augmented the supply of labor. Migration to the West began to open up the untouched resources of that region, which the adoption of the public land system had made more accessible. The rapidly rising annual production of wealth, and especially the abnormal foreign demand for American products and shipping for the two decades ending in 1812, made possible greater savings and helped, with the added foreign investments, to augment the accumulation of capital available for productive purposes. Meanwhile, progress in science and the arts had made possible a more efficient use of these varied economic resources. New and important crops, notably upland cotton and sugar, had been introduced in agriculture and some improvements in

farming methods. The technological innovations in manufacturing and the very rapid expansion in this branch of economic activity after 1807 were particularly significant as furthering the attainment of a better rounded national economy.

In addition to the gains made in increasing the quantity or improving the quality of the factors of production, this period also brought marked improvements in the economic organization of the country tending to increase the efficiency with which the economic resources were used. Particularly important among these were the improved facilities for transportation, at this time chiefly in the form of more and better roads but including the beginnings of canal construction and the use of steamboats. These in turn, with the expansion of the postal service and the spread of newspapers, greatly facilitated the means of communication. Combined with the removal of all restraints upon interstate commerce, these improvements promoted an increase in both the volume and the relative importance of domestic trade which created one of the most striking contrasts between the situation in 1775 and that in 1815.

This trend was also furthered by the development of financial institutions, which was also an outstanding contribution of the period toward a more efficient economic order. The opening of a mint and the coinage of specie, though the output was insufficient for the country's needs, helped to provide a sounder and more uniform circulating medium. More important were the introduction and rapid spread of banking institutions. Despite the many unsound practices that prevailed, the banks improved the provision of credit, promoted saving, facilitated endless financial transactions, and, by increasing the mobility of loanable capital, enhanced the likelihood that it would be diverted to the uses where it would prove most productive. The rapidly spreading provision for the use of the corporate form of organization helped in the development of a larger scale of business enterprise, while the slow rise of fire insurance provided means for meeting one of the serious risks of business.

Finally, it is to be noted that the spirit of liberty and democracy that underlay the Revolutionary movement resulted in there emerging from this movement a social order which made for greater equality of economic opportunity among the people and a somewhat more equitable distribution of wealth and income. The shift in the distribution of wealth that accompanied the Revolutionary upheaval was probably the greatest, relatively, that the country ever experienced. The rapid progress made in abolishing slavery in the North was an essential step in advance, though affecting but a small group. The abolition of primogeniture and entail promoted the breakup of the great landed estates. The opening up of the public domain and the sale of state lands on easy terms widened the economic oppor-

tunity available to those prepared to face the hardships of pioneer life. Better provision for public education, though very limited in scope at this period, marked another gain.

Thus, through the increase in economic resources and the improvements in both the political and the economic organizations, this troubled period brought progress in the economic development of the new nation. Certainly the economic order that had been evolved by 1815 showed a great advance over that existing in 1775. On the foundations laid down during this period of transition, an essentially national economy based on a more efficiently functioning economic and social order was emerging in place of the provincial organization of the colonial period. On this foundation in the era of peace that followed. the country was able to build with results that amazed the world.

Part III

WESTWARD EXPANSION AND THE RISE OF A NATIONAL ECONOMY, 1816–1860

CHAPTER XVI

THE PERIOD IN GENERAL AND THE WORLD BACKGROUND

Nineteenth-century Tendencies. Following the close of the long and exhausting Napoleonic wars, the Western world enjoyed a full century of comparative peace, for the wars that occurred during this period were relatively brief and never involved such widespread and destructive economic upheavals as had attended many of the wars of the preceding century. This contributed much to the phenomenal economic advance that characterized the nineteenth century.

Among the outstanding developments of the nineteenth century which were of special significance in shaping the economic history of the world and which must be borne in mind as essential factors in the background of American economic history during this period, the following may be listed:

1. The remarkable progress in the sciences, both natural and biological, and particularly the application of this knowledge through invention and better technological methods to the processes of production. From the purely economic point of view, this was the most important development of the century, especially so since it underlay most of the other changes, though of course there was endless interaction. The introduction of new sources of power such as steam, oil, and electricity; the new machinery devised; the resulting rise of the railroad, the steamship, the electrical devices for the transmission of power or for communication; and the whole modern factory system revolutionized the economic life of most of the world in a comparatively brief period of time. The unparalleled material progress attained through these changes has resulted in this period in world history being called the "Age of Materialism." Because the sweeping changes

reacted upon all phases of social life, a study of the economic history of the century is also fundamental to an understanding of its political and social history.

2. The rapid increase in the population of Europe and the great migration of those people to the less developed regions of the world carrying with them their civilization and culture. Between 1821 and 1932, around 60 million people left Europe for some other continent; about 57 million of them migrated to the New World; 34 million of these went to the United States. Yet, despite this loss, the population of Europe, which was less than 200 million in 1800, had more than doubled by 1900 and by 1933 was about 520 million.

3. The rapid increase in the accumulated wealth and capital of the world and the outflow of capital from the richer nations of western Europe to less developed countries. The wealth accumulated by each generation and handed on to the succeeding generation greatly increased the productive capacity of the world, especially as it became embodied in more efficient forms of capital goods. Thus capital and its control became increasingly important factors in the whole social order.

4. The rise of a demand for greater economic freedom—the tendency toward a policy of *laissez faire* on the part of the state, as contrasted with the elaborate system of regulation and control inherited from the past, which proved ill adapted to the new conditions that were so rapidly changing the economic life of the period. However, these changes created new problems and soon led to a demand for many new forms of state control.

5. The growing spirit of nationality and the rise of large and powerful nations or empires in whose political life economic interests played an important part and greatly accentuated international economic rivalries.

6. The rising spirit of liberty, democracy, and humanitarianism; the demand on the part of the masses, not only for greater political power but also for a greater degree of economic freedom, industrial democracy, and social well-being. The more radical programs were reflected in the spread of socialistic and communistic groups. These demands were destined to play an important part in shaping the economic as well as the political and social history of the century.

Bearing in mind these outstanding nineteenth-century trends, we can now turn to a brief survey of the economic developments outside of the United States during the portion of that century up to 1860 with which we are now concerned. Because the United States was more immediately reacted upon by the developments in western Europe, the changes in the three leading nations, Great Britain, France, and Germany, will be noted in more detail and those in other parts of the world that were of significance for the United States can be briefly summarized.

Great Britain, 1815–1860. The nineteenth century marks the rise of Great Britain to a position of economic dominance among the great powers. In the seventeenth century she had ranked behind France, Spain, and Holland in economic importance, though rising rapidly. In the eighteenth century she was still behind France in population, wealth, industry, and commerce. During the course of the nineteenth century, she forged ahead of her ancient rival in all these respects, and until the latter part of the century retained an undisputed preeminence among the economic powers of the world. This was England's great century. How did it come about?

The prolonged period of internal revolution and foreign wars from 1789 to 1815 left France disorganized and exhausted; her recovery required well-nigh a generation. Meanwhile England, safe in her island stronghold with the establishment of her firm command of the seas, escaped the ravages of war, though piling up a huge debt, and maintained much of her ocean commerce, though at times it had been impaired. Also, she had been rapidly perfecting and introducing the remarkable series of inventions which by 1815 gave her the leadership in manufacturing among the nations of the world.

Partly as a result of the consequent economic development, a rapid growth of population occurred, the total for the United Kingdom rising from 15 million in 1801 to 29 million in 1861, despite a large emigration, chiefly to America. In England and Wales, where nearly all of this increase took place, the population more than doubled so that in 60 years the growth exceeded that in all the preceding centuries. In view of the limited area and resources of the British Isles this created serious problems in providing the necessary food and devising means for getting a living for all these people (see the chart on page 416).

The chief opening for employment that developed was in the field of manufacturing. This growth was based upon the introduction of the remarkable series of inventions between about 1770 and 1830 which has led to this period's being called that of the Industrial Revolution. During these years, the steam engine was made available to provide motive power in factories and on railroads, coal began to be used for power and the great coal resources of Great Britain were rapidly developed, tools for making machines were devised, mechanical engineering arose, and great progress in industrial chemistry occurred. Many industries, notably the iron and steel and cotton manufactures and more slowly the woolen manufacture, were revolutionized by the introduction of factory methods. At first there was much suffering among the workers displaced by the machines, leading to outbreaks of violence, but eventually manufactures expanded so as to employ a larger proportion of the growing population than ever.

Although the introduction of the new technology hastened the repeal or

abandonment of old laws and customs developed under earlier methods of production and thus gave workers greater freedom of action, it also gave rise to many new problems. The conditions surrounding work in the factories or in the mines and the rapid rise of great industrial cities were attended by evils that led to a demand for labor legislation and better safeguards to protect health in the cities. This marked the beginning of a new field for the activity of the state in relation to industry.

Although England has always benefited from the fact that few places were far distant from water transportation, the cost of overland transport has been heavy. During this period, various improvements in inland transport helped to minimize this obstacle and to promote specialization and division of labor. Better roads were built; many canals were constructed and rivers made navigable between 1761 and 1860, often cutting the cost of transportation by three-fourths, while the introduction of railroads starting in 1825 and rapidly pushed during the 1840's, provided a system of 7,000 miles by 1850 that connected all the larger cities.

Under the leadership of the Bank of England and aided by the spread of joint-stock banks, the banking system was developed so that it became the most advanced of all countries. London replaced Amsterdam as the financial center of the world and, as British capital accumulated more rapidly, it flowed out to other lands in an ever-increasing stream.

Despite the great improvements that took place in English agriculture after the middle of the eighteenth century through new crops, a better system of rotation, and better breeding of livestock, all facilitated by the enclosure movement which drove many yeomen and small tenants to industry or emigration, England found herself increasingly dependent upon imports to supply the food required for the growing population. The duties on imported foodstuffs tended to increase the cost of living and so were opposed, not only by the industrial workers but also by the manufacturers who felt that they necessitated the payment of higher wages. The frightful famine that occurred in Ireland on the failure of the potato crops in 1845–1846, when hundreds of thousands died of starvation and others escaped only by emigration, brought this problem home to the nation in the most ghastly manner. This led Great Britain in 1846 to abandon the old policy of protection to agriculture embodied in the corn laws and increasingly to seek cheap food for her growing population from foreign lands.

The rapid expansion of manufacturing industries also necessitated increased imports of raw materials, for England's natural resources, except for coal, were very limited in amount as well as in variety. Even the domestic supply of wool, a resource which for centuries had been the great staple export, now proved insufficient. Timber and other supplies for the shipbuilding industry along with the better grades of iron ore had long been

imported, and the newly risen cotton manufacture added another great staple to the growing list of imported raw materials. At the same time, the rising output of her industries led England to seek foreign markets in which to dispose of the surplus, an effort that was greatly facilitated by her superior efficiency in many lines of production. As a result, England's foreign commerce was increasingly made up of imports of raw materials and foodstuffs and her exports of finished manufactures. This also caused a steady growth in the importance of foreign trade in the economic life of the nation.

Basically, these developments simply meant that England as a nation was coming to specialize in manufacturing and in the foreign trade that such specialization inevitably involved; in short she was shifting to what may be called the stage of an "international" economy in which she became increasingly dependent upon other countries for supplies of raw materials and foodstuffs and for a market for her manufactures.

Such a step in economic development confronts a nation with most momentous problems, for it involves serious dangers along with its many advantages. Had England chosen to remain more self-sufficing economically, it would have checked the growth of population and wealth and to that extent made her less powerful politically; but she would have been less dependent economically on the rest of the world. On the other hand, by specializing in manufacturing it was possible to sustain a much larger population in the British Isles, to accumulate greater wealth, and to secure a higher standard of living; but, if her foreign trade were ever cut off, the nation would face ruin and starvation, a possibility only too vividly brought home to England during the First World War. It was to prevent such a danger, as well as to protect her far-flung empire, that England sought to maintain her supremacy on the seas. The specialization that the nation chose, or at least drifted into, was in line with the predominant trend toward a more nearly world-wide economy which is shown in the whole course of history.

With this development there came a complete shift in England's commercial policy from the Mercantilist System with its extensive regulation of commerce to free trade. Since English manufacturing industries were generally the most efficient, they needed no protection, and they naturally opposed import duties on raw materials and also on foodstuffs, fearing that the latter would necessitate paying higher wages. It was also felt that a free-trade policy might lead other nations to admit British products on more favorable terms. As a result of a series of measures, starting in 1825 and including the repeal of the corn laws in 1846, England by 1860 became a free-trade nation.

Increasing foreign trade necessitated more shipping and made low freight

rates desirable. Although the British merchant fleet dominated the ocean-carrying trade of the world and its registered tonnage nearly doubled between 1815 and 1860, it faced a growing competition, chiefly from the shipping of Baltic ports, of the Scandinavian countries, and of the United States. Her Navigation Laws now deprived England of the chance to buy the cheap ships that she had obtained from the thirteen colonies, though the Canadian Provinces supplied some of this deficiency. The slow introduction of iron in the construction of ships and of steam for motive power, scarcely started before 1840, was a change destined eventually to give England a great advantage in shipbuilding, but so far as cargo vessels were concerned the effects were relatively slight previous to 1860. Under such circumstances, an effort to increase the protection afforded by the Navigation Laws might have been expected, yet the influence of the manufacturing and trading interests combined with the general reaction against mercantilist policies were such that this period saw these laws, which for several centuries had been looked upon as the very palladium of British sea power, swept from the statute books. Up to 1846, the process of undermining these laws proceeded very slowly and took the form of a long series of minor exceptions and modifications, such as those granted American ships as early as 1783; but the abandonment of the general policy came suddenly. In 1847, as a result of the Irish famine, the Navigation Laws were temporarily suspended; in 1849, they were repealed, except for the coastwise trade and the requirement that three-quarters of the crew be British subjects, restrictions which were also abolished in 1854. Though many feared that the navy would be weakened and shipping interests prophesied that "The Americans would become the great carriers of the world," later developments dispelled these apprehensions.

Just as the outflow of the growing population and wealth of the British Isles to the colonies contributed to their development, so that development in its turn contributed to the progress of the mother country. The Napoleonic wars had brought the empire new possessions including British Guiana, Cape Colony, and Ceylon, but thereafter until the last quarter of the century the keen struggle for colonies that had marked the preceding centuries was greatly abated. Strong doubts arose as to the advantages of such possessions, especially in England. It was pointed out that too frequently the colonies were lost, as in the case of the United States or so many of the possessions of France, Spain, and Portugal. Also, it was claimed that most of the advantages of their trade could still be obtained without political control, just as England was still dominant in the foreign trade of the United States. Thus, as far as the British government was concerned, no definite and vigorous policy of imperial expansion was followed. Such expansion as did take place was more likely to be the result

of the private initiative of traders and of settlers in the colonies seeking new fields for exploitation. To divert emigrants to her colonies, as well as to relieve the distress among her workers, England in the late 1820's adopted a policy of assisting emigration. British traders, bankers, and other entrepreneurs also helped to direct the flow of capital to the colonies. The growing mobility of labor, capital, and business enterprise which these movements reflected helped to hasten the economic development of the world as well as that of the British Empire.

The Development of France to 1860. Until near the close of the eighteenth century, France had been the richest and most powerful nation of western Europe. The chaos of the French Revolution followed by the prolonged Napoleonic wars exhausted the country and set back its development for fully a generation. When France finally emerged from the struggle, her position of economic supremacy had passed to her agelong rival, Great Britain.

This period of upheaval helped to sweep away many of the old institutions, habits, and regulations that had previously checked development; the burdensome and unequal taxes, the restrictions on manufactures and commerce, and the concentration of land ownership were modified or cast aside altogether as unfitted for the changing economic conditions and social ideals of the period. Yet the process of readjustment was difficult, and it took time for the beneficial results to develop.

The population of France continued to grow, but at a much less rapid rate than in England, the total rising from about 27 million in 1800 to over 36 million in 1860. The greater portion of the people was engaged in agriculture, and a larger percentage of this group than in most European countries was made up of peasant proprietors owning their own land. The industry and thrift of this class were among the most important economic assets of France, though the introduction of better methods in agriculture proceeded rather slowly. Some progress was made in developing better grades of livestock and new crops such as the sugar beet and the potato, while a better system of rotation reduced the land left fallow each year. Thus aided, the increase in the country's food supply fairly kept pace with the growth of population and France remained nearly self-sufficing as far as food was concerned.

Although France had a road system far superior to most in the eighteenth century and had started a canal system, both of these were rapidly extended during the first half of the nineteenth century. Supplementing these, under government aid, the construction of the main trunk lines of a railroad system had been practically completed by 1860, thus greatly improving the transport facilities available for agriculture and industry.

During the decade 1825–1835, the new manufacturing methods began to

be introduced, but only very slowly. High duties on machinery checked its use, and by 1850 the total horsepower in mines and factories supplied by steam engines was not much over 65,000. The greatest advance occurred in cotton manufacturing, though the silk and woolen industries also showed progress. Lack of adequate or usable iron and coal resources limited the growth of the iron manufacture, the output of which in 1850 was barely 600,000 tons. Most French industries continued to be operated by small-scale plants, especially those turning out the highly finished and artistic products for which the country was noted.

On the return of peace, the industries that had been expanded as a result of Napoleon's efforts and wartime conditions joined with the agricultural interest in a demand for protection. The result was a system of very high duties and often an absolute prohibition of imports which was continued until, in the 1850's, a shift toward a more moderate level was inaugurated.

This restrictive commercial policy was among the factors that checked the growth of the country's foreign commerce. It was not until the 1830's that the value of her foreign trade again equaled the figures attained in the preceding century. After 1850, stimulated by greater freedom of trade and rising prices, the figure mounted rapidly and by 1860, though barely three-fifths that of Great Britain, it exceeded that of any other country. The merchant marine had been practically annihilated during the Napoleonic wars, and subsequently, in the face of keen competition, its growth was slow, being dependent largely upon the expansion of the nation's foreign trade and the protection afforded by law. In 1850, it carried less than half of the foreign trade and, despite rapid growth in the following decade, it included barely a million tons in 1860, making it third in the world but still far below that of Great Britain or the United States. Thus, in 1860, the relative economic position of France was in many respects inferior to that which she had enjoyed in the eighteenth century.

The Development of Germany to 1860. The development of Germany during this period was of significance less for its actual reaction on the rest of the world at the time than for the later growth for which it helped to prepare the way. At the close of the eighteenth century, Germany could hardly be called a nation; rather it was a jumble of little states, principalities, and free cities, which the Napoleonic wars reduced from over 300 to 38. Economically little progress had been made since 1650. Agriculture was the main pursuit of the great portion of the people, though many cultivators of the soil also carried on home industries. In the more populous sections, skilled craftsmen plied their various trades on a small scale. A little mining was carried on, and in the old trading cities the merchants enjoyed a share in the limited foreign trade of the day, but the obstacles to trade made an essentially provincial economy generally prevalent.

Though the devastation wrought by the Napoleonic wars was particularly severe among the German states, the social upheaval involved, as is so often the case in a prolonged war, was not without some ultimate benefits. In addition to the great reduction in the number of petty political units, a marked impetus was given to freeing the serfs on the land, and the monopolistic control of the guilds in many industrial centers was greatly weakened. In agriculture the conservative peasants tended to adhere to their old ways, but the larger landowners, especially those in the East, were steadily introducing better methods. In manufacturing, little progress was made in adopting the new machinery and factory organization until the middle of the century. The population increased from over 24 million in 1800 to nearly 38 million in 1860, showing a rate of growth much below that of Great Britain but greater than that of France; by the end of this period it had surpassed that of the latter country (see chart on page 416).

Developments particularly significant for their effect upon economic growth were the introduction of better facilities for transportation and the abolition of the innumerable tariff barriers and restrictions on internal trade. Traffic on the extensive river system and the few canals was promoted by the removal of various charges and on the larger streams by the introduction of steamboats. Though improved roads were notably lacking, not much advance was made after 1815 until around 1850, after which construction was rapidly pushed. For this reason the introduction of railroads, starting in 1835 and leading by 1850 to a system of some 3,000 miles well devised to promote long-distance traffic, was especially important. Meanwhile, under the leadership of Prussia, the Customs Union or *Zollverein* was organized in which a group of states joined together in abolishing the customs duties on trade between members, and levied moderate duties on goods imported from elsewhere. By 1834, it included about three-quarters of modern Germany; by 1860, it embraced nearly all of the country. The duties tended to protect manufactures, particularly those facing English competition, but the general level of rates was very moderate.

Although these developments were most significant for the stimulus given to internal trade, they also furthered the growth of foreign trade as well as that of the merchant marine, though the latter remained comparatively small. The fact that the chief exports were agricultural products such as wheat, vegetable oils and seeds, wines, and wool while manufactured goods were a minor element, but suggests the stage of German development. In fact it has been said that in 1850 Germany was nearly 100 years behind England in economic development. Though progress was being made, it was during the latter part of the century, chiefly after securing political unity under the Empire, that the economic modernization of the country was carried through.

The Economic Development of Other Lands. Among other European countries, Belgium, after securing independence in 1830, developed mining and manufacturing fairly rapidly with the aid of the new technology. Holland remained devoted to intensive agriculture and to trade, though losing ground relatively in the latter field and markedly so in her merchant marine. The Scandinavian countries were increasingly successful in developing their extractive industries, shipbuilding, and the carrying trade. Spain and Portugal, deprived of their most valued colonies, were of minor significance. Italy was still a group of petty states no longer of much commercial importance. Austria-Hungary was more backward than Germany. Russia, still lacking railroads, was an essentially medieval country practically untouched by Western development, though sending out agricultural and forest products from her Baltic ports and, following the opening of the Dardanelles, wheat from the Black Sea ports.

The increasing social unrest in Europe broke out in 1848 in a series of revolutionary uprisings in several countries. These reflected the growing aspirations of the middle and lower classes. Though their immediate objective was generally greater political freedom and the revolts were suppressed, the ferment aroused did eventually hasten the economic reforms that were the main objectives besides stimulating the spread of socialistic and other radical ideals.

The developments in other continents of most significance for our purposes were those reacting upon the world's commerce. With the abolition of the slave trade, the commerce of Africa became less important for, aside from some increase in the exports of farm products from the Mediterranean coast and of pastoral products from the slowly growing Cape Colony, there was little change and the interior of the continent was still being explored. In Australia settlement was started with the founding of a penal colony in 1788 to which England turned to ship convicts after the loss of her American colonies. Under the stimulus of government aid, a small stream of free British emigrants was diverted to this continent so that by 1851 its white population had risen to over 400,000. Wool became the great staple of these colonies and by 1850 England, previously chiefly dependent on the Continent for her imports, was getting half of them from this source. The discovery of gold in 1851 led to an influx of nearly 600,000 people during the next decade while the output of the mines for that period, totaling some $600 million, was very similar to that of California.

In India, the British East India Company continued to expand its control over the native states, but England took over the government after the Mutiny of 1857. The Company's loss of its monopoly of the country's trade in 1813 was followed by a marked growth in that trade so that, unlike the eighteenth-century situation, it became far more important to England than the trade of her West Indian colonies. At the same time, the character

of the trade was shifted to increasing exports of Indian raw products and imports of British manufactures. The Dutch East Indies continued to send their valuable tropical products to Europe. After about 1840, as the result of a series of wars, China opened new ports to foreign trade, thus considerably increasing the commerce with that country. Japan, practically closed to foreign trade for two centuries, opened her ports after a series of treaties between 1854 and 1858.

In Central and South America the colonies of Spain and Portugal had established their independence by 1822 and, once freed from the restrictive commercial policies of those countries, their commerce slowly but steadily rose, raw products being exported and manufactures imported. Unstable governments, the lack of capital and railroads, and the generally backward state of the population made economic progress very slow. Of the two leading countries, Argentina was devoted to pastoral pursuits and exported wool, hides, and tallow; Brazil, after the output of her gold mines fell off, reverted to sugar and cotton but also became an important exporter of coffee. Until about 1850 in order to secure the labor needed for these crops, she obstructed the efforts to end the slave trade. Mexico, Bolivia, and Peru continued to provide most of the world's supply of silver, but there was a substantial decline in the output from the high point reached around 1800.

In the West Indies, the development of which had been such an important factor in the economic life of the colonies, this period brought a marked change. The world found other sources of supply for the great staples such as sugar, cotton, coffee, and indigo, the output of which had made these islands so valuable in the eighteenth century. Haiti, the greatest sugar producer of the group, lapsed into semibarbarism on attaining independence. The British and French islands, already suffering from soil exhaustion, were hard hit by the abolition, first, of the slave trade and, then, of slavery and, finally, by the rise of the beet-sugar industry in Europe and the growing competition from the cane sugar of the Far East. On the other hand, Cuba, and to a less extent Puerto Rico, grew rapidly under a more liberal Spanish policy, and Cuba became the great sugar producer of the group. Although their growth more than offset the decline elsewhere, the West Indies quite lost their eighteenth-century importance in world trade.

In Canada, the increase in the white population was at a more rapid rate than in the United States, though the absolute growth was much smaller. The population, originally chiefly of French origin, was first largely augmented by the influx of Loyalists after the Revolution, and subsequently by a large immigration from the United Kingdom, 1826–1834, and again after the Irish famine. Many of these immigrants later moved on into the United States. By 1861, the population had risen to some 3.2 million. At this time the better farming land in the region east of Lake Huron had been occupied but, aside from the small Red River settlement

and scattered outposts in British Columbia, the West remained unsettled. To take advantage of its great inland waterway and provide the transport facilities so essential for growth, a series of canals and river improvements was constructed opening up the route through the Great Lakes and down the St. Lawrence. A 9-foot channel from Lake Huron down was provided by 1848, but the hope of diverting much American traffic away from the Erie Canal was not realized.

Of the two great staples of the colonial period, fish and furs, the former remained important but the latter in time lost its significance. In its place arose lumbering and its related industries, especially shipbuilding, stimulated by preferential treatment in the British market till this advantage was lost in the 1840's. As population increased, agriculture expanded, especially the growing of wheat, which enjoyed a similar stimulus till it also was lost with the repeal of the corn laws. The ending of the preferential treatment of these two staples, which had been the chief strictly economic gain derived from the imperial connection, led to a demand for annexation to the United States among certain groups and was a factor in securing the reciprocity treaty of 1854 which greatly increased the trade between the two countries. The union of Upper and Lower Canada in 1841 promoted the sorely needed greater political and economic unity and was followed by England's first substantial concessions to self-government. However, the economic life of the Maritime Provinces had rather meager connections with the rest of the country, and that of the Far West had almost none.

In general, the result of these developments in the more backward continents was to increase the supply of foodstuffs and raw materials needed by the nations of western Europe and, to a lesser extent, the United States, and also to provide an expanding market for the manufactured products of those countries. At the same time, it offered new outlets and opportunities for the growing population and accumulating capital of Europe. In short it meant a step in advance toward a more nearly world-wide specialization and division of labor, resulting in a more complete and effective utilization of the economic resources of the world which enabled all countries participating to raise their standard of living.

Outstanding Characteristics of the Period 1816–1860 in the Economic Development of the United States. After the close of the War of 1812, the United States entered upon a new epoch in its economic history. Following such a prolonged period of disturbances arising from wars, the return of peace, which endured almost without interruption till 1861, allowed the country to devote its attention and energy to its own affairs, and European political events ceased to play the important role they had played theretofore. Now that independence had been attained and a policy of isolation had been adopted, the absence of powerful neighbors and its growing strength enabled the nation to turn its back upon the Old World,

face to the West, and become absorbed in the task of exploring and developing the vast domain endlessly spread out before its vision and awaiting only the quickening touch of its hand to become an Eldorado.

In fact, this West and the problems connected with its development became the dominant factor in the economic, political, and social life of the nation during this period; at no other period was the influence of the West so all-pervasive. It was the desire to exploit the resources of the region that led to the territorial acquisitions which extended the borders of the country to the Pacific and fulfilled the concept of "manifest destiny." The wealth of untouched natural resources was the most important factor tending to differentiate economic conditions and development from those in the countries of western Europe. Largely because of the opportunities thus offered, European emigrants and capital were attracted to this country in steadily growing volume.

A second factor of basic importance during this period was the change in the economic order resulting from the slow introduction of modern capitalistic industry. The use of the new machinery and of steam for power, based on the recent inventions, led to the rise of the factory system and the revolution in transportation incident to the appearance of the steamboat and the railroad. The growth of credit institutions, chiefly banks, helped to facilitate the provision of the capital required by these developments. One result of the progress in manufacturing was to make the nation, relatively speaking, more nearly independent economically than it had been theretofore. The improvements in the transport facilities together with other developments helped to complete the breakdown of the local or sectional economy; specialization and division of labor were promoted; internal trade was greatly expanded; an increasing number of ties bound the different sections of the country together economically. Thus an essentially national economy was developed.

All these changes created new problems of social and economic readjustment to meet the altered conditions. The greater part of the resulting legislation required fell within the domain of powers allotted to the states, and in consequence there was a substantial expansion in the scope of the laws regulating economic activities, while there was also an increase in the number of goods and services that the states or their political subdivisions attempted to supply. A similar trend, though much less marked after about 1828 because of the growing power of the strict constructionist group, appeared in the sphere of Federal activities. This general trend in both state and Federal activities was accentuated by the rising demands and the growing power of the masses, following the surge toward greater democracy starting in the 1820's as well as by the spread of the humanitarian spirit.

Chapter XVII

POPULATION GROWTH AND THE PUBLIC DOMAIN

The Growth of Population. During this period, the population continued to grow at about the same high rate as prevailed during the colonial period. The average rate of increase in each decade from 1790 to 1860 was about 35 per cent, a trifle lower in the decades between 1810 and 1840, a little above that during the other decades. In consequence the total population rose from under 4 million in 1790 to 9.6 million in 1820 and 31.4 million in 1860. This rapid rate of growth, many times greater than that of the nations in western Europe (see the charts on pages 416 and 450), gave the United States by 1860 a total population greater than that of the United Kingdom and not far below that of France or Germany. This fact alone was of the greatest importance in increasing the relative economic and political strength of the nation and raised it from a position of relative weakness to one among the great powers of the world.

Of the total population in 1860 nearly 4.5 million were Negroes and about 4 million of these were slaves. After the abolition of the slave trade in 1808, the decennial rate of increase of this racial group was always below that of the whites; by the decade 1850–1860 it had fallen to 22 per cent. The greater rate of growth among the whites was partly a product of the high natural rate of increase that still prevailed and partly a product of the steadily mounting number of immigrants, for in 1860 there were over 4 million foreign-born, practically all whites, in the population.

Immigration. After the return of peace in 1815, immigration quickly revived. Government statistics of the inflow are available since 1821 and are shown in the charts on pages 451 and 453. The influx averaged 14,000 a year in the 1820's, rose rapidly till 1837, remained nearly stationary till 1846, and then spurted upward to a peak of 427,000 in 1854, after which it quickly dropped to less than half this figure, though the annual average for the 1850's was nearly 260,000. Although the fluctuations in the movement were generally closely related to the prosperity or depression prevailing in this country, the sudden advance after 1845 was a product (1) of the Irish famine and (2) of the European revolutionary upheavals of 1848, particularly in Germany, though an agricultural depression there was also an important factor.

The smaller volume of imports relative to exports allowed space for immigrants on the ships returning from Europe, and with the growth of foreign trade competition for the immigrant traffic tended to reduce the fare charged so that by the 1830's it had fallen to between $20 and $30. This was also one factor in the disappearance of the redemptioner system following the depression of 1819. The course of shipping also determined the port of the immigrant's arrival; out of a total of 5.4 million arrivals between 1821 and 1860 3.7 million were at New York, 550,000 at New Orleans, and most of the remainder at Boston, Philadelphia, and Baltimore. The sailing vessels commonly took 5 to 6 weeks to make the westward passage, and it was not until the 1850's that steamships began to seek the immigrant traffic.

The countries from which most of these immigrants came were the same that furnished the stock, other than slaves, that had populated the colonies. The percentage from Great Britain proper was smaller and that from Germany and Ireland larger. Previous to 1850, when the lure of California gold attracted many from other countries in Europe as well as the Chinese, there were few immigrants from outside Germany or the British Isles. The arrivals from Ireland, however, unlike the Scotch-Irish stock of Presbyterian faith so predominant in colonial times, were chiefly of Celtic stock and of the Roman Catholic faith, a fact partly responsible for arousing some opposition.

In general, the country welcomed this addition to its labor supply with open arms. Many railroads and some manufacturers had agents in Europe to secure immigrants, and there was little opposition even among the laboring class, yet some did appear. It was found that a much larger percentage of the foreign-born than of the natives became public charges and that paupers were being sent over to escape the cost of their support. Also the marked increase in the number of Roman Catholics led to opposition on religious grounds. In 1834 anti-Catholic riots broke out in New York and the Native American political group arose reflecting this opposition. In the 1850's the Know-Nothing party developed still more strength. To check the influx, the states where most of the immigrants landed passed laws imposing a nominal head tax or requiring a bond that the immigrant would not become a public charge within a few years; but the constitutional powers of the states were too limited to secure appreciable results. The only action on the part of the Federal government sought to aid and protect the immigrant through a series of laws, beginning in 1819 and considerably strengthened after 1846, requiring better accommodations on immigrant ships.

The Expansion of the Public Domain. As settlers pushed westward and took up the most desirable land, later comers began to venture beyond

the country's political boundaries in the search for furs, minerals, and fertile fields. The demands of such groups backed by others in the East furthered the growth of expansionist sentiment. So rapid was the westward movement that barely a generation after the acquisition of Louisiana Territory, when statesmen doubted whether most of that region would ever be settled, further acquisitions were being demanded.

In 1819, Florida was obtained from Spain for $5 million, thus rounding out political control and eliminating a source of international disputes in that section of the continent. The influx of Americans into Texas, where the population rose to around 30,000 by 1835, hastened that state's declaration of independence from Mexico in 1836 and its annexation in 1845, though in this case the state retained the title to about three-quarters of the land. The settlement of the long-standing dispute with Great Britain over the Oregon territory in 1846 gave this country the portion south of the 49th parallel of north latitude and so extended its border to the Pacific. The acquisition of New Mexico and California in 1848 following the Mexican War fairly rounded out the prevalent notions as to the country's "manifest destiny." The small Gadsden purchase in 1853 was for the purpose of securing an easier railroad route to the Pacific. The resulting total area of over 3 million square miles was more than triple that of 1783 and made the country roughly fifteen times as large as France or the German Empire and twenty-five times larger than the United Kingdom. But the character of most of the region secured during this period was very different from that in the eastern half of the country. Although it included rich timber and mineral resources and vast grazing areas, by far the greater portion, particularly that between the 100th meridian and the Sierras was too arid for ordinary farming and held little prospect of supporting a dense population.

The Acquisition of Land from the Indians. Following the usual colonial practice, the government sought to secure a title to the land occupied by the Indians before it was opened up and sold to the whites. The latter, impatient with the government's delays, constantly invaded the Indian's hunting grounds, and the resulting Indian outbreaks furnished a frequent excuse to compel the aborigines to surrender their titles and move farther west.

The policy adopted by the government at this period was to negotiate for the removal of the Indians to the region beyond the Missouri River or Arkansas where reservations were created upon land which it was then assumed the whites would not soon want. There were also a few reservations in states to the east where such of the old tribes as still survived were permitted to live in peace. By 1830, practically all of the land east of Kansas and Nebraska and south of Iowa and Wisconsin had been ceded

by the Indians except for two considerable sections in the lower South. Before 1840, these tracts were also obtained and by that time nearly all the tribes had been removed to Indian Territory or other lands west of the Missouri.

The Policy in Disposing of the Public Domain. Previous to 1816, most settlers in the West had usually taken up state land which was sold at a lower price than the land in the public domain. But as the supply of good state land dwindled and the influx of settlers rapidly rose, the regulations governing the disposition of the public domain assumed greater importance, and the issues aroused continued to be one of the leading causes of political controversy throughout this period.

The resulting legislation can be explained only as the product (1) of conflicting economic interests of different sections or groups as to the disposal of the public lands and (2) of the fact that in politics this issue became tied up with such other issues as the tariff, internal improvements, and slavery. In consequence, the laws enacted were generally the result of political compromises reflecting the varying economic interests of different sections on several issues.

In the East, manufacturers were generally opposed to cheap Western land for fear it would drain off their supply of labor. But if receipts from the sale of public lands were large, it would lessen the need for customs duties, which were the chief source of national revenue, and might lead to a reduction of those duties, which the manufacturers did not want. Hence they were willing to use the receipts for internal improvements or to give them to the states, particularly as the West wanted this and might thereby be induced to support tariff duties or other measures that the East desired. This was the basis of Clay's National System. Eastern farmers took a similar stand, fearing the competition of Western products. The Eastern laboring classes, however, after about 1820 began to demand free land, believing that easy access to the land would help to raise the level of their wages.

In the South, where after 1820 there was strong opposition to protective duties, it was hoped that large receipts from the public land sales would lessen the need for customs duties. For the same reason, the use of these receipts for internal improvements was opposed, the more so as this ran counter to the principle of strict construction of constitutional powers which prevailed in that section. After about 1840, the South began to feel that free land would be inimical to slavery as nonslaveholding farmers were likely to settle the West more rapidly than those interested in slavery. This fear was increased by the Kansas-Nebraska Act of 1854 and the acceptance of the doctrine of squatter sovereignty under which the settlers of each territory were to decide by a majority vote whether it should come into the Union as a free or a slave state.

In the West, nearly everybody wanted to have access to the public lands made as easy as possible to attract settlers and hasten economic development. This section also wanted aid from the government to finance internal improvements and other enterprises and so favored using the receipts from land sales for this purpose or gifts of land to the states. As one state after another was admitted to the Union, the political influence of the West steadily mounted and throughout this period the East and the South bargained for its support on measures which they desired. In the earlier portion of the period, the East was more successful; in the latter portion, the South. But, despite vacillation, the general trend of legislation was in line with the West's desire to make the land more easily obtainable.

The Public Land Laws. The first important act of this period was passed in 1820 and provided for a reduction in the minimum price from $2 to $1.25 an acre, a decrease in the minimum size of the tract that could be purchased to 80 acres, and cash payment instead of sales on credit. The abolition of sales on credit was designed to check the overbuying and speculative activities which had left so many in trouble after the drop in land values following the panic of 1818; the reductions in the minimum size of tracts and price reflected the wishes of the West, but were facilitated by the easier fiscal condition of the Treasury. This act is often said to mark a shift in public land policy from stress on obtaining revenue to the purpose of hastening the settlement and development of the West. Although it did strongly reflect this shift in emphasis, it was only one of a long series showing the same trend which began when it was found that the hoped-for revenue from this source was disappointing while the growth of customs receipts lessened the need for it and the West clamored for cheap land.

Another demand of the Western settlers was met by the series of preemption acts primarily designed to protect the squatters. A legal title to land could not be secured until the tract had been surveyed and offered for sale, except in the case of public grants. But surveying proceeded slowly and the inrush of settlers and speculators often carried them beyond the areas surveyed and open to sale, especially if they learned of particularly desirable tracts. Later, when such tracts were offered for sale at public auction, these squatters, if they had improved their land, were forced to bid a higher price to secure their title against other bidders just because of the improvements that they had made. For this reason, it was very common for the squatters to organize and effectively prevent outsiders from bidding at such auctions. Besides the squatters there were others who, for one reason or another, found their titles defective and sought laws to protect them.

Most of the earlier preemption acts were designed to meet the latter type of cases and were limited in scope. The growing number of squatters led to a general preemption act in 1830 for one year's duration; this was

several times renewed until 1841, when the permanent act was passed. This provided that in designated states and territories the squatter who had improved and built a dwelling upon a tract should have the right to buy it at the minimum price of $1.25 an acre before it was offered at public auction. The protection thus afforded was obviously a stimulus to the practice of scattering out over and squatting upon the best tracts of unopened land.

The Graduation Act of 1854, though not of great economic importance, had been a prominent political issue for nearly 30 years. It provided that

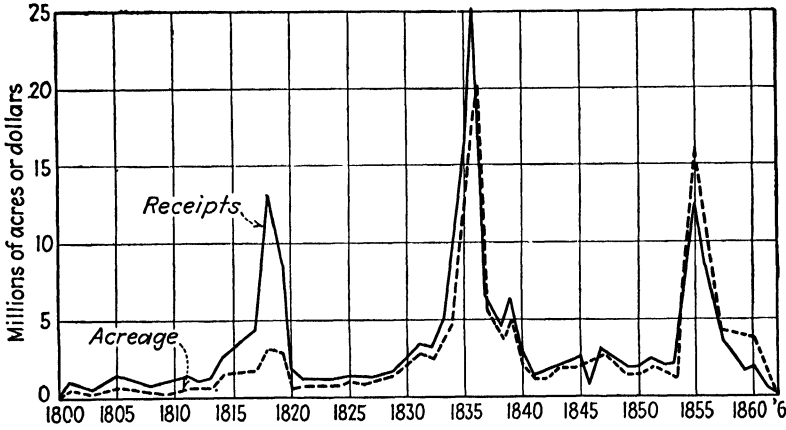


FIG. 12. Sales of public lands, acreage and receipts, 1800–1862.

land remaining unsold 10 years after it had been opened for sale was to be slowly reduced in minimum price to 12½ cents an acre and sold in lots of not over 320 acres. This act, sought chiefly by the older public land states, enabled farmers to buy the less valuable tracts at a reasonable price and helped the government to dispose of odd, scattered lots. Also a few acts regulated the sale of mineral lands in certain localities, generally at low prices; but much the greater portion of the valuable mineral resources was sold as ordinary farm land. In fact, the existence of many mineral deposits was unknown at the time.

The crowning success of the West was attained when free gifts of land were provided for under the Homestead Act of 1862. A demand for free land had been voiced among various working-class groups in the East since the 1820's, but it was not until after 1845, when actively pushed by the agrarian reformer George Evans and supported by Horace Greeley, that it rapidly spread to other groups. During the 1850's, several bills that passed the House failed of enactment, chiefly due to Southern opposition. Success came only when the new Republican party, which had adopted the

idea as one of its chief planks, won the election of 1860, and the South seceded. Under this law, citizens or intended citizens could obtain for a nominal fee a tract of 160 acres after they had improved it and resided upon it for 5 years. A commutation clause permitted the exercise of preemption rights to obtain title after 6 months' residence on payment of $1.25 an acre. This right, primarily designed to protect the settler who for some unforeseen reason was unable to meet the 5 years' residence requirement, was chiefly used by speculators having no interest in developing the land and hoping for a quick resale.

The Public Land Grants. There was constant pressure to use the resources of the public domain for grants to help finance various public purposes as this lessened the need for taxes and involved no immediate burden, whatever the future effects. The Western states in particular, being poor, wanted financial assistance for many undertakings and became the more urgent in their demands after the panic of 1837 when the heavy debts that they had piled up led many to default in their interest payments while some repudiated their bonds. This situation explains the efforts, particularly prominent from about 1830 to 1842 and ardently championed by Henry Clay, to get Congress to give the public lands to the states or to distribute the proceeds from their sale among the states.

The passage of the Distribution Act of 1836 was made possible by a favorable combination of circumstances. The craze for speculation in Western lands, which had been gathering momentum for several years, reached an all-time peak in 1836 with sales of over 20 million acres; in consequence, this was the only decade in history when receipts from this source produced a very substantial addition to Federal revenues. Customs receipts also mounted, and the resulting surplus made it possible to pay off the remaining national debt in 1835. What to do with the surplus once the debt had been extinguished was a question for which the states had a ready answer in the Act of 1836 which provided for the distribution of some $37 million among the states in four installments. The sudden appearance of a deficit after the panic led Congress to suspend payment of the final installment. Technically, this distribution was made in the form of a loan to meet Constitutional objections, but it was generally understood to be a gift; and the states, which used it for a great variety of purposes, have never repaid it. In 1841, another act provided for a further distribution of the receipts from public land sales, but it was conditioned on there being no increase in customs duties above the rates in the Tariff of 1833 and, as the duties were raised in 1842, the law remained in force only a year, despite vigorous efforts to continue it.

Besides seeking some form of general distribution, the states sought grants of land for various specific purposes. To help finance internal im-

provements the Federal government itself undertook the construction of the National Turnpike, to be described later, and in the 1820's made a few small grants to the states for use in the construction of wagon roads, chiefly such as were of military importance. Between 1827 and 1866, there was a series of grants to aid state canals. These were all made to states in the old Northwest and totaled some 4.6 million acres. Finally, there were the grants for railroad construction starting in the 1850's, during which decade most of the grants were made to states bordering on the Mississippi River. The general plan, which was a development of that earlier used for canal grants, was to give a strip of land 100 feet wide for the roadway and in addition the alternate sections (each 1 square mile) in two strips of varying width on either side of the roadway. Six miles was a common width of these strips in the grants of this period, in which case the railroads received 6 square miles of land per mile of track. The alternate sections remaining to the government were to be offered for sale at not less than double the minimum price of $1.25 an acre.

Among other specific purposes for which grants of the public land were made, those for education, drainage of swamplands, and for military services were the most important. Beginning in 1848, two sections in each township, instead of the original practice of only a single section, were reserved for school purposes. In 1850, Congress granted to each of the then existing states (to which Oregon and Minnesota were later added while Louisiana had obtained a special grant the previous year) the overflow and swamplands of the public domain within its borders, the proceeds to be used "exclusively as far as necessary" for the reclamation of these lands. Fifteen states have thus received some 63 million acres. Although it was expected that this would hasten state drainage and levee work, little was done till near the close of the century except for some levee construction in the Mississippi Valley. In addition to such state grants, there were numerous grants to private individuals who had performed some public service, the most important being the bounties for military service.

The Effects of the Public Land Policy. How far the policy, which in its general trend conformed to the wishes of the West in making the public lands more and more easily obtainable, was wise from the point of view of the long-run welfare of the nation is not easily determined for it undoubtedly entailed both desirable and undesirable results. In a listing of the former, it can be said that it hastened the process of settling the country and developing its resources at a period when the nation was none too strong; it facilitated the financing of various undertakings of social importance; it helped to improve the condition of the poorer classes and to attract immigrants; it served to promote a spirit of individualism and a more democratic society.

As disadvantages, on the other hand, it may be claimed that it tended to promote what was likely in the long run to prove a wasteful use of natural resources; it scattered the population, making government more difficult and expensive, besides decreasing the gains from those civilizing institutions that depend on a fair density of population; by trying to hasten development it accentuated the business cycles that periodically disturbed the country; and, because of laxness in the formulation and administration of the laws, it often promoted speculation and made possible private gain without any resulting public benefit, though this was not inherent in the general policy. Probably the strengthening of the youthful nation and the promotion of democratic conditions may be considered as outweighing the losses, some of which fell on later generations who could better afford them.

CHAPTER XVIII

THE OPENING OF THE WEST

The Westward Movement of Population. Facilitated by the more liberal land policy together with the introduction of better means of transport and pressed on by the rapid growth of population, the westward movement was resumed after the War of 1812 on a larger scale than ever.

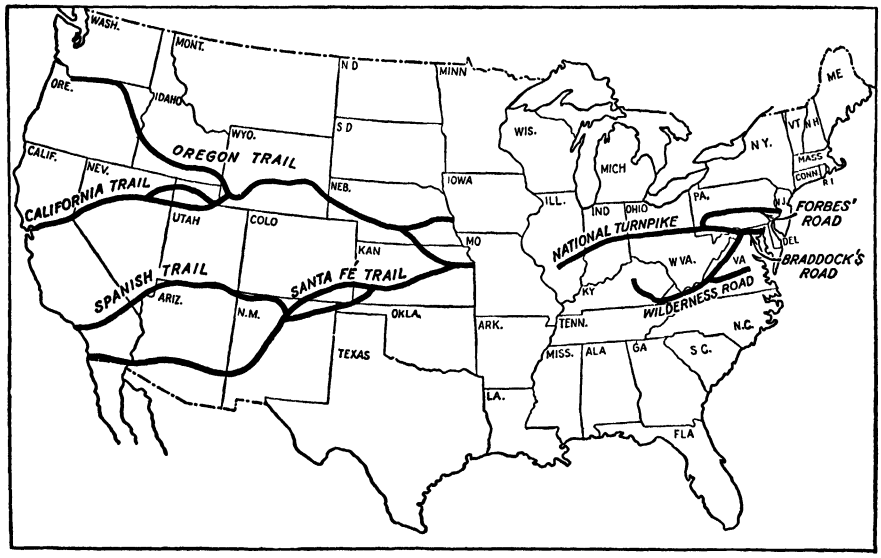


FIG. 13. Chief roads and trails to the West. (Base map, copyright, 1939, by the University of Chicago.)

"Old America seems to be breaking up and moving westward," wrote a foreign observer in 1817.

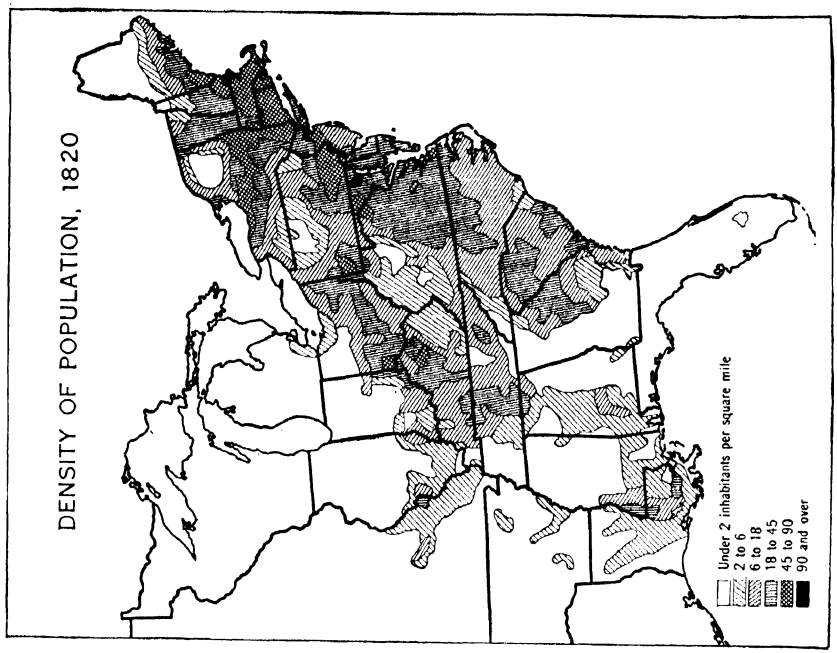
Up to about 1830 most emigrants from the Northern states followed one of the routes leading to the Ohio River between Pittsburgh and Wheeling and then proceeded down the river to the point nearest their chosen destination. Thus in the early period the most rapid growth of settlement took place along that valley, gradually extending back from the river and down the stream as the flow of emigrants increased. The tendency to settle close to navigable waters was such that as early as 1820 a thin line of settle-

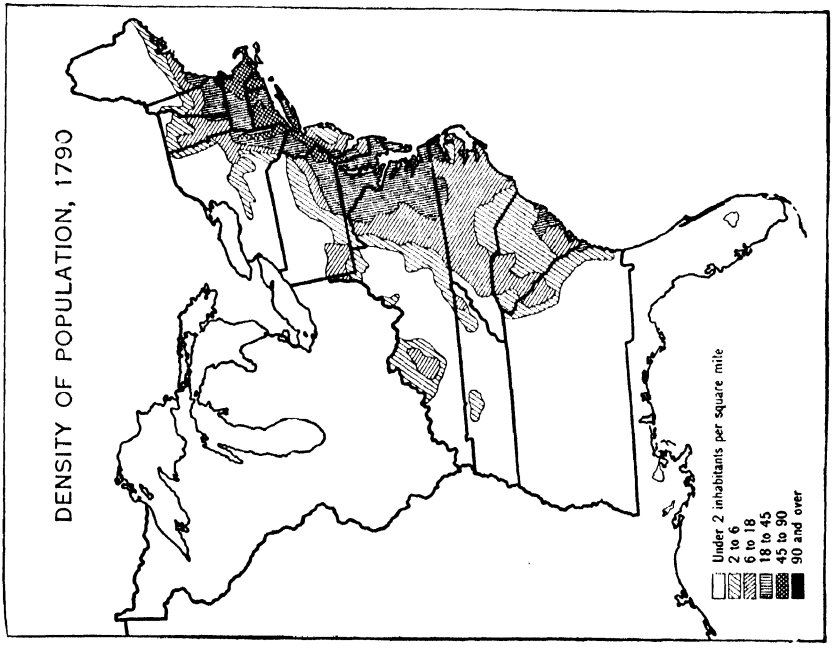
ment extended up the Missouri River halfway across the state of Missouri, and another line was spreading up the Mississippi from its junction with the Ohio. Previous to 1825, when the Erie Canal was finished, few settlers ventured into the sections bordering on the Great Lakes west of Cleveland; consequently, that region was slow in starting to grow. In the lower South, the hostile Indians checked extension into western Georgia and parts of Alabama and Mississippi until after 1830, though before that the spread of settlers up the river valleys from Mobile had reached the earlier settlements in Tennessee. Meanwhile population moved northward from Louisiana up the Mississippi, the Red, and the Arkansas rivers (see map on page 258).

After the opening of the Erie Canal in 1825 provided easy access to the region bordering on the Great Lakes, emigrants from the North Atlantic states quickly poured into this section, the New England element among them being particularly prominent. Previous to 1830, settlers had clung to the wooded river valleys avoiding the treeless, open prairies stretching westward from Illinois; but thereafter, once the pioneers had demonstrated the richness of the prairie soil, others were quick to follow. By 1840, all of the old Northwest except the central and northern portions of Wisconsin and Michigan was settled, and later comers began to push across the Mississippi. While the extensive railroad construction in the old Northwest during the 1850's helped to fill in the sections lacking water transportation, the vanguard of pioneers kept well ahead of the railroads until after 1860. At that date, the frontier line of settlement (measured by regions having at least two inhabitants per square mile) extended from central Wisconsin up around the southeastern corner of Minnesota then southward and across northwestern Iowa where it met a line of settlements extending up the Missouri to Dakota and spreading westward into eastern Kansas and Nebraska (see maps on page 259).

In the South, meanwhile, expansion was proceeding at a rapid pace. During the 1830's the removal of the remaining Indians combined with high prices for cotton resulted in the occupation of most of the land east of the Mississippi by 1840, together with the greater portion of Missouri and Louisiana and much of Arkansas. Some settlers were attracted beyond the border into Texas, and after the annexation of that state it furnished the chief outlet for southern expansion up to 1860, though there was a steady filling up of the states adjoining the Mississippi. By this date the Southern frontier line, held back by the Indian reservations west of Arkansas, extended westward in Texas almost to the 99th meridian.

The Westward Emigrant. In moving west the general tendency of the emigrant was to follow along parallel lines of latitude. Most of the earlier pioneers, coming from the Southern uplands and including many Scotch-


DENSITY OF POPULATION, 1820
Under 2 inhabitants per square mile
2 to 6
6 to 18
18 to 45
45 to 90
90 and over


DENSITY OF POPULATION, 1790
Under 2 inhabitants per square mile
2 to 6
6 to 18
18 to 45
45 to 90
90 and over

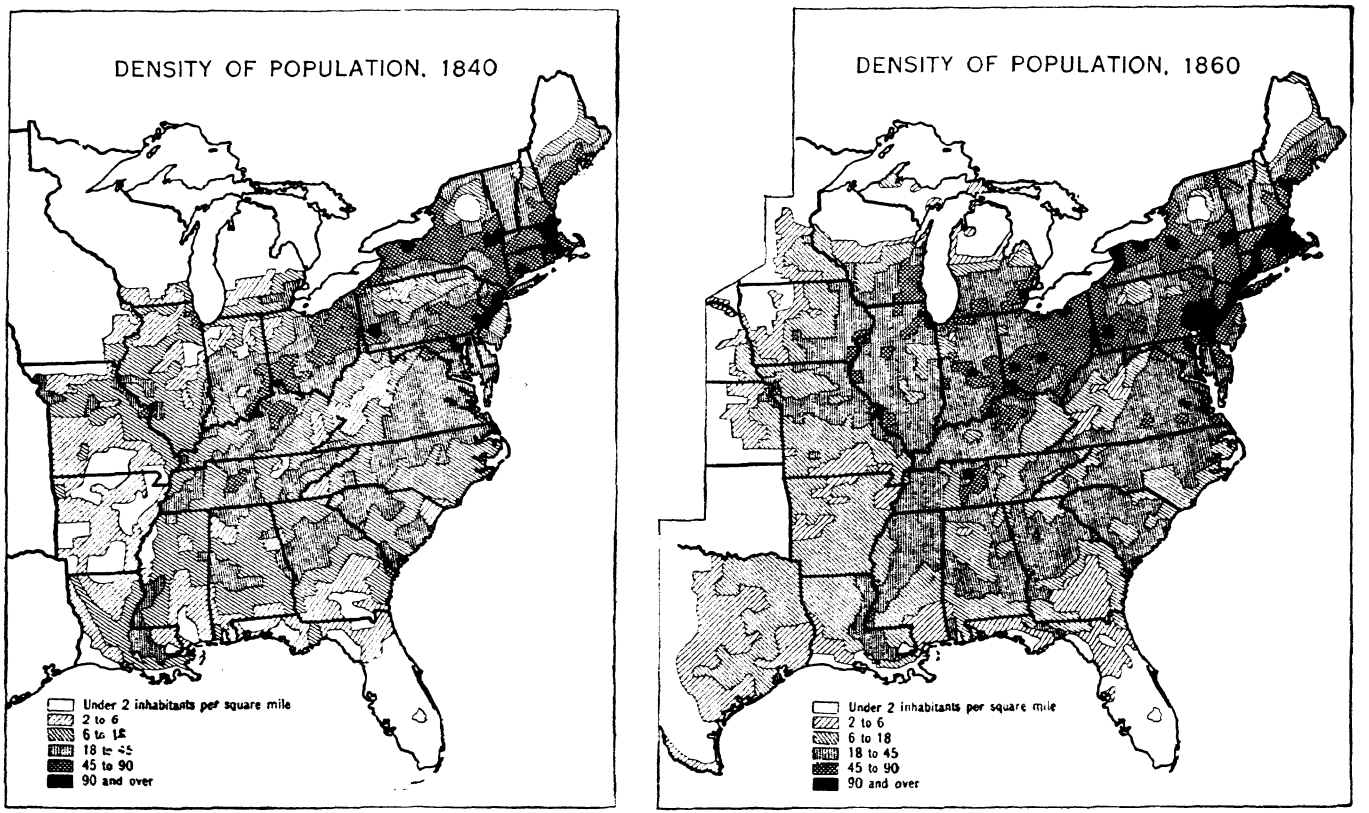


FIG. 14. Settled areas and density of population, 1790–1860. (*Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.*)

Irish along with some Germans and Quakers, went first to Kentucky or Tennessee. Augmented by followers from the same section, this group contributed the greater portion of those who later settled Missouri, southern Illinois, much of southern Ohio, and made up the Hoosier stock of Indiana. The Middle Atlantic states contributed many settlers to central and parts of southern Ohio. After filling up western New York, New Englanders became predominant among those who settled along the borders of the Great Lakes and later pushed on into Minnesota, Iowa, Kansas, and Nebraska. This group, transplanting such typical New England institutions as town government, the Congregational Church, the public school and academy, helped to create a social atmosphere in their settlements which differed considerably from that to be found where Southern settlers predominated, a difference particularly clear in Indiana and Illinois.

In the South most of those who settled the western regions came from the South Atlantic states, including both the upland and the tidewater sections. The mingling of the people from the two sections helped to modify the differences between them that had been so marked and thus, together with the dominance of cotton culture and the dependence on slavery, extended the social and economic institutions of the old South to the westward and helped to unify the whole of the lower South. Texas obtained a larger admixture from the North than most of the Gulf states, but the greater portion of this group came from the region centering about Missouri and was of Southern origin. In fact the westward-moving emigrant, both North and South, was very likely to make several relatively short moves in the course of his life rather than a single long move, this trait being especially marked among the real pioneers.

In the South, unlike the North, immigrants contributed very little to the growth of population or the settlement of the West. How far this was owing to the presence of slavery, how far to the greater opportunities for getting a living offered in the North, and how far to the fact that most immigrant ships sailed to Northern ports is not easily determined, but it is probable that the second reason was the most influential. Of the substantial number landing at New Orleans a considerable proportion went up the Mississippi to the Northwest, and many of those landing in the North eventually went west, but few went south. In 1860 out of nearly 2 million foreign-born living west of the Appalachians barely one-quarter were located in the South. In this group the Irish and the Germans were the most numerous. A number of German settlements were established in Louisiana and Texas, those in the latter state being the product of an elaborate plan to build up a colony which came to grief in the middle 1840's.

The most important contribution of immigrants to the growth of the

West was made by the large influx of Germans after 1848 who went to the Northwest and settled in the river towns or the neighboring farming area from Cincinnati to St. Louis and thence northward to Wisconsin or along the lake shore from Chicago to Milwaukee. The social habits and customs of this group appreciably influenced the life of the communities where they congregated, and they typically supported the Union cause in 1861. There was also a considerable Irish element that eventually drifted into the Northwest and tended to settle in the larger towns and cities.

This influx of immigrants into the Northwest was a factor, though a minor one, in the more rapid growth of population there than in the Southwest. It is important to note that throughout this period the states north of the Ohio and Missouri rivers were increasing in population more rapidly than those south of them. Though, in 1810, the latter group had more than twice the population of the former, they had lost this lead by 1840 and by 1860 had less than two-thirds of the population of the former group. This fact, serving both as a cause and as a result, was of vital significance in determining the relative economic growth of these two sections as well as for its bearing upon the Civil War. It was the far more rapid growth of the North as a whole in both population and wealth which aroused much feeling in the South where it was generally attributed to favoring Federal legislation and aggravated the sectional antagonism.

The Growth of the Cities. Before turning to the opening of the Far West, where cities were unknown until the sudden rise of San Francisco, it is well to note the growth of urban population and the larger cities. In 1790, six cities had 8,000 or more inhabitants and their total population was 3.3 per cent of the total for the country. By 1820, there were thirteen such places and they had altogether under 5 per cent of the total population; by 1860, the number had risen to 141 and they contained 16 per cent of the country's inhabitants. This growth of urban population, destined to become an outstanding phenomenon in the country's development, involved important changes in the economic and social environment of an increasing proportion of the people.

During this period, as in colonial times, trade was the chief factor responsible for the growth of cities. A location favorable for the expansion of trade was basic in the rise of all the largest cities, and it was to supply the needs of the trading population or to take advantage of the facilities for trade that people engaged in other pursuits were drawn to locate in the great trading centers. Yet it is also to be noted that manufacturing was becoming a more important factor in the growth of cities, and the rise of some cities of fair size such as Paterson, Fall River, Lowell, and Lawrence was due almost exclusively to the development of manufacturing enterprises.

In the growth of the older seaboard cities, access to the trade of an expanding hinterland was the most important factor. It was chiefly through this means that New York took the lead as the largest city and, as the chart on this page indicates, rapidly forged ahead of all rivals. The Erie Canal first drew the trade of central and western New York and, after furthering the settlement of the Northwest in time drew an even greater

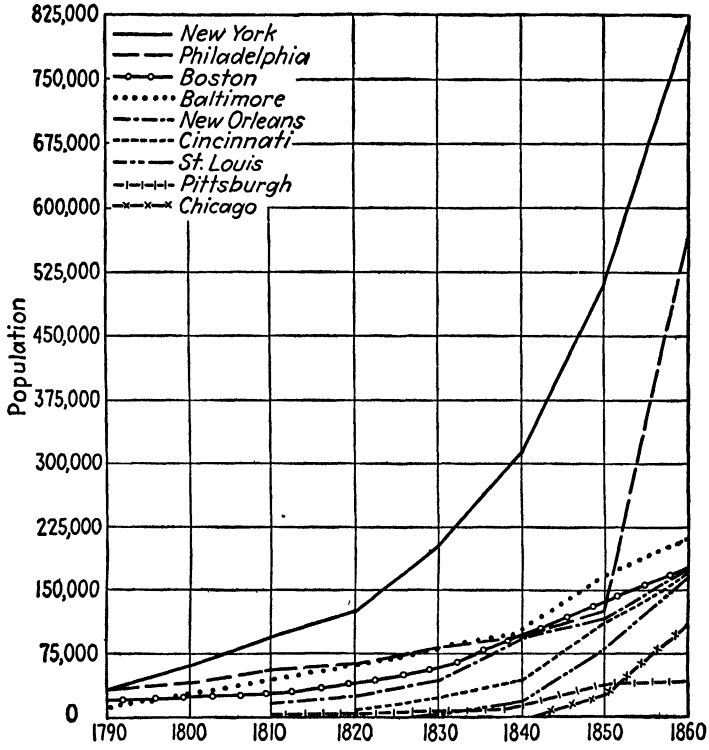


FIG. 15. Population of the larger cities, 1790–1860.

trade from that section. Favored by its harbor and central location, it took the lead in developing the coastwise trade and became the great distributing center for imported goods. The resulting growth made it a more attractive location for certain lines of manufacturing and enabled it to wrest the financial leadership of the country from Philadelphia in the 1830's.

Philadelphia grew at a much slower pace. It had a limited hinterland dependent upon it, and its earlier lead in trade with the Ohio Valley region was impaired by the growing competition of Baltimore, New York, and New Orleans. Still, aided by the development of considerable manufacturing and, after 1850, by the annexation of suburbs, it held second place in

1860 with over 500,000 inhabitants. Baltimore, thriving on the growth of its flour and tobacco trade, practically equaled Philadelphia by 1820 and soon surpassed it; but, being less active in developing manufacturing and suburbs to be annexed, it had fallen back to third place by 1860 with less than half the population of Philadelphia.

Next and not far below came Boston, which enjoyed a steady, slow growth, since it was largely dependent upon the progress of New England and, although losing some lines of business to New York, began to get a small portion of Western business only when rail connections were completed. In the South, Charleston fell far behind. Its hinterland developed but slowly, and the trade of the growing region to the west was diverted to the Gulf ports.

In the West, the growth of the different cities was largely determined by the period when the surrounding region was settled and the trade which that region or the through trade routes developed. Throughout this period New Orleans was the largest city west of the Appalachians; in 1860, with 168,000 inhabitants, it nearly equaled Boston. Its preeminence was due to its position at the outlet of the great river systems along the borders of which the earlier settlers congregated and down whose waters so much of their produce was shipped. After the introduction of the steamboat, it also became the entrepôt for goods carried up the river.

In 1810, Pittsburgh with about 5,000 inhabitants was second in size among Western cities, its early rise being due to its location as the gateway through which so many emigrants passed, the growth of its manufactures to supply the Western market, and its business as a distributor of goods brought from the East. But, as emigrants surged past it, it soon lost its rank to competing cities and in 1860 had just under 50,000 inhabitants. Favored by the early settlement of Kentucky and southern Ohio, Cincinnati surpassed Pittsburgh by 1820 and thereafter remained the great commercial center of the Ohio Valley. A substantial development of manufacturing contributed to make it the second city west of the mountains, almost equal to New Orleans by 1860. Though much older, St. Louis, chiefly dependent on the fur and lead trade, rose very slowly until about 1840 after which, as settlers poured into the region bordering on the upper Mississippi and the Missouri, it fairly leaped forward and by 1860, with 160,000 inhabitants, practically equaled Cincinnati.

The delay in providing easy access to the region bordering on the Great Lakes explains the late growth of the cities along those shores. An early start gave Buffalo a lead which it held until 1850, when it had 42,000 inhabitants. Cleveland and Detroit, being more dependent on the commerce of their immediate hinterland, attained only a moderate growth. Chicago, an old trading post and garrison fort, had less than 100 residents as late as

1832, after which its spectacular rise, aided by the speculative fever of those years, commenced. As the region to the west was settled, the surplus produce was sent to Chicago for shipment eastward through the Great Lakes, and the city became the distributing center for eastern products going farther west. The completion of the Illinois and Michigan canal in 1848 and the westward extension of the railroads in the 1850's broadened the area tributary to the city's trade. Some manufacturing began to develop, and by 1860 Chicago could boast of 109,000 inhabitants, though still only fourth in size in the West and eighth in the country.

Exploration and Early Settlements in the Far West. The first explorations and settlements in the Far West were undertaken by the Spaniards, but when they failed to discover precious metals there, they lost all interest in the region. Santa Fe, the only appreciable settlement, maintained a desultory existence as a trading and missionary center for nearly three centuries without showing much growth. Beginning in 1769, a series of missions was established in California to convert and civilize the Indians, but the authorities frowned upon immigration of whites to that section.

In the Pacific Northwest, the activities of explorers along the coast, of hunters of the sea otter, and of fur traders coming from the East first made the region known and established the earliest trading posts and settlements. The Russians, with their main base in Alaska, extended their operations southward to California, and American ships, which began stopping at points in the Oregon territory even before 1790, secured from them some of the furs that they carried to China. The first important American post, Astoria, was established in 1811 by John Jacob Astor but, following the outbreak of war in 1812, was sold to its Canadian rival. The treaty of 1818 left the dispute between Great Britain and the United States over possession of the Oregon territory undetermined, though the region was open to settlement by citizens of either nation. Until about 1840, the territory was practically controlled by the two British fur companies, united in 1821 under the Hudson's Bay Company. They, as well as the American fur traders, opposed the influx of settlers, at least until the 1830's, when the supply of fur-bearing animals had been nearly exhausted. Moreover, it was not until then that a practicable trail to this region for emigrants from the East had been opened up.

The process of exploring this vast intervening region was completed between 1804 and 1845, chiefly by government expeditions and through the activities of the fur traders. The expedition of Lewis and Clark up the Missouri River, over the Rockies, down the Columbia to the Pacific, and then back to St. Louis in 1804–1806 was the first great undertaking. In 1806, Pike, who had explored the upper Mississippi in 1805, crossed the

plains from St. Louis to the Rockies. Yet his characterization of that region was hardly calculated to attract settlers, for he wrote,

> But from these immense prairies may arise one great advantage to the United States, *i.e.*, the restriction of our population to some certain limits, and thereby, a continuation of our Union. Our citizens being so prone to rambling and extending themselves on the frontiers will, through necessity, be constrained to limit their extent on the West to the borders of the Missouri and the Mississippi, while they leave the prairies, incapable of cultivation, to the wandering and uncivilized, aborigines of the country.

This point of view was fairly typical of the ideas of most people concerning this section until the late 1840's. The concept of the "great American desert," the extent of which was grossly exaggerated, but which centered about the region now better known as the "dust bowl," was generally accepted after the report of Long's expedition to Colorado in 1820. As late as 1845 Daniel Webster insisted that the country could have no possible use for the whole region westward to the Pacific.

Meanwhile, the hunters' and fur traders' activities were also rapidly making known the general character of this vast region and the most practicable routes of travel across it. From 1807 on, hunters and traders were operating along the eastern slopes of the Rockies, but their exploration of the great interior basin to the west and the mountain passes giving access to it from either side was chiefly a product of the period between 1820 and 1840. As the fur-bearing animals were exterminated in one locality, the hunters turned elsewhere until, after about 1835, the supply was so reduced that the trade rapidly dwindled.

In the Southwest, where the supply of good furs was smaller, a better knowledge of conditions was obtained through the rise of some trade between Santa Fe and the settlements in western Missouri over what became known as the Santa Fe trail. From 1822 on, a regular caravan organization existed for carrying on a small trade over this route, and it provided a model for the later emigrant movement to Oregon and California for which the Santa Fe trail was little used. After 1827, some traders moved southward from Santa Fe along the Rio Grande, then struck westward to the Gila River and on to San Diego. Another route from Santa Fe, known as the Spanish trail, came into use after 1830; it passed through southern Utah and turned southwestward to Los Angeles (see map on page 256).

In the Pacific Northwest, except for the fur-trading posts, there was no appreciable effort to establish settlements until the 1840's, by which time explorations had indicated the Oregon Trail as the most practicable route to this region. Starting at the Missouri River, this trail struck across the prairie to follow up the North Branch of the Platte River, took the easy

ascent over the continental divide through South Pass at an altitude of about 7,500 feet and then, descending the valley of the Snake, cut across to the Columbia. Several Indian missionary groups following this route from 1834 on proved it possible for women and practicable for wagons. In 1841 there were perhaps 400 Americans in the Oregon territory but thereafter, owing chiefly to the active movement to direct settlers thither in the belief that it would strengthen American claims, there was a rapidly mounting influx till in 1846, when the boundary dispute was settled, the number had risen to 4,000 or 5,000.

Meanwhile very few Americans had been diverted to California, then still a possession of Mexico. Cattle raising on a few great patriarchal ranches and some trade in hides, tallow, and provisions with ships passing along the coast were the chief pursuits, while the missions had been secularized after 1833. When, starting in 1841, little groups of avowed American settlers began to arrive, the authorities assumed a more hostile attitude. The Americans there numbered only 500 when in 1846 they took the lead in declaring the Bear Flag Republic. This act was immediately followed by the occupation of the region by American forces upon the declaration of war. Thus, once more, peaceful economic penetration beyond the country's boundaries proved to be a first step toward territorial expansion.

Within the region acquired from Mexico in 1848, there was, in addition to the small settlements in California and that at Santa Fe, one other settlement of appreciable size—practically the only one in the vast but arid region between the prairies and the Sierras. This was the Mormon colony at Salt Lake founded in 1847. This sect, organized by Joseph Smith in western New York in 1830, had a remarkable record of migrations in the effort to escape persecution. Moving to Ohio in 1831 and then to western Missouri where more hostility developed, a group of some 8,000 founded Nauvoo, Ill., in 1839. There reports of Smith's revelation in favor of polygamy aroused further opposition, and a popular outbreak culminated in his murder. The leadership then fell to Brigham Young, and again it was decided to move—this time to an uninhabited region where they might hope to dwell in peace. There resulted a trek across the plains unparalleled in our history.

Starting from Nauvoo in the spring of 1846, some 12,000 moved in successive groups across Iowa to a point near Omaha where they spent the following winter amidst great privations. In the spring an advance party under Young set out, approximately following the Oregon Trail through South Pass and then striking off to Salt Lake where a town was laid out which had some 5,000 followers by 1848. Upheld in their endeavors by intense religious zeal, guided by efficient and astute leaders, and cooperating under a highly centralized organization, they met with marked

success among most unfavorable conditions. By constructing irrigation works, they became the first Americans to make the desert bloom, and in the subsequent rush of the gold seekers the settlement provided a welcome source of supplies at a substantial gain for itself.

The Gold Seekers. In January, 1848, gold was discovered in the Sacramento Valley near Sutter's fort, and soon reports of remarkable finds spread along the coast. Instances of men who secured from $10,000 to $30,000 in a week or 10 days were well established. From Oregon to South America, eager gold seekers flocked to San Francisco and vessels stopping at that harbor were at once deserted by the whole crew; eventually several hundred ships were stranded there unable to get away. It is estimated that 40,000 persons came to San Francisco before the end of 1848. To induce anybody to remain in ordinary pursuits, enormous wages had to be paid. Unskilled labor easily obtained $10 a day and skilled perhaps twice as much. Prices jumped to fantastic levels; candles sold at $3 apiece, a tin pan at $9, shirts at $40, and a good pair of boots at $100; a quarter was the smallest coin in circulation.

News of the discoveries did not reach the East until the late summer and, since the overland route was then impossible, the more eager took to the sea. Some went to the Isthmus of Panama and then across to catch a ship going up the west coast, but the majority chose the long route around Cape Horn. For the latter, the fleet clipper ships, which took 3 to 4 months for the voyage, were in great demand, and some erected temporary houses on their decks to accommodate the crowd. Before April, 1849, some 17,000 persons had sailed for California. As the news spread around the world, gold seekers from most of western Europe as well as Australia and China took to the sea for San Francisco.

In May of 1849, when some 20,000 people had gathered along the Missouri River from Independence to Council Bluffs, the march of the "forty-niners" began. Following the old Oregon Trail through South Pass, the emigrants then struck across the semidesert region in Utah and Nevada, climbed the steep Sierras, and saw below the hoped-for Eldorado. The trip took about 5 months, and haste was necessary to avoid the ghastly fate of the Donner party. In 1846, that party had failed to cross the Sierras before the snows fell and fairly buried the group of about 80 people; half of them died of starvation before rescuers came, and some of the others survived only by eating the flesh of the dead. Overcome by the trials and dangers that beset them, many of the forty-niners gave up and turned back, cholera broke out among them, and soon the trail was lined with the graves of some 5,000. Yet great hopes and indomitable energy carried 30,000 to 40,000 through that year. In 1850, around 55,000 crossed the continent while 36,000 arrived by sea, and California became a state.

The main gold fields extended over 200 miles along the western slopes and foothills of the Sierras, and approach up the navigable rivers to the base towns from which the miners spread out to the diggings was easy. The gold output, estimated at $5 million for 1848 and $40 million the next year, rose to a peak of $65 million in 1853, after which there was a steady decline to $22 million in 1868. At the peak, the number of miners in the diggings may have been 100,000. Although over $450 million in gold is supposed to have been secured between 1848 and 1856, relatively few miners reaped a fortune thereby and the early comers generally fared best. Until about the middle of 1849, getting a pound of gold dust a day was common, but by 1850 those securing an ounce a day—accepted as worth $16 there—were thought to be doing well, and thereafter $5 to $6 a day was considered good. As the placer-mine gravel deposits, which could be easily worked with simple tools by a single individual or a small group, were depleted and resort to quartz mining, which required expensive machinery, became necessary, individuals began to leave the diggings and gold mining tended to pass into the control of large companies.

After 1853, as the output of gold declined and the exodus of miners rose, the speculative boom that had been engendered collapsed, and a gradual readjustment to a more normal life followed. San Francisco, with under 1,000 inhabitants in 1847, had become a city overnight with nearly 25,000 population by the close of 1849 and twice that by 1853. Within 18 months, six disastrous fires swept through the ramshackle wooden buildings of the city before a more durable form of construction was adopted for the business section. Real estate values had skyrocketed, and interest rates rose to 5 per cent a month, but many investors were ruined in the collapse of 1854–1855. Disreputable elements got control of the local government and courts; gambling houses had the most profitable business; there were a thousand murders with but one legal conviction up to 1856, when the citizens' vigilance committees arose to drive out the gangs and restore law and order. By 1860, the city's population was 57,000 and that of the state, where most people had reverted to ranching, farming, or commerce, 380,000.

The scattering of such miners as did not go home or to the Australian gold fields, discovered in 1851, led to new finds in British Columbia, Idaho, Montana, Nevada, and Colorado, though the results never compared with the California output. The little mining camps that sprang up were likely to have but a brief existence, yet they sometimes led to the beginning of an agricultural settlement. The discovery causing the greatest excitement was that at Pikes Peak in 1858. The next year 100,000 people rushed to Colorado; "Pikes Peak or Bust" was the motto on their wagons; but the results were slight—one case with the motto changed to "Busted, by Gosh!" reflected the common fate. The most important find at this time

was the Comstock Lode in Nevada in 1859, which proved to be the richest silver deposit in the country and marked the beginning of that mining industry.

By 1860, there were some 175,000 people in the region between the Pacific coast states and west of Texas, Kansas, Nebraska, and Dakota. About half of them were in what then constituted New Mexico Territory and nearly a quarter in Utah, where the Mormons had been active in attracting converts, often from abroad, and in establishing many new settlements. Thus only a bare beginning had been made in developing this vast area.

The Pioneer. At least a word should be said concerning the human elements involved in this westward movement. Migrating to the frontier was no child's task, and great fortune seldom rewarded the emigrant, yet to most people the West stood for greater freedom and economic opportunity. In the early days even the journey to the Mississippi Valley was beset with hardships and required ambition, courage, and endurance. For those with limited means, it was arduous indeed. Thus we hear of a man with his wife and five children walking from New Jersey to Ohio carrying their worldly goods in a wheelbarrow, and another couple with seven children loaded all their possessions on their backs.

More typical were the sights described by Birkbeck in 1817:

> We are seldom out of sight as we travel on this grand track towards the Ohio of family groups behind and before us. A small wagon (so light you might almost carry it yet strong enough to carry a good load of bedding, utensils, and provisions and a swarm of young citizens and to sustain marvelous shocks in its passage over these rocky heights) with two small horses, sometimes a cow or two, comprises their all. . . . A cart and single horse frequently affords the means of transfer; sometimes a horse and pack saddle. Often the back of the poor pilgrim bears all his effects and his wife follows naked footed bending under the hopes of the family.

Even after improved transport facilities eased the journey to the Middle West, the still longer trip to the Far West remained beset with yet greater hardships and dangers. Indian attacks and depredations were a constant menace. The task of transporting a family over the Oregon or the California trail might well appall the strongest and most venturesome. The trip across the plains and through South Pass was difficult enough and involved careful planning of equipment and supplies, but the section beyond that across the semiarid Great Basin and up the steep, rough trails over the Sierras was far more exhausting. The spirit back of the emigrant is well illustrated by the group of some 1,000 Mormons who, in 1856, pushed handcarts 1,200 miles over the trail, of whom over 200, getting a late start, perished in the snows of the Rockies.

After the journey's end, the emigrant was likely to face a life of hard and unceasing toil. He had to readjust himself to a new environment and to learn new methods in farming or such other pursuit as he adopted. If near the frontier, his family faced a rather isolated life far from the advantages of contact with cultural institutions. But in owning his own land and home, though no more than a log cabin, a dugout, or a crude frame shanty; in seeing his property develop, and in feeling his self-sufficiency, he enjoyed a sense of freedom and independence such as makes one of the strongest appeals to human nature. It was the pioneer's spirit of unbounded optimism, his indomitable energy and ambition, his fearlessness of toil and danger, his love of freedom, which underlay the settlement and development of the West. How much of human suffering, struggle, and idealism were involved the generation of today will never realize.

Political and Social Influences of the West. The rapid movement of population to the West was important not only for its direct influence on the country's economic development but also because the growing political and social influence of the West had important reactions on economic life. Politically, it brought a new section with new economic interests into existence; socially, it left a deep impress on American character and ideals.

By 1828, eleven new states, all but two to the west of the Appalachians, had been added to the original thirteen; before 1860, nine more had been admitted to the Union. Thus in the United States Senate with its equal basis of representation the older states came to be outnumbered by the new states, though their sparser population gave the latter less power in the House. Because the population of the Southern slaveholding states grew less rapidly than that of the Northern free states, the former became insistent that the number of free states admitted to the Union should not exceed that of the new slaveholding states, for only so could they maintain sufficient power in the Senate to protect slavery. Thus, as was originally intended and has been the case ever since, the Senate provided one of the chief constitutional strongholds to protect the economic and other interests of minority groups.

The growing political power of the West and of the ideals of its people were made plain in the election in 1828 of the first Western president, Andrew Jackson. The spread of the movement known as "Jacksonian democracy," led by the West but gaining support in the East, broadened franchise rights and other reforms, and thus tended to place political power in the hands of the masses. In striking contrast to the line of his predecessors who represented the statesmanship and ideals of the Old Dominion or New England, Jackson was a pure product of the frontier West. Born in 1767 to Scotch-Irish immigrants in the uplands of Carolina, he moved when a young man to Tennessee where he practiced law, became the

state's first representative in Congress, and achieved fame as a soldier. A born leader, a vigorous fighter both in defense of his country and for the rights of common men, Jackson had little formal education or culture and an open contempt for formalities. He became the champion of the middle and lower classes in their struggle against the upper groups and secured a popular following, which in its ardent enthusiasm was unequaled by that of any other president of the period, for he typified the rising spirit of democracy then coming into its own.

Just as in colonial times, when the conditions in a frontier land had served to promote democracy, and the transit of civilization across the ocean had hastened the elimination of social institutions out of harmony with the current ideals of the people, so in the nineteenth century the newer West exercised a similar influence. It was a region of economic opportunity, a refuge for the discontented and the downtrodden of the East or of Europe, a land where classes scarcely had had time to develop and all were on a nearly equal basis, each person standing on his own feet with little fear or favor. The West nurtured the democratic spirit, for the hardships and relative isolation of frontier life developed initiative, adaptability, individualism, and a sense of liberty. This spirit was reflected in the more democratic constitutions and other social institutions that were adopted by the Western states. This trend in the West gave added support to the rising demand among the growing group of industrial wage earners in the East for a more democratic political and economic order. This demand was heightened by the more radical ideas being brought over from Europe.

The way in which the West helped to shape the character and ideals of the American people and the product that it could turn out are illustrated in another president—Abraham Lincoln. His forebears, with the typical, restless, migratory spirit, had moved in successive stages from New England to Pennsylvania, to Virginia, and to Kentucky. In 1816, when the boy Abraham was seven years old, his parents moved to Indiana, made a clearing, and erected a log cabin where, amid the privations of frontier life, his mother soon died. Up to 1830, when he joined the movement to the prairies of central Illinois, he had obtained about one year of formal schooling. There he remained, taking an active part in many phases of the life of the frontier community and eventually settling down to the practice of law, until he was called to the service of the nation, first as congressman and then as President to guide the country through the great struggle to preserve the Union.

So completely a product of the frontier was Lincoln that his traits typify the characteristics which that environment tended to develop in the American people. His physical strength, endurance, adaptability, patience, and common sense were traits fostered in the hard struggle to

get a living by converting the wilderness into a flourishing community His slight defects—the ungainliness, the crudity, the lack of a broadly cultural training—were also inevitable concomitants of a rough, unsophisticated society where wealth and leisure were unknown. But, above all, the tolerance, the boundless charity, the spirit of true democracy, and the great humanity of the man reflected the frontier's influence on American character. Because he so completely embodied the best that came out of this environment, Abraham Lincoln, who was often looked down upon and even reviled by his contemporaries—a common experience of democracy's best servants—has become enshrined in the hearts of the American people as the typical American—typical of that nineteenth century when the West dominated the life of the nation—the greatest statesman of that period.

Chapter XIX

TRANSPORTATION AND COMMUNICATION, 1816–1860

Introduction. The difficulties arising from the lack of good transportation facilities during the preceding period only became more acute as the population surged westward and, after having filled in the regions adjacent to the available waterways, was forced back upon sections dependent upon long overland transport. It was fortunate for the nation that during this period the new technology made available in the form of the steamship and the railroad vastly improved devices for transport both by water and by land. That the demand for the introduction of these as well as the older types of facilities should be insistent was to be expected.

Nor was there any economic development that exercised more far-reaching effects upon the economic organization of the country during the period than the provision of better means of transport and communication. It hastened the development of the West; it widened the markets for the products of every region, thus promoting specialization and division of labor, increasing trade, and augmenting the productive capacity of the nation; it helped to break down the local or provincial economy of many sections, hastened the growth of a national economy, and helped to advance international trade as well.

Roads and Turnpikes. For the most part, the construction of roads was left to the towns and counties whose work was sometimes supplemented by aid and supervision from the states. Commonly, people were given the option of working out their road tax, and farmers generally chose to do so. The roads built were apt to be poor and were seldom kept in proper repair. Also, being generally laid out to meet local needs, they often failed to suit the requirements of long-distance traffic. It was partly to overcome these defects that states appointed highway commissioners and provided some financial aid. The construction of turnpikes by private companies was likely to be confined to sections where considerable traffic already existed.

To secure important intersectional roads, such as were suggested by Gallatin's plan in 1808, Federal aid was sought, but, except for the National Turnpike or Cumberland Road, little was achieved. The building of this road, started at Cumberland, Md., in 1811, was completed as far as Wheel-

ing on the Ohio in 1818, the cost for this 130-mile stretch being $13,000 a mile. It was planned to extend the road westward through the state capitals to Missouri. Columbus was reached in 1833 and Vandalia, Ill., in 1844. Here the road stopped, and the completion of the final portion was left to the states, to whom the government eventually turned over the whole road.

The growing opposition to such Federal projects arose in part from sections unlikely to benefit thereby and in part from doubts as to their constitutionality. The latter led Madison and Monroe to veto bills involving such projects, and after John Quincy Adams's administration the Federal government did little to further road building.

Canals and Waterways. The low cost of water transport turned the country's attention to canal construction and improvement of the navigable waterways, and the period between 1816 and the panic of 1837 became the great era of canal building. Though a few of the shorter canals were built by private enterprise, the cost of most was so great that they were undertaken by the states.

By far the most important and successful was the Erie Canal connecting Lake Erie near Buffalo with the Hudson River, begun in 1817 and completed in 1825. It was 40 feet wide and 4 feet deep, accommodated 30-ton barges, and cost about $8 million. Its success was immediate, as was that of another canal connecting the Hudson River with Lake Champlain, which had been opened in 1822; numerous branches were soon added and work begun to increase its depth to 6 feet. Whereas previously it had cost from $80 to $100 to carry a ton of goods from Buffalo to New York the canal reduced this to an average of less than $9 between 1830 and 1850.

The canal was at once adopted by those moving west from New England or New York, and the emigrant boarding a canalboat at Troy, progressing about 4 miles an hour, reached Buffalo in 4 days. The rich wheat-growing region in western New York profited greatly, and Rochester became a large flour-milling center. The marked trading advantages thus gained by New York as the region bordering on the Great Lakes was settled aroused other seaboard cities to endeavors to secure similar canal connections with the West, though none had such a physiographically favorable route.

Philadelphia, which had enjoyed most of the trade with the trans-Allegheny region, was particularly concerned, and at once began to plan a canal to the Ohio River. The mountains presented a great obstacle and at first it was proposed to tunnel through them. A tunnel, being uncommon in those days, was described as "a passage like a well dug horizontally through a hill or a mountain." But this plan had to be abandoned in favor of a portage railroad of 36 miles over the mountains. The main line connecting Harrisburg with Pittsburgh was started in 1826 and finished in 1834

at a cost of some $12 million, but the high operating cost prevented its ever securing much through traffic, except in the less bulky westbound commodities. To obtain the necessary legislative support for this project, the state also constructed a number of short canals or river improvements

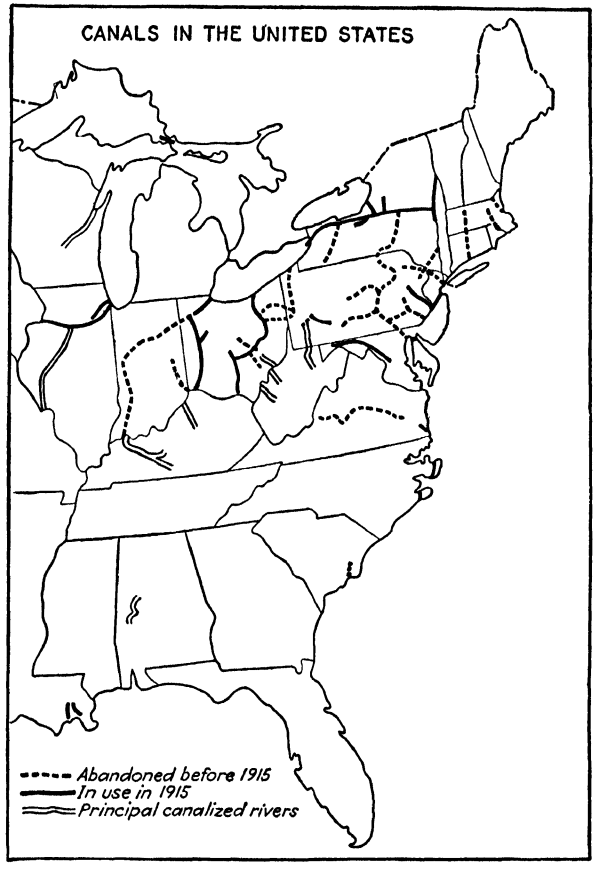


FIG. 16. Canals in the United States. (*Reproduced from B. H. Meyer, "History of Transportation in the United States before 1860," Washington,* 1917, *by permission of the Carnegie Institution of Washington.*)

in other sections, especially in the coal-mining region. Much political jobbery and waste of public money resulted.

Maryland was even less successful, for the construction of the Chesapeake and Ohio Canal running beside the Potomac River, revived in 1828 after an earlier failure, was stopped after reaching Cumberland, Md., in 1850, some $11 million having been spent upon it. Its only important traffic was in coal from the mines just beyond Cumberland. Virginia planned

a waterway to the West by way of the James and Kanawha rivers and the section from Richmond to Lynchburg had been completed by 1840; but it never got much farther and proved a financial failure. In New England, Boston talked of constructing a waterway to Albany and to Montreal, but the obstacles proved too great and the city had to await the coming of the railroad to secure connections with the West.

The Atlantic coast states also built a series of canals to facilitate coastwise trade or improved the rivers to aid local traffic. The Delaware and Raritan Canal running northeast across New Jersey, finished in 1838 as a private enterprise, proved fairly successful, being chiefly used by the coal trade. Another canal to carry coal to New York starting in northern New Jersey was built by the Delaware and Hudson Canal Company. In 1830, the Chesapeake and Delaware Canal, receiving both state and Federal aid toward the cost of $2,250,000, was opened and secured a considerable traffic in lumber, grain, and coal coming down the Susquehanna and moving to Baltimore or through this canal to Philadelphia. In the South, the opening of the Dismal Swamp and Albemarle Sound canals enabled craft of light draft to avoid the dangerous ocean passage around Cape Hatteras.

In the West, Ohio, aided by Federal land grants, took the lead in canal building under an elaborate plan that resulted in nearly 800 miles of construction. Two main lines stretched across the state from the Ohio River to Lake Erie. That from Portsmouth to Cleveland, started in 1825, was opened in 1832; that from Cincinnati to Toledo, 10 years later; and numerous branches were built connecting with them. This system was chiefly useful in carrying local produce to market, but it helped to divert some traffic of the Ohio Valley from the Mississippi to the Erie Canal. Meanwhile, the chief obstacle to the use of the Ohio River by large boats was eliminated by the opening of a canal around the falls at Louisville in 1830, which was enlarged in the 1850's. In Indiana the Wabash Canal, 459 miles in length, was begun in 1832 but not finished until 1853, and it never secured much traffic. In Illinois, the Illinois and Michigan Canal connecting Chicago with the navigable waters of the Illinois River was commenced in 1836 with the aid of a Federal land grant but, owing to the state's financial difficulties, it was not completed until 1848, after which it proved fairly successful.

The cheap but important deep waterway provided by the Great Lakes was opened up when Canada completed the Welland Canal around Niagara Falls in 1830 and, by other canals around rapids in the St. Lawrence, secured an outlet to the Atlantic which became a rival to that through the Erie Canal and by 1848 was improved to afford a 9-foot channel. The opening of the Soo Canal, built by Michigan in 1855, completed the system.

The panic of 1837 brought the great era of canal building to an abrupt

end, though some projects already well started were subsequently completed so that by 1850 there were some 3,700 miles of canals in the country. The rapid increase in state debts incurred for this and other purposes, combined with the fact that many canals yielded little revenue, helped to create a crisis in state finance and a reaction against state undertakings generally, leading to many constitutional amendments prohibiting them. Finally, the growing success of the railroad diverted much of the most valuable traffic from the canals and led to the abandonment of some before 1860.

River and Harbor Improvements and the Steamboat. Of far greater importance to most of the Western country than the canals were the waterways of the Mississippi and its tributaries. However, the difficulties of navigation with the consequent heavy losses led to a strong demand for improvements. These, it was urged, should be undertaken by the Federal government, since they were of national importance and, if left to the numerous states, there was no certainty that the whole water route would be improved. So, beginning in 1824, small appropriations were made for this purpose; but up to 1860 the total outlay on the Western river system was less than $4 million. Federal improvements of both rivers and harbors were also made in other sections of the country, and this policy was continued on a moderate scale to 1860.

The introduction of the steamboat, after Fulton made his first successful trip from New York to Albany in 1807, was at first confined to inland or coastal waterways, and there was no region in the world where it was more eagerly welcomed or proved of greater immediate importance than in the Mississippi Valley. There the surplus produce of the region had been loaded on rafts, flatboats, or keelboats and floated down the river. Though the direct cost was low, the trip was slow and the losses heavy. Even so, the estimated receipts of goods from the interior at New Orleans rose from over $4 million in 1805 to nearly $12 million in 1822 when little came by steamboat. Carrying goods upstream was so costly that few could stand it and up to 1817 twenty barges making one trip a year sufficed for the shipments up the river from New Orleans; it took 3 months to reach St. Louis. On the Ohio, a larger number of keelboats plied back and forth, chiefly between Pittsburgh and Louisville. Consequently, until the advent of the steamboat, the regions bordering on the Ohio and the upper Mississippi secured most of their imports from the East.

As an inducement to build steamboats, Louisiana in 1811 granted Fulton a monopoly of this type of navigation on the Mississippi within its boundaries, just as the state of New York had already done within its waters. The "New Orleans" was promptly built and by 1817 the skepticism as to a steamboat's ability to make the trip upstream was dispelled when one ran

from Louisville to New Orleans and back in 41 days. Until then, owing to these doubts and the monopoly granted Fulton, only seven had been built in the West. The questioning of Fulton's patent and the protests against his monopoly were such that after 1820 the monopoly claim was practically abandoned, though it was not until the Supreme Court decision in 1824 of *Gibbons v. Ogden* involving the New York monopoly that such a grant was declared unconstitutional as state interference with interstate commerce.

Thereafter steamboat building and navigation increased rapidly. By 1825, there were 125 steamboats in use; in 1856 over 600. Up to 1856, nearly 2,300 had been built and, though the losses were heavy, the total steamboat tonnage on the Western rivers in 1847 was claimed to exceed that of the whole British Empire. As the steamboats were improved and their charges reduced, they secured an increasing proportion of the downstream traffic as well as practically all of that moving upstream. Whereas boats floating down had required from 20 to 30 days to make the trip of nearly 1,500 miles from Louisville to New Orleans and over 90 days for the return, the steamboats almost at the start made the down trip in 12 days and the return in around 36 days. The latter was soon cut so that by the 1830's the fastest boats were making it in less than 7 days and by the 1850's in under 5 days.

In consequence, many goods formerly brought into the interior from Eastern seaports were carried up the river from New Orleans. Together with other improvements, this enabled the Western people to buy goods brought in from outside at lower prices and to sell their own surplus products at much higher prices than ever before, thus greatly improving their standard of living and stimulating the development of the whole region. Referring to this period one writer says, the steamboat "contributed more than any single cause, perhaps more than all other causes which have grown out of human skill, combined, to advance the prosperity of the West."

On the Great Lakes, the advent of the steamboat was less important, for the conditions there made the use of sailing vessels comparatively easy. The first steamboat there was built on Lake Ontario in 1817, and the next year one was built on Lake Erie. After the opening of the Erie Canal and the influx of settlers into the region bordering on the lakes, the tonnage of vessels on the Great Lakes rose very rapidly and in the 1850's surpassed that on the Mississippi River system, though steamboats constituted only a third of the total.

The Introduction of Railroads. Of far greater importance as an advance in transport facilities for the country as a whole was the introduction of the railroad. In fact few things have done more to revolutionize the economic organization of the more advanced countries of the world during the past century than this first device for providing cheap overland transportation. Today we take the railroad for granted and seldom realize its

contribution to daily living, but barely a century ago wise men doubted its very possibility, and one of the first obstacles that had to be overcome to secure its introduction was to convince people that such a device was practicable.

Rails upon which cars were drawn by horses had existed about English coal mines in the eighteenth century, but the proposal to use steam engines for motive power was met with great skepticism; men considered wise held that it was impossible and some of its advocates were thought insane. An English writer in 1825, picturing the dangers of such a method of travel said,

> It is certainly some consolation to those who are to be whirled at the rate of eighteen or twenty miles an hour by means of a high pressure engine to be told that they are in no danger of being sea sick while on shore, that they are not to be scalded to death or drowned by the bursting of the boiler and that they need not mind being shot by the scattered fragments or dashed in pieces by the flying off or breaking of a wheel. But with all these assurances we should as soon expect the people of Woolwich to suffer themselves to be fired off in one of Congreve's rickochet rockets as to trust themselves to the mercy of such a machine going at such a rate.

Others dwelt on the danger of disease believed due to rapid travel, or the fires that would be set by sparks from the locomotive, or the frightening of the cows which would spoil their milk. Some towns protested that they did not want their peace and quiet disturbed by a railroad. An Ohio school board refused permission to use the schoolhouse to discuss the practicability of railroads saying,

> There is nothing in the Word of God about them. If God had designed that His intelligent creatures should travel at the frightful speed of fifteen miles an hour, by steam, He would have certainly foretold it through His holy prophets. It is a device of Satan to lead immortal souls down to Hell.

Such views deserve relating, not because they seem amusing today, but because they illustrate a problem that is constantly confronting people in connection with all new ideas whether in the field of economics or elsewhere. Conservatism of thought and action has its advantages in preventing mistakes and hasty, unwise innovations, but it involves the danger of checking social progress. Fortunate indeed is the nation whose people possess that inquiring type of mind, ever searching with scientific imagination for the truth, and that freedom from inertia and pure habit in action, which enable them quickly to distinguish the good from the bad and hasten the adoption of that which makes for the common weal. Conditions have helped to develop such characteristics in the American people to a higher degree than in most countries, and this is a social asset the importance of

which must not be overlooked. It must be added, however, that whenever innovations seem likely to injure the economic interests of any group, opposition is certain to develop. In the case of railroads such opposition arose from the owners of inns, stagecoaches, ferries, and canals. Economic history is filled with illustrations of the operation of such obstacles to progress.

To overcome the disbelief in the possibility of railroads, technological improvements had to be devised. Motive power, the chief problem, involved many failures before the steam engine was made practicable. The first locomotives were so heavy that they smashed the track, or they proved unable to draw a load up an appreciable grade, or they ran off the track in going around a curve; and they were constantly breaking down. Hence, at the start, various other sources of motive power were tried such as sails or a device like a handcar; but the horse was the chief reliance and it was found possible thus to draw two cars with fifty-five people 9 miles an hour. However, American ingenuity soon overcame these difficulties; a suitable roadbed, iron rails, and a practicable locomotive were devised; so doubters had to give way before the great enthusiasm for railroads that swept over the country.

There were also the problems of organization, management, and finance. At first it was expected that this new road would be used in the same way as other roads; that is, that each user would employ his own cars and motive power. When the locomotive displaced the horse, it was obvious that the railroad would have to provide the motive power, but on some railroads cars were supplied by individuals for a considerable period. The difficulty of organizing traffic on a single track necessitated centralized control and the use of frequent sidings, especially before the advent of the telegraph. The lack of any comprehensive planning of construction resulted in the adoption of varying gauges in different sections of the country and this, combined with the use of ferries over the larger rivers, necessitated the constant unloading and reloading of long-distance shipments.

Financing of the Railroads. With but few exceptions, the railroads were built by private corporations under state charters. The corporate form of organization was necessary to obtain the relatively large amounts of capital required and to provide the centralized management essential to successful operation. The willingness of private capital to invest in these enterprises was due partly to the fact that many of the earlier roads, being located in regions where population and traffic were most dense, proved financially successful from the start. Also these lines were commonly so short that no very large investment was involved. On the other hand, in the case of the longer roads, particularly those built in the more sparsely populated and less wealthy regions, public aid was commonly sought,

usually in the form of town, city, county, and state subscriptions for the bonds or stock. Some capital was obtained from abroad, where a considerable amount of state bonds was sold up to 1837, and railroad stocks were dealt in on the London stock exchange.

In New England, little state aid was given the railroads outside of a few loans by Massachusetts after 1837. In New York, the series of short railroads that finally completed a line from Albany to Buffalo was built with private capital. The demand for a railroad from New York to Lake Erie through the less populous southern counties of the state that had not benefited from the Erie Canal led to a state advance of over $6 million to the New York and Erie and small loans to several short roads. Yet the towns, cities, and counties subscribed several times this sum for railroad securities. Much the same situation prevailed in Pennsylvania and Maryland where Philadelphia and Baltimore, anxious to secure rail connections with the West, subscribed heavily. Virginia took three-fifths of the stock of many roads and by 1860 had aided them to the extent of $21 million. She also guaranteed some railroad bonds and built a difficult portion of one line over the mountains. Stock subscriptions or guarantees of bonds were common among other Southern states. In Georgia, the state itself built the Western and Atlantic connecting Atlanta and Chattanooga and continued to operate it until 1870.

In the West where distances were greater, population and traffic less dense, and capital scarce, there was at the start more dependence on public support. In 1837, Ohio promised state subscriptions equal to half the private subscriptions to railroad stock. At the same time Indiana, Illinois, and Michigan adopted elaborate plans for internal improvements, including railroads, to be built by the state. After the panic of 1837, they became so financially involved that it was impossible to finish the roads actually begun, and they were finally sold to private companies, often at a heavy loss. In the Southwestern states, financial aid was generously extended, usually in the form of loans, guarantees of bonds, or subscriptions to stock, but the impairment of state credit after 1837 put an effective check on aid from that source, at least until the 1850's.

This in part explains the demand for Federal aid and the resulting series of land grants starting in 1850. To meet constitutional scruples, these grants were made to the states which in turn conveyed them to the railroads, and the latter sold either the land or bonds secured by a mortgage on the land. The form that these grants took has already been described. The first made a grant from the public lands in Illinois, Alabama, and Mississippi for a railroad to run from northern Illinois to Mobile, which now makes up parts of the Illinois Central and the Mobile and Ohio railroads. A few more grants were made, 1852–1853, and a large number, 1857–

1858, when the first period of railroad land grants came to an end. Except for Florida, Alabama, and Michigan, all these grants were in states bordering on the Mississippi River and totaled over 30 million acres.

More indirect forms of aid were often given by various provisions of the charters granted to the railroads by the states. In the earlier period of construction, each charter involved a special act of the legislature, and there was likely to be much undesirable lobbying in connection with its provisions. Some railroads were given a monopoly of the right to build a line in a specified region for a varying period of years to attract investment, but such monopolies were so unpopular that, once the success of railroads was established, few were granted. The people suffered for decades from such a monopoly given to the Camden and Amboy Railroad running across the state of New Jersey. Exemption from taxation for a period of years was a frequent privilege. Occasionally, lotteries were authorized to help raise capital, and a device particularly favored in the South was to allow railroads to do a banking business to aid in their financing, with results that were often disastrous for the banks and the holders of their notes.

The charters also included such restrictions as were deemed necessary to protect the public. Often the rate of dividend was limited, frequently to 10 per cent, which was high enough to attract capital, but resulted in evasions and inefficiency where the road was able to earn more. Sometimes, limits were set on the charges that the roads could make, and many charters permitted state purchase of the road after a specified date. However, as the demand for railroads rose, there was a tendency to impose fewer restrictions to safeguard the public interest.

Progress in the Construction of Railroads. Once the great possibilities of the railroad had been established, all the enthusiasm and energy back of the movement to hasten the country's development eagerly turned to railroad building. The belief that there could not be too many railroads became widespread, and the completion of each important link in the network was celebrated as a great event.

As in the case of canals, the desire of the commercial cities to secure connections with the interior, especially with the West, hastened the construction of many lines. Cities where such connection by canal was impracticable now eagerly turned to the railroad. Savannah, Charleston, Baltimore, Philadelphia, and Boston all became active in building lines to the West. The first important railroad, the Baltimore and Ohio, was started in 1828 but proceeded slowly, and in 1830 the country had only about 23 miles of railroad.

In the course of the following decade, this total was raised to over 2,800 miles (see the map on page 284). The most rapid construction at this time was in the Middle Atlantic states, where the roads were generally short

and afforded little opportunity for long-distance travel. Still, by 1840, it was possible to go by rail and ferry from New York to Washington and from the Potomac to Wilmington, N.C. In 1834, the railroad running westward from Charleston 137 miles to Augusta was the longest in the world under one control. In New England in 1840, the chief lines radiated only a short distance from Boston, and in New York a series of little roads paralleled the Erie Canal from Albany to Syracuse, but there was still no rail connection with the West in any section. In the West, about a dozen lines had been started, but none had attained a length of 100 miles.

In the decade 1840–1850, despite the difficulties in financing due to the depression in the earlier portion, construction more than tripled the railroad mileage of the country, raising it to over 9,000 miles by 1850. The most extensive building was in New England, which section had secured a very fair system by 1850. Boston obtained rail connections with New York City in 1849 and with the West through completion of lines to Albany and to Ogdensburg on the St. Lawrence. In the middle states, though the series of lines from Albany to Lake Erie had been completed, the Erie, the Pennsylvania, and the Baltimore and Ohio still fell short of reaching their western objective points. In the South, the chief gain was the completion of the lines from Charleston and Savannah to Atlanta and the connecting of that city with Chattanooga. In the West, the construction of a line across Ohio from Cincinnati to Sandusky and another across Michigan from Detroit to Lake Michigan were the chief accomplishments. Thus, up to about 1850, the railroads provided no more than the bare beginnings of a system for long-distance and intersectional movement of traffic. It remained for the next generation to witness such an achievement; but the succeeding decade alone did provide the first through rail connections between the sections east of the Mississippi River (see the maps on page 285).

The decade 1850–1860, being one of very general prosperity and marked speculative activity favorable to railroad construction, resulted in tripling the mileage, the total rising to over 30,000 miles—about half the world's total at that time—and around $1 billion was invested in these new lines. Construction was pushed so rapidly and financed by such methods that various Western roads became bankrupt—a development that helped to bring on a sharp but brief panic in 1857 which checked new construction. The difficulties of these roads arose in part because in the less densely populated regions it took time to develop sufficient traffic to afford a fair return on the investment; in part they were due to the unsound practice, which became fairly common at this period, of raising a large proportion of the needed capital by the sale of bonds while the stock was sold at a low price or given to the purchasers of bonds. The interest on the bonds created

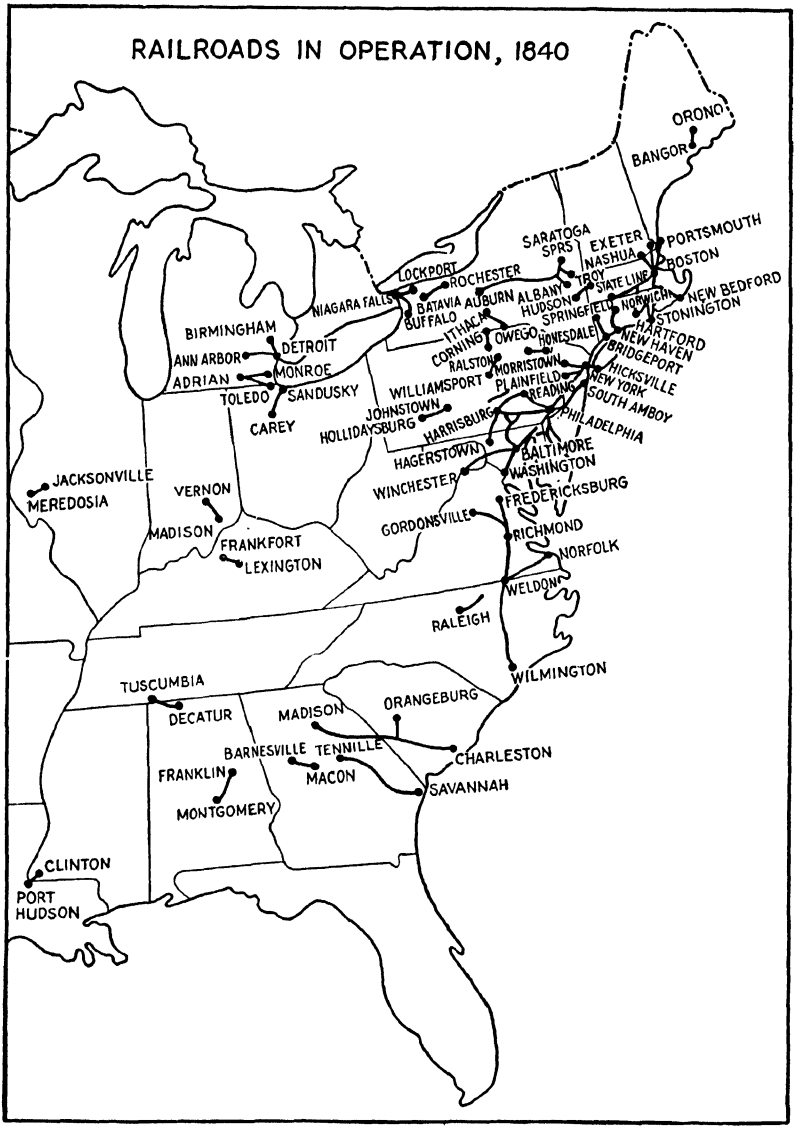
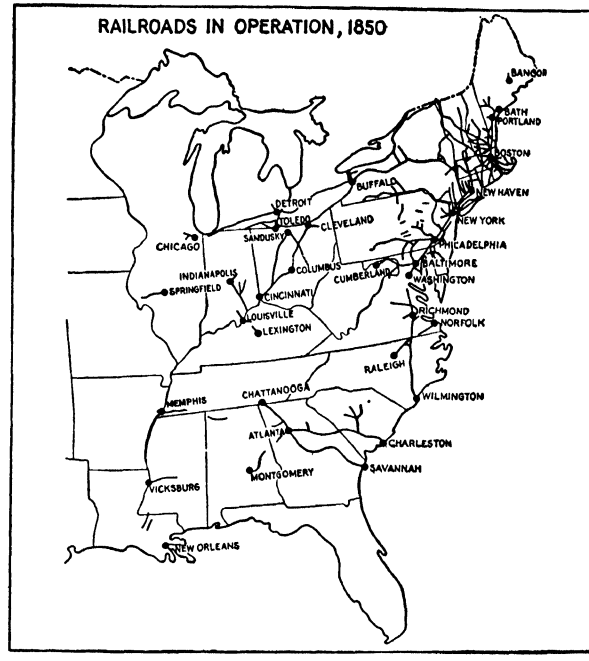


FIG. 17. The railroad system, 1840–1860. (*Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.*)



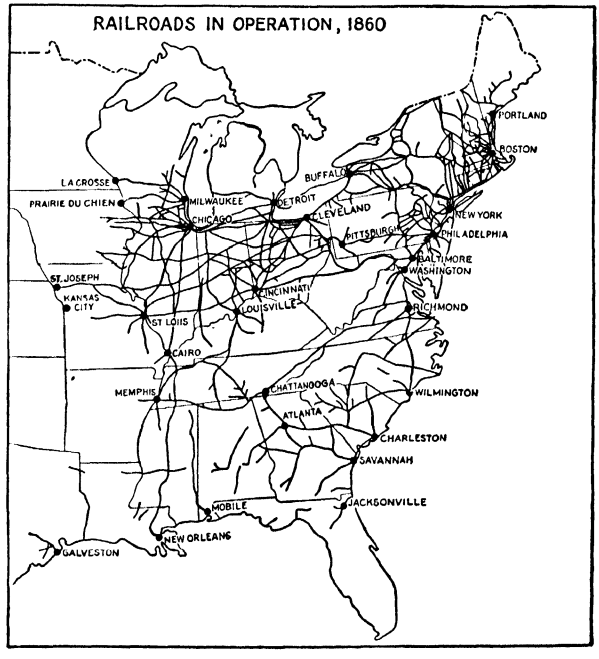


FIG. 17. (*Continued.*)

a heavy fixed charge which proved financially disastrous when the earnings were small.

Much the greater portion of the new construction during this decade was in the old Northwest, and by 1860 all of this region except the northern parts of Michigan and Wisconsin was provided with a fairly satisfactory system. The building of lines running westward from the Mississippi commenced in the middle of the decade, and by 1860 one line had been completed across northern Missouri to St. Joseph while several others extended 100 miles or so into Iowa. In the South, there were only a few short lines west of the Mississippi, but a substantial aid to long-distance traffic was provided by the completion of lines from Mobile and New Orleans to the Ohio River and the connection of Chattanooga by different roads with Richmond, Louisville, and Memphis. Yet, except for these few lines, the South was still very inadequately provided with facilities for the long-distance movement of freight, a fact that later proved a serious handicap for the Confederacy during the Civil War. Many of the Southern roads were built chiefly to connect the upland cotton belt with the leading seaports.

In the North Atlantic states, the construction of this decade helped to fill in gaps, but by far the most important achievement was the completion of several lines linking the railroads of this section with those of the West thus providing for the intersectional movement of rail traffic. In 1851, the Erie reached Lake Erie; in 1852, the Pennsylvania entered Pittsburgh; the next year, the Baltimore and Ohio reached Wheeling, and the completion of a short gap in Ohio, combined with the opening in 1851 of the line from New York to Albany, gave Chicago through rail connections with the East. In 1857 was held the great Railroad Celebration marking the establishment of connections between St. Louis and New York. The difficulties that still attended such long-distance travel can be judged from the fact that this trip involved five changes of cars, two short steamboat trips, and two ferry trips. The lack of a standard-gauge track and of bridges over the larger rivers, combined with the many short lines, still made rail transportation slow and expensive. The consolidation of the eight railroads which made up the line between Albany and Buffalo in 1853 marked the beginning of the movement to develop through trunk railroads, and the Pennsylvania began to extend its system at this time. The completion of the suspension bridge over the Niagara River in 1855 showed how the difficulties presented by the larger streams might be overcome.

Railroad Rates and Traffic. The variations in railroad rates were such that generalizations concerning them are difficult. A tabulation of passenger fares in 1848 indicates that in New England they averaged between 2 and 3 cents a mile, in the Middle Atlantic states around 3½ cents, in the West

just under 4 cents, and in the South between 4 and 5 cents. Freight rates were also lowest in New England, generally between 3½ and 6 cents per ton-mile, about one-third or one-half higher in the West, and still higher in the South. The bulky, less valuable goods were carried at much lower rates than others in order to develop traffic, according to the principle of charging what the traffic would bear. When, despite the doubts of some, experience revealed how much traffic in some commodities could be developed by lowering rates, a more general acceptance of such a policy prevailed. Thus in the 1850's there seems to have been a decline in rates, and many products were carried long distances at from 2 to 3 cents per ton-mile. In fact, under the stress of growing competition as the network of railroads was expanded, some rates were cut so low that agreements to keep up rates began to appear.

In the early days, passenger traffic was the chief source of revenue of most railroads. Throughout this period, it continued to provide a much larger proportion of the operating revenue of railroads than is the case today when it contributes only about one-tenth of the total. It was the passenger traffic and then the less bulky and more valuable freight that the railroads first succeeded in taking away from the water routes. Where no water transport was available, the railroads obtained the bulky freight as well, since transportation over the turnpikes and ordinary dirt roads generally cost from 10 to 20 cents per ton-mile, a rate prohibitive for long-distance shipments. In consequence, as far as bulky freight was concerned, the railroads at this time served chiefly as feeders to the great channels of water transportation: the Mississippi and Ohio river system, the Great Lakes, the canals, and the ocean; in fact, many of the railroads were built for this purpose. For most such traffic, water transport was cheaper than rail, the cost seldom exceeding 1 cent per ton-mile. Thus in 1860, although nine-tenths of the grain received at Chicago came in by rail, practically all that was shipped eastward went out by water.

Still there were a few bulky products moving by rail, cotton and coal being the most important at the start. For upland cotton, the railroad was the only practicable means of transport to the seaboard, and only just before 1860 was any considerable amount of that used in the New England factories shipped all the way by rail. The output of coal rose rapidly, and the railroads secured an increasing proportion of that traffic. As early as 1847, the Reading became known as the great freight road of the country, and its annual tonnage exceeded that on the Erie Canal. The volume of traffic developed enabled it to carry this freight at even lower rates than were possible on the canal. The possibilities of the railroad as a competitor of the canal, thus shown, put a quietus, if that were needed, upon the agitation for more canals and induced the railroads to reduce rates so as to

develop new traffic as well as to compete with the waterways, though the chief successes in this competition were not secured until a later period.

Other Transportation Facilities. With the rapid growth in the size of cities, better means for local transportation were essential and, when introduced, promoted further growth. Omnibus lines were started in New York in 1830; in 1852 the first horse-drawn streetcar line appeared there and its success quickly led to its adoption in other cities.

In 1839, William Harndon started an express business from Boston to various points, and the service, which was chiefly concerned with the carriage of small packages and valuables, proved so popular that numerous companies sprang up to serve other sections. As the business grew to a volume necessitating the use of railroad cars, the express companies made arrangements with the railroads, usually exclusive, for handling the business carried by each road. This development combined with the very rapid consolidation of the smaller companies into large systems which occurred during the 1850's—the most striking early illustration of this characteristic of modern capitalistic industry—soon led to a single company attaining substantial dominance in a given section. In the Northeast and the Northwest, this fell to the American Express Company, in the South to Adams, and in the Far West to Wells Fargo, though there were sections where their services overlapped or independents intervened to provide competition.

As the demand for transport facilities in the Far West arose after the gold discoveries, stagecoach, express, and freighting services were rapidly provided. In 1849, a regular stage line from Independence, Mo., to Santa Fe was started; by 1860, there were three lines, one from New Orleans and two from Missouri, extending to the Pacific coast carrying passengers and mail. The Overland Mail, started in 1858, made the trip of 2,800 miles from St. Louis to San Francisco by the southern route in less than 25 days. In 1860, a speedier service for letters was provided by the Pony Express which, by relays of horseback riders, made the trip from St. Joseph, Mo., to San Francisco in less than 10 days. The charge at the start was $5 a letter. The American Fur Company established a steamboat service on the Missouri River which reached eastern Montana in 1834 and Fort Benton in 1859. Freight bound for the Pacific coast region went by sea, but the western plains and most of the inter-mountain region had to depend on ox-train freight service from Missouri River points. The trip to Denver might take from 4 to 6 weeks and that to Salt Lake over 10 weeks. From 20 to 25 cents per ton-mile was a fairly standard rate, though there were great variations. There were many local freighting companies, and the largest concern, Russell, Majors, and Waddell, using 6,000 teamsters and 45,000 oxen, is supposed to have had an investment of $2 million in 1859.

Improvements in Facilities for Communication. In addition to the cheaper and quicker means of transport provided, there were numerous other developments which improved the facilities for communication. The postal service was extended so that by 1860 there were over 28,000 post offices and over 260,000 miles of post roads. Though less than a third of the miles traveled by the mails was carried on the railroads, the total of over 86,000,000 miles was more than 100 times that of 1791. The increased use of the service is best indicated by the fact that, in spite of much lower postal rates, the gross receipts of the post office were 27 cents per capita, or twenty-seven times the figure for 1791.

Up to 1842, the letter rates on a single sheet were from 6 cents for distances under 30 miles to 25 cents for distances over 400 miles. These rates were so high that numerous devices were used to evade them, and many private individuals undertook to carry letters, despite the efforts of the Post Office to stop the practice as illegal. In 1845, the public demand forced a reduction to 5 cents per half ounce for letters carried less than 300 miles and 10 cents for greater distances; local letters paid 2 cents. In 1851, the letter rate was reduced to 3 cents per half ounce under 300 miles. In 1855, registration of letters was provided for and in 1858 the first letter box for the collection of letters was installed in New York. Local collection and free delivery did not come until 1863 when it was started in about fifty cities.

Another important advance in communication facilities came with the introduction of the telegraph, perfected by Samuel F. B. Morse. Government aid made possible the construction of a line from Baltimore to Washington, opened in 1844. When further government assistance was refused for fear the undertaking would not prove profitable, private initiative took it up, and soon lines were being rapidly built in all directions. By 1850, connections had been made with the larger cities of the West and by October, 1861, aided by a government subsidy, a line had been constructed to San Francisco, thus ending the brief career of the Pony Express. Meanwhile, in 1858, the first transatlantic cable had been laid, but it soon ceased to work, and it was not until 1866 that it was successfully relaid.

The Development of Printing and the Newspaper. In the fields of printing and publishing, as elsewhere, the progress of science and invention furthered the advance in communication facilities. A machine for the manufacture of paper in place of the slow hand process was introduced in Europe in 1803, though not widely adopted in this country until the 1830's. It reduced the direct cost of manufacture to about one-eighth of that under the old process. Rags continued to be used as the chief raw material, and their scarcity remained a handicap until the cheaper wood pulp was adopted after the Civil War. The application of steam power to the printing

press after about 1835, together with the improvement of the press, notably by Robert Hoe and Company who brought out their revolving press in 1846, revolutionized the printing industry. The resulting lowered costs of publishing gave a remarkable impetus to the printing of books, newspapers, and magazines of all types.

Up to the 1830's, the growth of newspapers, though fairly rapid, had not brought marked changes in their general character. Most papers were chiefly concerned with political and party issues, but a few devoted to other special interests were beginning to appear. What has been called the first regular commercial paper was started in Boston in 1795, but it soon broadened its scope and it was not until the 1820's that purely commercial papers appeared elsewhere. The first farmer's paper was started as a monthly in 1819, and in 1828 the first paper devoted to the interests of labor was published while various religious papers were started about the same time. By 1828, some 850 newspapers and periodicals were being published with a total annual issue of around 68 million copies. Only the large cities had daily papers, and these commonly sold for 6 cents a copy.

With the advent of the penny paper in the 1830's, a marked transformation in the character of the daily press was initiated. The first successful penny paper was the *New York Sun*, started in 1833. Within 3 years it attained a daily circulation of 27,000 copies, considerably greater than the total of eleven other New York papers selling at 6 cents a copy. Soon similar penny papers appeared in other cities, and the reading of newspapers among the masses became more widespread than in any other country. As circulation rose, the great possibilities for advertising thus afforded were better appreciated, and the resulting increase in revenue from this source led the publishers to put greater efforts into increasing circulation. To appeal to a larger group of readers, politics became subordinated to providing the news. Though the range of news published by *The New York Herald*, started in 1835, was looked upon just as "yellow" journalism is today, it met with popular support. Among these penny papers, most of which were ardent supporters of democracy, the *New York Tribune*, founded by Horace Greeley in 1841, came to exercise an influence that was nationwide in its scope.

The rapid expansion of the daily newspapers increased the total number to nearly 400 by 1860, at which date there were also nearly 3,000 weeklies; other periodicals brought the whole number to over 4,000. The total copies of these publications was estimated at over 900 million. The printing of books was stimulated in the same way, and the foundation of some of the best-known publishing houses goes back to this period.

Chapter XX

AGRICULTURE AND OTHER EXTRACTIVE INDUSTRIES, 1815–1860

Introduction. In a new and undeveloped country, as has previously been noted, the extractive industries are likely to be the chief lines of economic activity and the basis for the country's industry and commerce. That such was the case in the colonial period has already been shown. In the period now under consideration, this still held true, since the development of the greater portion of the country's area did not really begin until this period. It was during these years that its area was extended to the Pacific, and the Mississippi Valley, one of the largest and richest agricultural regions in the world, was being developed. All this tended to prolong the period during which the extractive industries played such a predominant part in the national economy.

Though the other extractive industries could not begin to compare in importance with agriculture, this was a period when mining experienced a very marked gain, for science and invention were showing new uses for mineral products, particularly iron and coal. The discovery of gold in the newly acquired Far West greatly increased the output of that valuable metal. The forests in the section of the Middle West east of the prairies made possible an extension of the lumbering industry into that region, though the timber resources of the East had not yet been seriously depleted. The supply of fur-bearing animals in the trans-Mississippi region helped to continue the fur trade after these animals had been practically exterminated in the East.

The period was marked also by substantial improvements in the methods of farming and in the economic organization of agriculture. The introduction of better breeds of livestock and plants, greater care to maintain the fertility of the soil, and new farm implements and machinery, together with the rapid shift to commercial farming as one section after another secured cheap transport to distant markets and made specialization possible, all helped to increase the productivity of the nation's chief economic pursuit.

Improved Methods in Agriculture. This period proved remarkable for the numerous and revolutionary improvements made in agricultural implements and machinery. Though their adoption for general use pro-

ceeded slowly, it marked the beginning of a shift in many methods that had been little altered for centuries and was destined to prove a most important factor in the subsequent expansion of the country's agriculture. The plow and the harrow were greatly improved, and machines were soon devised for other tasks that had previously been performed almost entirely by hand or with the aid of simple tools. Drills and seed sowers, cultivators, mowers, reapers, horse rakes, and threshers came in rapid succession and were constantly being improved upon, so that by the 1850's American farm machinery led the world. In a country where labor was relatively scarce and land abundant, these laborsaving devices were of the utmost importance—a fact largely responsible for turning American ingenuity to their development. They made it possible for the farmer to raise much larger crops and lessened the danger of loss at harvesttime by increasing the speed with which crops were gathered, to say nothing of the great reduction in the cost of production.

Another advance came through the greater care given to livestock and the efforts made to improve the various breeds, following the example set by England in the latter part of the eighteenth century. The importation of English Shorthorns, Devons, and Herefords resulted in increasing the amount and improving the quality of beef obtained; it also reduced the period required for the cattle to reach maturity. The herds kept primarily for dairy purposes were improved by bringing in Ayrshires, Guernseys, and Jerseys. In the case of horses, more attention was given to speed and the development of trotters and pacers; for general utility purposes, the Morgan breed from Vermont proved admirably adapted. The breeding of heavy draft horses, aided by the importation of such types as the Percheron, occurred somewhat later. Sheep had always been kept primarily for wool, and the importation of the fine-wooled Spanish merinos and later of the Saxony strain provided the finer grades then in demand. Subsequently, various English breeds better fitted for producing mutton and lamb were obtained. In the case of hogs, the introduction of such breeds as the Suffolk, Essex, Berkshire, and China wrought a great change in the lightweight razor-backed native stock.

The selection of seed also began to receive more attention, and the government not only imported foreign plants and seeds but began a small free distribution of seed. Thus progress was made in obtaining better grades of grains, vegetables, and fruits.

The investigations of Liebig and others provided a better knowledge of the chemistry of the soil and led to more intelligent adaptation of crops to the soil, as well as to efforts to improve the fertility of the land. Manure, previously often left unused, was spread over the fields, and various new fertilizers began to be employed. The use of root crops and a better system

of rotation not only helped to maintain the fertility but obviated the necessity for letting the ground lie fallow or else abandoning its use. Nonetheless, since land was cheap and new land easily obtainable, most farmers paid scant attention to the problems of soil conservation. To European eyes, American methods appeared extremely wasteful, often nothing short of land butchery.

A final factor furthering agricultural progress was the development of various facilities for investigating the farmer's problems and spreading abroad a knowledge of better practices. This was left almost entirely to private individuals or organizations, such as the agricultural societies that began to be formed after the Revolution. The rapid spread of county and state agricultural fairs helped to bring the farmers together, gave them an opportunity to see and to buy the best livestock or the newest implements, and, through the award of prizes, offered an incentive to improve farm products or the household products of the farmer's wife. Similarly, the growth of farmer's newspapers and journals spread information as to better farming methods.

Considering the predominance of agriculture, governmental bodies did surprisingly little to promote better methods. The states promoted a few investigations and issued some reports, but almost nothing was done to teach the subject in the schools, and it was not until 1857 that the first state agricultural college was founded by Michigan. The Federal government did not organize the separate Department of Agriculture until 1862. Previously, its activities in this field had been carried on under the Commissioner of Patents and were mainly confined to the importation of foreign plants or seeds and a small distribution of free seed.

The Economic Organization of Farming. The cheapness of land, combined with the relatively high cost of labor and capital, continued during this period, just as in colonial times, to promote extensive methods of farming. The opening up of the West tended to check the rise or to cause a decline in the value of eastern farm land. In the neighborhood of the larger cities, however, the rise in land values led to a more intensive agriculture, chiefly in the form of market gardening.

Land being so easily obtainable, most farmers owned their land, and it seems improbable that the proportion of tenants was very large, though no statistics are available. Presumably, tenancy was most common in the South. Typically, the tenant could look forward to the time when he had accumulated enough savings to buy a farm of his own, at least with the aid of a mortgage.

For such borrowing as he found necessary, the farmer generally had to depend upon loans obtainable in his immediate locality either from banks or from private individuals. A mortgage on his land or chattels was usually

the only security he had to offer and, in the undeveloped state of the farm mortgage business, there was little market for such investments at any great distance. In the East, the farmer of good standing could ordinarily secure such loans, especially where the banking laws discriminated against loans outside the state. In the rapidly developing West, the scarcity of local capital was largely responsible for the demand for cheap money, easy credit, and reckless banking which, as will later be seen, arose in that region. In the South, the heavy investment of the large plantation owners in land and slaves, often combined with a tendency to live beyond their means, resulted in many becoming heavily burdened with debt, just as in colonial times. Here the practice of mortgaging the crop in advance became common, even among the smaller cotton growers, often with disastrous results if the crop proved unprofitable.

The problem of his labor supply was always a serious one for the farmer. In a country where a competent worker so commonly found it possible to satisfy his ambition to own his farm, few were content to remain hired help for long. At the seasons of the peak load of farm work, such as harvesting, many could be induced to give up their usual occupation for the sake of the temporarily high wages offered. In consequence, most farms were limited in size to tracts such as could be cultivated by the labor available in a single family, and small-scale economic units were the rule. The only important exception was the Southern plantation where slavery provided the needed supply of labor.

The economic organization of agriculture in many sections of the country was almost completely transformed by the widening of the available markets resulting in part from the growth of population but chiefly from the introduction of better facilities for transportation. In consequence, agriculture became much more commercial in character than it had been theretofore; that is, a much larger proportion of the farmer's products was raised for sale in the markets. This enabled the farmer to specialize in the particular crops for which his land was best fitted, thus increasing the productivity of agriculture generally; also, it tended to emphasize the one-crop system of cultivation and, by reducing the number of things produced to supply the needs of the farmer's family, increased the amount that had to be bought, thus making the family less self-sufficing economically. Although this was the dominant tendency, the change often took place slowly and conditions varied greatly as between different crops, different periods, and different regions.

This trend toward commercial agriculture greatly increased the economic risks confronting the farmer. The size of his main cash crop and the price obtained for it might mean prosperity or ruin for him. Market conditions determined the cost of a growing proportion of the goods that he con-

sumed. Thus his fate became increasingly locked up with economic developments in the rest of the world, and his concern with national affairs was greatly broadened.

Another aspect of the trend toward commercial agriculture must also be noted. The prices of farm products are ultimately determined in the markets where they are consumed and these markets may be local, national, or international in character. But the price received by the farmer is reduced by all the costs of transportation, middlemen's services, etc., involved in getting the produce from the farm to these markets. Moreover, in the United States, as compared with most European countries, these costs are generally very high, chiefly because most produce has to be carried far greater distances to reach the ultimate market than is the case in Europe. This is notably true of the main farm staples, many of which are exported, and upon which most farmers have specialized; it is in some measure true even of the small produce carried into the towns and cities and sold for local consumption.

The foregoing explains the American farmer's great interest in the costs of transportation and, during this period, his vigorous demand for internal improvements, especially railroads. At first, anything to get railroads was likely to be approved; later, when the railroads had been obtained, the attitude toward them changed and there arose a persistent demand for lower railroad rates.

Much the same situation determined the farmer's attitude toward the middlemen and their various charges. In this period, when the middlemen's services were generally provided by small individuals or partnerships, the farmer felt that he was in a less unfavorable position for bargaining for the sale of his produce than is the case today when he may have to deal with large corporations and seeks a defense in powerful cooperative marketing organizations.

Since the trend toward commercial agriculture made the fluctuations in prices of farm products so much more important in determining the prosperity of the farmer and his reaction on many economic issues, a knowledge of those fluctuations is essential for an understanding of the history of agriculture during this period. It was not until after 1817 that there was a precipitate drop from the abnormally high level of agricultural prices that had been sustained by the prolonged period of wars since 1793. By 1821 the level had been brought down to that of 1793, a drop from which the farmers suffered severely. Prices remained about this low level for nearly a decade, even reaching a slightly lower point in 1830. A somewhat higher level prevailed through 1834 followed by a rapid rise during the next two years. After the outbreak of the panic of 1837, prices declined substantially for over a year, but early in 1839 had recovered most of the

loss. Then a sudden drop, succeeded by a slower fall up to 1843, brought the level down to the lowest point since the century opened. In fact, there was probably no period during that century when market conditions were so bad as in the early 1840's, unless it was in the middle 1890's. After 1844, aided by the repeal of the British corn laws, the demand created by the Crimean War, and the stimulus of the gold discoveries, a marked advance occurred which by 1855 brought the level to the peak reached in 1836; even after the substantial decline following the panic of 1857, the level remained appreciably above the average for the period. Thus the 15 years preceding 1860 brought general prosperity to the farmers.

The Progress of Agriculture in the North and the West. Although general farming continued to prevail in New England, there was some tendency to give increased attention to dairying and market gardening to supply the growing urban population. Horses continued to be raised, and there was a market expansion in the merino sheep flocks, chiefly in Vermont; after 1840, however, the number of sheep in New England rapidly dwindled. Of the leading grains, this section produced relatively little, oats and corn being the most important. Wheat, never extensively grown, declined further after 1840, owing to an insect pest. In these crops, as well as in pork and beef, New England suffered from the growing competition of the cheaper and richer lands of the West, particularly after about 1840 when these Western products began to be brought to the East in ever-increasing volume. Thereafter the progress of New England agriculture was slow. Many farmers or their sons migrated to the West or sought other pursuits in the cities; those that remained who were not contented with supplying most of the family needs from the farm and selling a small surplus in the local market to obtain cash, turned to dairying or market gardening where Western competition was as yet less felt.

In the middle states, somewhat similar tendencies were in evidence but growth was more marked, aided by the expansion of farming in western New York and Pennsylvania. Wheat continued to be the chief staple, and the output of the fertile Genesee Valley brought a substantial increase in this crop. In 1850, Pennsylvania grew more wheat than any other state, though the Census of 1840 had shown Ohio temporarily in the lead. The per capita crops of oats and rye exceeded those of any other section in 1860, and that of barley was only second to the Pacific coast section. Among livestock, beef cattle and swine received slight attention. Sheep raising spread rapidly in New York and parts of Pennsylvania up to about 1840, but declined thereafter. Dairying steadily rose in importance, and in 1860 New York produced almost twice as much butter and more than twice as much cheese as any other state, and Pennsylvania was second in butter output. The introduction of the cheese factory in the 1850's marked another

step in the transfer of various activities away from the farm. In these states, too, orchard products and in New York the cultivation of hops and grapes received more attention than elsewhere.

In the group of states west of the Alleghenies and north of the Ohio or the Missouri rivers, the great staple products were corn, wheat, hogs, and cattle. Of course, the pioneers and earlier settlers in this region found it necessary to raise a variety of farm products for family use and often engaged in other activities such as lumbering, hunting, and the manufacture of various household products. But as population increased in density and better transport and marketing facilities became available, the tendency to concentrate on the great staples, particularly in the later occupied sections, became more marked. In consequence, by 1860 the wheat crop in each of four of the states in this section exceeded that of Pennsylvania, and the per capita crops of wheat and corn in the group were almost twice those for the whole country and several times those for the New England or middle states. Though the per capita figure for cattle, other than milk cows or working oxen, was a trifle below, and that for swine about 50 per cent greater, than the respective figure for the whole country, both were much greater than the figures for New England or the Middle Atlantic states but lower than those for the South. Evidently this section in the decade or two before 1860 was providing the Northeastern states and also England with a growing proportion of its wheat and pork products.

The growth of these markets proved most fortunate for this section, since otherwise the expansion and specialization in its staple crops would have been impossible. The drop in prices in the early 1840's to one-half or one-third those prevailing in the middle 1830's so that wheat was selling around 50 cents a bushel, corn around 12 cents, or pork and beef around 3 cents a pound, though partly a reaction from the speculative boom, indicated the need for greater markets if expansion along these lines was to continue. In fact, these years of low prices combined with other factors did tend to shift attention to other products than the great staples—at least in some sections.

In Ohio, farming was always more diversified than in the states farther west, owing partly to necessity in the early days and later to the growth of urban population. In this state, sheep were an important element among the livestock. In 1840, Ohio had more sheep than any other state but New York and, from 1850 until the rise of the range industry in the Far West, it was the chief wool-growing state. In other states of this section, farmers turned to sheep raising during the depression, but outside of Ohio and southern Michigan this interest was soon lost. Dairying, however, received more and more attention. In 1860, Ohio was third among all states in the production of butter and Illinois fourth, while Ohio also produced nearly

one-quarter of the country's cheese. By this date also, oats, hay, and orchard crops were of some importance in the section east of the Mississippi. In Ohio, tobacco and grapes could be added to this list.

The sudden growth of population on the Pacific coast, chiefly in California, led to a development of agriculture mainly to supply local needs but partly for export. This furnished a more stable basis for the growth of the region than the uncertainties of gold mining. Wheat, barley, cattle, hides, and wool were the chief products sent out from this section, mostly from California, but the amounts were small. The collapse of the boom market for cattle following the exodus from the mines was disastrous for the big ranchers, and after 1856 many herds were slaughtered for the hides and tallow. The vast region between the settlements along the coast and those on the prairie frontier played no real part in the country's agriculture. The small scattered settlements that existed supplied their own needs as far as possible but nothing more, except for a little wool or a small herd of cattle occasionally sent out from the region of New Mexico.

Southern Agriculture. The agriculture of the Southern states during this period is made particularly interesting because of the opportunity it affords to study the effects of slavery upon economic life and development. However, the use of slave labor was largely concentrated on the great Southern staples, and there were large areas not well adapted to these staples where the proportion of slaves in the total population was relatively small (see the maps on page 301) and a different type of farming prevailed. The dominant type of the agriculture in these different sections must be briefly characterized.

In the Appalachian section the Southern mountaineers were practically self-sufficient families; the economic developments that so altered conditions in the rest of the country swept around them unnoticed and left them among the most backward group of farmers in the country, securing a meager living from their little hill farms much as they had in colonial days. Below this region in the Piedmont, was a section extending to South Carolina and given over to moderate-sized farms that raised a variety of products, but especially wheat, corn, and livestock.

Still farther eastward in Maryland and Virginia—later in North Carolina as well—came the tobacco-growing region where slaves were more numerous. The desirability of using slaves in raising tobacco was being questioned even before the Revolution, for it was seen that, as the fertility of the land declined and more careful methods of cultivation became necessary, the labor of Negro slaves was less economical. However, as the demand for slaves from the cotton belt increased and their price rose, a counteracting factor appeared in the greater profit from the sale of those born into slavery. In Maryland, the number of slaves declined after 1810 and in

Virginia remained about the same after 1830. Whereas the tobacco crop of this section showed little growth before the later 1840's, the higher prices in the 1850's resulted in a doubling of the output. Along with tobacco, this region also raised corn, hogs, and such other products for its own needs as could be grown there.

West of the mountains were the border states of Kentucky and Missouri growing practically no cotton but holding a considerable number of slaves. Just south of them, Tennessee and Arkansas, though having small sections devoted to cotton, generally followed lines of farming similar to those in the border states. Kentucky raised a great variety of products but became noted for the breeding of livestock, particularly horses, for leading all states in the production of hemp and flax, and for developing a new tobacco-growing center which before long rivaled Virginia in its output and, together with the crops of the adjoining states, came to exceed that of the South Atlantic states by 1860. Though less prominent in these specialties, Tennessee and Missouri also raised them along with the more common staples of the region.

The Agriculture of the Lower South. In the lower South, the dominating feature in agricultural development was the increase and westward extension of cotton growing. Starting in 1820, when the total cotton crop was about 160 million pounds, the output was at least doubled in every decade up to 1860, except for that of the 1840's when low prices resulted in an increase of less than one-quarter; in the boom period of the 1830's it was almost trebled. By 1860 this crop exceeded 2,200 million pounds. Though the output of the South Atlantic states steadily rose, that of the states to their west increased much more rapidly; this latter group, though raising barely one-third of the total crop in 1820, outstripped the former group before 1830 and raised three-quarters of the total by 1860.

Though upland cotton became the great staple of this region, there were a few small sections along the seaboard that specialized in other crops. Long-staple sea-island cotton continued to be grown in the limited area suited for it. The same was true of rice, though there was no appreciable increase in the output; on the other hand, the cultivation of indigo was abandoned. A significant development was the rapid growth of the cane sugar industry, though this was practically confined to Louisiana. Being vitally affected by changes in tariff duties and the alternative profits of cotton growing, its advance was fluctuating, but the peak of production during this period was reached in the early 1850's with an output of 450,000 hogsheads, besides the by-product of molasses. Thus, in part, a domestic source of supply was provided for a product almost entirely imported before 1800. By 1830, the output supplied around one-half of the country's consumption. For all three of these minor staples—sea-island cotton, rice,

and sugar—relatively more use was made of slave labor than in the case of upland cotton.

Though the agriculture of the lower South was dominated by these staples, this section also raised most of the food products consumed there. The amount of cotton that anyone could raise was limited by the supply of labor available for picking the crop, since an individual could pick only about half as much as he could raise. Though women and children could be used for this work, it meant that there were seasons when the supply

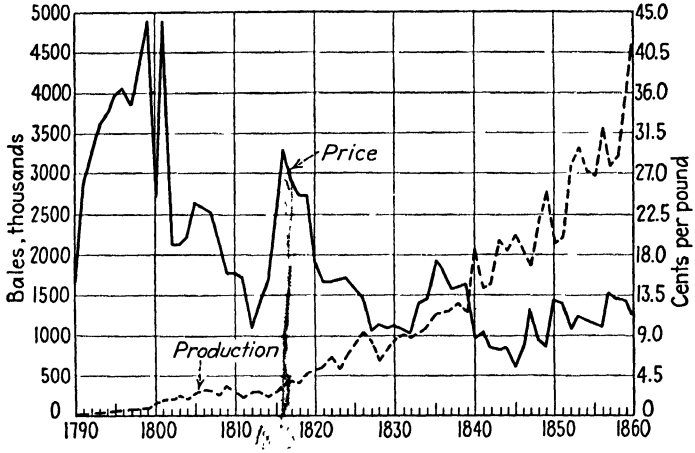


FIG. 18. Production and New York price of cotton, 1790–1860.

of male labor was only partly employed in the cotton fields. To prevent waste from idleness it was common to use such labor for raising corn; thus in many sections it was customary to plant 8 to 10 acres of cotton and 6 to 8 of corn, for every able-bodied slave. Similarly, to help keep all the slaves employed and to use other resources to the fullest extent, hogs, poultry, and some cattle were generally kept and garden products widely raised. Some wheat was grown in the cooler sections, and a few sheep were raised, generally of an inferior grade—a characteristic of much of the Southern livestock. The larger plantations took a further step toward self-sufficiency by maintaining carpenters and other skilled workmen.

The result of this diversification of products, despite the concentration on a few staples in large areas, was that the South as a whole in 1860 had a larger output of corn, peas and beans, and hogs per capita than did the country as a whole. It also had about the same proportion of milk cows, though the per capita butter output was less than half that of the country and almost no cheese was made. The per capita wheat crop fell about one-third below that of the country. Since nearly one-third of the population of

the South consisted of Negro slaves whose chief articles of diet were corn and pork products, it would appear that the South as a whole must have been able to supply most of its own food consumption. What the cotton belt lacked was generally available in the adjoining border states; the lower

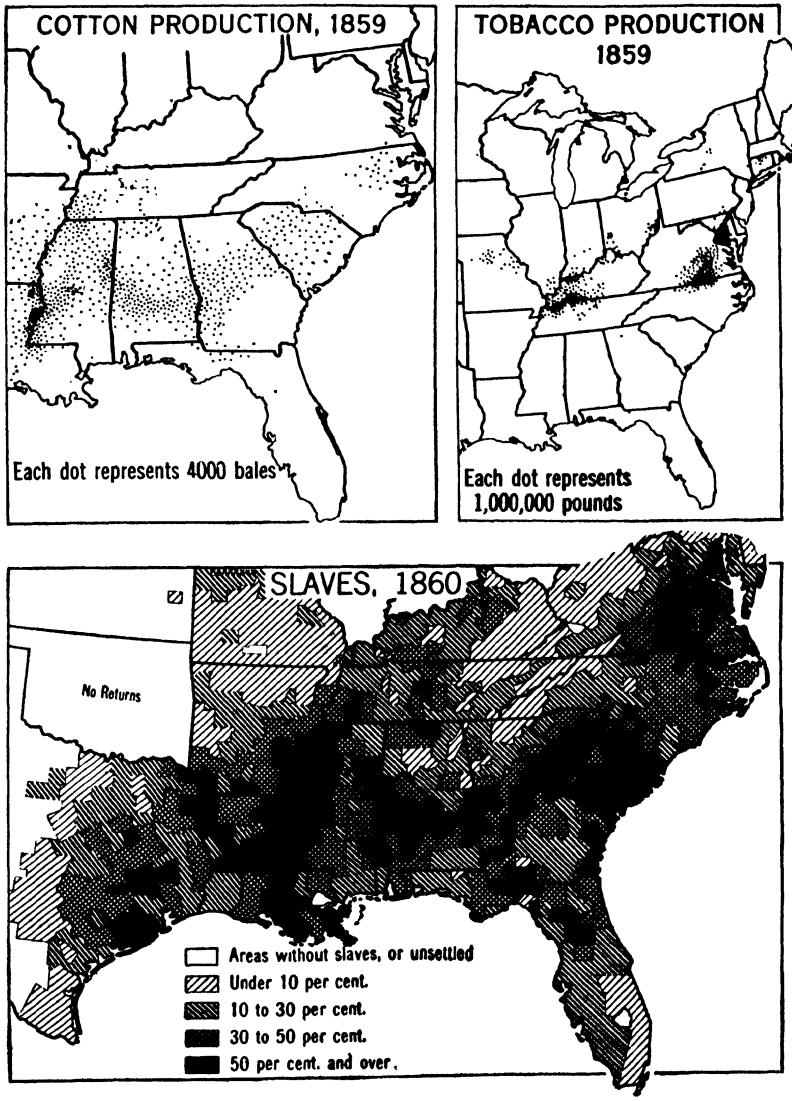


FIG. 19. Cotton and tobacco production and slaves, 1859–1860. (*Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," New York, 1932, by permission of the American Geographical Society of New York.*)

Mississippi region was more dependent on Northern sources. Though some supplies such as wheat, butter, and, for the livestock, hay were brought in from the North, they provided only a very small proportion of the total consumption.

Economic Aspects of Slavery. The questions why slave labor was used in Southern agriculture and what were the economic effects of its use are not easily answered, for many factors are involved and needed data are lacking. Its chief advantage consisted in the certainty of control over a definite supply of labor and such mobility as resulted from being able to shift it from place to place. There was also at least the possibility that it might cost less than free labor, though numerous disadvantages, varying in importance with the purposes for which it was used, lessened this likelihood.

The chief economic disadvantage was the idling, carelessness, and inefficiency typical of all forced labor, and the resulting necessity for costly supervision. Also, most of this labor was suitable for only a few rather simple types of work and could not be shifted easily to other tasks. The original cost of the slave plus the constant outlay for the maintenance of the whole family created a heavy overhead or fixed charge which might prove very burdensome and was always an incentive to increasing output almost regardless of market conditions. The slaveowners often bore costs, such as relief of the poor, which might be shifted to the community in regions of free labor. The difficulty in adjusting output to demand so as to secure a fair profit, which is typical of so many farm products as well as of those turned out by industries using a large amount of fixed specialized capital, was substantially increased wherever slave labor was employed. The result was a succession of periods of high profits and heavy losses, which tended to give such pursuits a highly speculative character.

Finally, it must be noted that the effects of Southern slavery were substantially influenced by the characteristics of the people who were enslaved. A race developed in the tropics was physically better able to endure the climatic conditions in certain sections, notably those devoted to rice and sugar cane, than was the white population. On the other hand, most of these slaves were but a few generations removed from a barbaric life in Africa. Civilization is a slow process under the best of conditions and, in the case of these slaves, though progress took place, the process was often made difficult rather than easy. Most slaves used in the fields were simple, careless, ignorant, and emotional. These traits only increased the inefficiency that marks forced labor of any type. Still, the resulting impotence of the Negro slaves, combined with the fact that they were originally selected from the more docile African tribes, made the problem of their control easier.

The efficient use of slave labor depended on the characteristics of the slaves and the varying conditions faced in producing different kinds of goods or services. Cotton was the crop for which most slave labor was used, and the spread of cotton growing did more than anything else to intrench the hold of slavery on the South after the eighteenth century. The adaptability of Negro slaves for raising this crop was believed to be based on several conditions: (1) The work involved was simple and routine in character; only plain tools were used. (2) Supervision was relatively easy because more labor per acre was used than for many crops. (3) At the peak of the labor demand in picking, practically the whole slave family, young and old, could be employed. (4) Though the methods employed tended to exhaust the soil and so to necessitate either a more careful and varied agriculture, for which slave labor was less adapted, or else a resort to new fertile land, this latter alternative was always available, for the rich alluvial soil of the Mississippi Valley was more fertile than that of the older cotton-growing states and the limit of expansion had not been reached in 1860.

Rice and sugar cane appear to have been staples where the use of slave labor was more advantageous than in the case of cotton. This was due chiefly to the climatic conditions prevailing where these crops were raised, which were particularly trying for the whites, the more so then because of lack of modern medical knowledge. The concentrated use of labor made supervision easy, though the possibilities for expansion of the area under either crop were slight and the sugar plantation offered little chance to use the labor of the whole slave family. When it came to tobacco, more serious doubts as to the advantages of using slaves arose. The amount of labor required per acre was very large, averaging one hand for 2 acres; but the crop needed unusual care in handling and exhausted the soil very rapidly. As new land suited for this crop was limited, soil-conservation methods were very desirable. The fact that slaves were less generally used in newer tobacco-growing regions of the West than in the older regions seems to reflect the growing doubts as to the advantage of their use.

When it came to such a staple as wheat, experience seemed to show that the use of slaves was generally uneconomical. The labor required per acre was small, making supervision difficult; as machinery was introduced, it decreased the amount of labor required and increased the need for skill. In Missouri, the use of slaves in raising wheat was practically abandoned. Though some were still employed in the best wheat fields of Virginia, this may be explained as due to the difficulties in making a shift to free labor and various noneconomic factors. The preponderance of hogs among Southern livestock was due partly to the smaller amount of care required in raising them.

Thus cotton was the great staple chiefly responsible for the expansion of Southern slavery in the nineteenth century. In 1790, there were nearly 700,000 slaves in the country including about 40,000 north of Mason and Dixon's line; by 1830, there were over 2 million; by 1860, nearly 4 million. Probably over three-quarters of this total were on the cotton-growing farms and plantations. Moreover, the periodic fluctuations in the price of slaves corresponded with those in the price of cotton. About 1800, when cotton growing was rapidly increasing, good field hands were selling at from $400 to $600 in older slaveholding states. During the War of 1812, when the export of cotton was checked, the price fell to around $100, but quickly rose after 1815, only to drop as cotton fell in the 1820's. The boom of the 1830's carried the price to over $1,000, but this was almost cut in half in the depression of the early 1840's; the prosperity of the 1850's raised prices to the highest level on record, varying from $1,200 in Virginia to $1,800 in Louisiana.

In the last decade, it was a common rule of thumb that a prime field hand was worth $100 for every cent of the market price of cotton. Artisans sold for about twice as much as prime field hands of the same age; prime women brought a quarter or a fifth less than prime men; boys and girls entering their teens and men and women entering their fifties sold for about half the price of prime hands of either sex. For the period as a whole, the price of slaves tended to rise though the price of cotton tended rather to decline. This was due to the prohibition of imports of slaves after 1808—though some were smuggled—combined with improved methods and the rapid westward expansion of cotton growing. This Western demand kept the price of slaves in that section above that in the older states and was responsible for the growth of the domestic slave trade. It is estimated that some 220,000 slaves were sold out of Virginia to the Southwest between 1830 and 1860, and that the total domestic trade during the 1850's averaged around 80,000 a year with a value of about $59 million.

Though cotton growing was the chief basis of nineteenth-century slavery, it has been questioned whether the use of slaves in raising this crop was really very generally profitable. In the absence of adequate cost-accounting data, no certain answer can be given. Professor Phillips, a most careful student of slavery, has said, "As a matter of fact it was only in special industries, and only in times of special prosperity, that Negro slave labor was of such decided profit as to escape condemnation for its inherent disadvantages." If this view is correct, though L. C. Gray believes it exaggerated,[1] how can the steady growth of slavery be explained? A possible answer is to be found in certain conditions that would tend to prolong

[1] See his "History of Agriculture in the Southern United States to 1860," vol. I, Chap. 20, Washington, 1933.

the use of slaves in cotton growing even if this were not generally profitable. These are important as illustrating how complicated the factors shaping economic development may be.

1. How the difficulty of adjusting output to demand characteristic of so many farm products was increased by the use of slaves has already been noted. This was also aggravated by the heavy indebtedness of many planters and the system of crop liens, since the lenders commonly insisted that the borrower raise cotton. The constant effort of the planter to get more land and more slaves added to these difficulties.

2. The resulting highly speculative character of cotton growing led to consequences typical of speculative enterprise. An overoptimistic attitude prevails; occasional high returns lead people to underestimate the chances of loss, as was seen in the early gold rushes, though the clearest case is provided by the lottery where people will buy tickets well knowing that the chances are against them. In cotton growing, this speculative optimism was illustrated in the 1830's and the 1850's when the prices of land and of slaves were forced up to levels unremunerative for many growers.

3. There were the inertia, clinging to old habits, and ignorance, particularly the lack of cost analysis, that are found in every line of business but are widespread among farmers. The overseers employed by the large planters were more concerned in getting good immediate results than in the long-run success of the plantation. Also, any shift from slave to free labor created problems of the greatest difficulty.

4. There were in addition the noneconomic factors: the fear of the consequences of freeing the slaves, among some the dislike of selling them, and the fact that one's social prestige, though chiefly dependent upon ancestry, might be influenced by the number of slaves owned. All these conditions tended to prolong slavery regardless of its economic efficiency.

General Effects of Slavery, Economic and Social. The reactions of this peculiar institution on the South were so manifold and important that at least some of the most significant must be noted, though it should be said that in many cases Negro slavery was only one of the factors contributing to the results named.

Economically, the South became a highly specialized section devoted almost entirely to agriculture, and its prosperity was dependent largely upon the success of a few great staples. Except for most of its food, it had to rely upon outside sources for manufactured goods, for shipping, and for a market for its staples. Manual labor, being a badge of slavery, was looked down upon; skilled labor was scarce; immigrants for various reasons commonly chose to settle elsewhere. Extravagant living tended to lessen the accumulation of capital by those best able to save; much of what was saved went into land and slaves. This added to the other checks upon the

growth of manufacturing and was one reason why so much of the trade with other regions tended to fall into the hands of outsiders who could advance credit.

Extensive methods of cultivation were aggravated by slavery; they rapidly depleted the soil's fertility and led to the abandonment and waste of much land. The average size of farms was much greater than in the North—in 1860 four-fifths of all the farms in the country of 500 or more acres were in the South—but the density of population was much lower. The sparse and scattered population with the absence of many towns and cities greatly increased the difficulties in providing those institutions and facilities for social contact that are so essential to progress. The provision for education for the masses was notably deficient.

Southern society became highly stratified into three large groups: the slaves, the nonslaveholding whites, and the slaveowners; an appreciable and influential middle class scarcely existed. Yet the slaveholders constituted but a small portion of the white population. In 1860, there were under 400,000 slaveholders in the whole country. Nearly a third of these held one or two slaves; over a third held from three to nine slaves each; and about a quarter from 10 to 49 slaves. Only some 10,600 held 50 or more apiece, their total holdings being over a quarter of all slaves, and among these 2,300 owned 100 or more. About one-quarter of the white families of the South appear to have been slaveowners, and only a very small group had a large interest in this form of property. But this group led by the largest holders constituted the ruling class; economically, socially, and politically, they dominated the South.

Of this class in the lower South Professor Dodd said, "There was never in America a more perfect oligarchy of business men. . . . Nothing of importance could happen in the lower South without their consent. . . . Security of property, loyalty to church, and safety in education were the guarantees of the system." [1] As freedom of discussion concerning slavery was not tolerated, there was little chance that the light of truth would illumine its real effects. An institution that cannot stand the light provided by free discussion is a most dangerous one. The South paid a heavy toll for closing that safety valve of free speech upon which orderly progress so depends. This only strengthened the people in their conviction that slavery was right, morally as well as economically. This belief became a part of their very religion; justification of slavery was said to be found in the Bible; and two denominational churches were split in twain when the Northern element refused to accept such doctrine.

Probably the chief lesson to be learned from a study of Southern slavery is the tremendous influence exercised by inherited ideas, by habits, by

[1] Dodd, W. E., "The Cotton Kingdom," p. 121, New Haven, 1921.

economic interests, and by our whole social environment in shaping our opinions and beliefs. There is no reason for asserting that the beliefs of the South concerning slavery were any less real and sincere than popular opinions on many issues. Economic history is full of illustrations of a similar character. By looking back, it is easy to see how beliefs are thus distorted; the difficult thing is to discern and to counteract such distorting influences in formulating views on the problems of today. Yet, try we must if we would escape such tragic consequences as overwhelmed the South.

General Results of the Expansion of Agriculture. As a result of the developments noted in the different regions, agriculture in 1860 still remained the great economic activity of the country and occupied the chief attention of three-fifths of the population. Though this proportion had declined from about four-fifths in 1820, the country was still essentially a nation of farmers. The census showed over 400 million acres of land included in farms of which over one-third was improved land; the value of farm land and buildings was returned at $6,650 million, or around one-third of the country's wealth. Judged by the value of the output, corn was by far the most important of the staple crops. In 1859, this crop was worth around $500 million, and typically its value was about twice that of the wheat or the cotton or the hay crop which ranked next in importance. Considerably below these in value came oats, potatoes, and tobacco; all other crops were individually relatively unimportant.

Census figures for livestock products at this period are even more uncertain than those for crops, and it must be remembered that, in so far as crops like hay and corn were fed to the livestock, the value of the livestock products involves a duplication. The Census of 1860 put the value of livestock on the farms at $1,100 million and that of those slaughtered at $212 million. Milk, butter, and eggs were the leading live animal products.

Finally, it may be noted that agriculture provided the great bulk of the raw materials used in manufacturing as well as most of the country's exports. The prosperity of this pursuit, by means of which the majority of the people earned their living, largely determined the prosperity of the country.

The Development of Mining Industries. So little mining had been carried on before 1800 that it can fairly be claimed that the real rise of this industry occurred in the period under review; during these years, however, its rate of growth was remarkable. Outside the rise of gold mining in the West, already described, the chief developments were those in coal and iron mining.

As late as 1820, when something over 330,000 tons of coal were mined, but little use had been made of the great coal resources of the country, even such as were known, since the abundant supply of wood met most

of the need for fuel. As the available supply of wood declined in many localities and inventions required new uses for coal, the demand for the latter rose rapidly. At first, its chief use was for domestic heating; after about 1825, it began to be used in steam engines, though seldom in railroad engines before the 1850's; with the introduction of illuminating gas from the 1820's a new use was found, and somewhat later it began to replace charcoal in the manufacture of iron. The construction of railroads and canals, especially in Pennsylvania, greatly stimulated production and the estimated output of the country rose to nearly 2.5 million tons in 1840 and 20 million in 1860 or nearly two-thirds of a ton per capita. Over half of this total was anthracite, all derived from Pennsylvania, which also mined nearly half the soft-coal output. Ohio and Illinois ranked next in order. Some 40,000 workers were employed in the coal mines, and the value of the output was probably under $25 million, or about half that of the gold mines, but much above any other mineral product.

The mining of iron ore during this period was carried on at numerous points near the Appalachian chain from New England to Virginia, but chiefly in Pennsylvania. Farther west small amounts of ore were obtained in Ohio, Kentucky, and Missouri, but the great deposits of the Lake Superior region began to be used only after 1853. Although iron mining grew at a rapid rate, the total output of ore in 1860 was under 3 million long tons and its value less than $8 million.

Among the other basic minerals, there was none with an output of appreciable value. A little copper was secured from the southern Appalachians, but the opening of rich deposits in northern Michigan started only in the late 1840's, though they yielded three-quarters of the country's output, valued at $3.5 million in 1860. Lead was obtained in increasing amounts from Missouri and the district about Galena in Illinois. The earlier dependence on imports for salt was substantially reduced by the rapid rise of the output from the Onondaga district of New York and the slower growth of that from the Ohio Valley region, the latter being marked by persistent efforts to control prices. The petroleum industry was just starting its speculative career in western Pennsylvania in 1859. In addition to other mineral products of less importance, there was some quarrying of stone, marble, slate, and granite, the total value of which was also small.

Practically no silver was mined before 1859, and the total output of gold down to 1848, coming chiefly from the southern Appalachians, was less than $25 million in value. Thus it was not until the flood of gold from California raised the average annual output for the years 1848–1859 to $50 million that this metal became so predominant in the nation's mineral output. Yet, even with this great addition, the direct contribution of the

mining and quarrying industries to the economic life of the country remained relatively small. With something over 100,000 wage earners, these industries held less than 2 per cent of all the gainfully employed in 1860, and the proportion of their contribution to the national income was probably somewhat smaller, while the total gross value of their products was over $100 million. Indirectly, however, as providing raw materials so basic in modern industry as coal and iron, the developments of this period were most important.

The Forest and Other Extractive Industries. The forests throughout the region east of the Great Plains, though an obstacle that had to be removed before cultivation of the land, provided a range of cheap products in wide use. They furnished most of the country's fuel, the chief material used in buildings and ships, and much that was employed in a great variety of manufactured products. At first, local resources supplied the needs of most places, but as these forests were depleted of the best timber resort to more distant sources became necessary. Such sources were usually along the rivers down which the logs could be floated to the mills located on navigable waters. Northern New England and even the South began to supply the coastal cities of the North; western New York and Pennsylvania supplied the Ohio River markets; still later the forests of Michigan and Wisconsin met the needs of the unforested prairie region. Lack of data makes it difficult to estimate this industry's contribution to the national income, especially as so many forest products never reached large markets. It appears highly probable that the value of the forest products was much greater than that of all mineral products and that among the extractive industries forestry ranked second to agriculture, though very far below it.

The commercial fisheries enjoyed a period of steady expansion and fair prosperity from 1816 to 1860. To the catch of cod, formerly by far the most important and centering in New England, was added that of mackerel, and from Connecticut southward that of oysters, herring, and muskaden. A growing proportion of the catch was consumed in the domestic market, and exports, except for a small amount sent to the West Indies, practically ceased. The gross tonnage employed in the cod fishery reached its peak of 136,000 tons about 1860 when the value of the catch was $3 million.

Still larger and more important was the whaling industry which experienced its most rapid growth and greatest prosperity during this period. It was carried on from Massachusetts. As the supply of whales in Atlantic waters became depleted, the whalers turned to the Pacific, which became the chief source of the catch after about 1820. The whaling fleet attained its peak of nearly 200,000 tons and 600 ships in 1858 when the value of its catch was some $8 million. A rapid decline ensued when petroleum provided a cheaper substitute for the main product. On the inland waters of the

country, the only appreciable development of fishing on a commercial basis was on Lakes Erie and Michigan.

None of the other extractive industries was of importance in the national economy. Only the fur trade, chiefly significant for its part in the exploration of the West, can be noted. The practical extermination of the more valuable fur-bearing animals in the East made the West the center of activity during this period, and St. Louis became the headquarters of the trade. The exclusion of foreigners eliminated the rivalry from Canada, and control of the trade was increasingly concentrated in the hands of a few companies such as the Rocky Mountain Fur Company or Astor's American Fur Company. In the disputed Oregon territory, after the loss of Astoria in 1812, British companies dominated. By 1840, with a dwindling supply of furs, the trade was on the decline, though partly checked by the rising demand for the still plentiful buffalo hides.

Chapter XXI

THE GROWTH OF MANUFACTURING, 1815–1860

Introduction. Manufacturing was the general line of economic activity in which the colonies had been least successful, and at the opening of the nineteenth century the country had been more dependent on imports of manufactures than on imports of any other general class of commodities. Building on the growth resulting from the abnormal stimulus received between 1808 and 1815, the rapid expansion of manufacturing in the following period down to 1860 was one of the notable features in the nation's economic development. It was significant not only because of the much greater degree of economic self-sufficiency which the nation thus secured but also because the greater diversification of activities promoted, in one way at least, a more stable economy. Still another important reaction arose from the changing character of manufacturing because of the introduction of the new machinery and factory methods with the consequent rise of the problems characteristic of modern capitalistic industry.

The Chief Causes of Growth. To understand the various factors determining this growth, the same analytical procedure may be used that was employed in explaining the growth of manufacturing in the colonies. The basic factors involved were the same, but new developments were constantly tending to alter the old conditions and the net result was to create a situation more favorable to the growth of manufacturing.

Just as in colonial times, the growth of population was an important factor in the expansion of the many manufacturing industries whose products could not bear the costs of transport overseas. As settlers moved farther westward from tidewater, the heavy cost of overland transport made them even more dependent on local manufactures. As new resources were opened up, notably coal and iron, they provided cheap raw materials for more industries. The greater wealth and the rising standard of living increased the per capita demand for manufactures, both domestic and foreign.

Two of the chief obstacles to the growth of manufacturing in colonial times, the relative scarcity of labor and of capital, still continued to check that growth; but changes taking place were modifying their effects. By far the most important change was the rapid introduction of new technological processes and laborsaving machinery. This not only greatly decreased the

amount of labor required but often made it possible to substitute relatively unskilled labor for the skilled labor which had been particularly scarce. The subsequent great development of American manufacturing has been closely related to the degree of success obtained in introducing machine methods of production. Though this involved greater use of capital, which was also scarce, this was a much less serious disadvantage, since the ratio of capital cost to labor cost in most manufactures is relatively low. Furthermore, during this period the comparative disadvantage of the United States in the cost of capital appears to have been decreased, while that in the cost of labor probably increased since English wage rates rose less than American. Not only was there a rapid accumulation of domestic capital, but foreign capital flowed in more freely than ever before. Also the development of financial institutions and credit facilities together with the introduction of the corporate form of organization made it easier to secure the larger sums of capital that the new methods necessitated.

Lower transportation costs, particularly overland, tended to check the wide dispersion of production in many lines of industry and to further concentration in sections possessing comparative advantages, notably the Northeastern states. However, the advantage of this reduction accrued to imported goods as well. By widening the market area, lower transport costs promoted the larger scale of production essential for the most efficient use of the new machinery.

Among the artificial stimuli employed to promote manufacturing may be mentioned the various forms of local aid, though their effect on general growth must have been slight. Much more influential was the tariff which, as will later be explained, became essentially protective in character.

Changes in the Economic Organization of Manufacturing Industries. The United States largely escaped the violence and the suffering among the workers that attended the Industrial Revolution in England; here the introduction of the factory system was an evolution rather than a revolution. One reason for this was the relatively undeveloped state of many industries in this country; there was far less to be changed. In England, the suffering among the large group of textile workers was most acute; in this country, since most of such cloth as was made was a by-product of farming and a household economy, the transfer of this work to the factory did not involve loss of the main means of livelihood. Another reason was that during the Napoleonic wars many English manufactures suffered from dislocation of their markets while in the United States, chiefly after 1808, manufacturers enjoyed a rapidly expanding market, and it was possible to sell the output of the new factories without decreasing, at least at the start, the output of the households, the handicraft shops, or the small local mills.

The introduction of the new machinery and the factory system took place in different industries and in different sections of the country at varying periods of time and, up to around 1850, proceeded at a rather moderate pace. When it occurred depended on the characteristics of each industry, the time when machinery was invented, and the developments affecting the extent of the market for a given industry's products.

The westward movement of population tended to prolong the period when household manufacturing, generally as a by-product of farm life, was fairly widespread, at least until the coming of the railroads and the cheapening of the factory-made products. Though the manufacture of textiles was one of the first to adopt factory methods, the household output of cloth appears not to have begun to decline until the 1830's. In 1820, it was estimated that two-thirds of the textiles used were made in the homes. In 1822, 1,600 yards were produced by one family. Over 14.5 million yards of cloth were produced in the households of New York state in 1825, but by 1835 the output had fallen to 8.5 million yards. From then on, the cheaper and better factory products rapidly displaced those of the household. The products of flax and linen were the first to be abandoned in favor of the cheaper cotton fabrics. The low cost of machine-spun yarn drove out the homespun product used in household weaving. Though hand weaving continued longer—in fact much machine yarn was put out to be woven in the household—the power loom soon led to its general abandonment.

One after another, the various household manufactures experienced a similar fate, though in most cases it overtook them more slowly and some lingered on, but with steadily declining output, until after 1860. The home manufacture of woolen goods was prolonged by the slower introduction of machine methods and the growing of wool by so many farms. The slaughtering of livestock, the salting or smoking of meat, and the production of such by-products as tallow, soap, and candles on the farm remained common until long after the Civil War; but more and more of the farmer's livestock was sold to local slaughterhouses or shipped off to the rising packing concerns. In the 1850's, the making of butter and cheese began to be shifted to the factories. The farmer had abandoned the making of nails as well as many products of wood long before then. By 1860, the value of manufactures in farm households had fallen to $24 million, reflecting the trend to abandon such lines and concentrate on farming. Greater specialization was the order of the day.

In the case of manufactures formerly turned out by the handicraft shops, the business tended to shift to the factory in lines where machinery was introduced; other products requiring only skill and simple tools were left under control of the craftsman. Thus cabinetworkers and carpenters still found ample demand for their products, though factory-made furniture

was beginning to enter the market. Elias Howe's sewing machine, patented in 1846, could be used in the home or shop as well as in the factory. Although the advantages of better supervision and centralization of the work under one roof did lead to the rise of the ready-made clothing industry—mainly for cheap men's wear—under factory organization in a few cities in the 1850's, many found it cheaper to distribute the material among workers who made it up in their homes. In the boot and shoe industry, where the putting-out system had been extensively developed, one process after another was shifted to the central shop of the merchant entrepreneur. First, the cutting of stock was shifted; when the sewing machine was adapted for upper leatherwork in 1852, that job was shifted; still later the invention of machines for lasting and bottoming and the adoption of steam for power put all the processes under one roof about 1875 and the factory system became supreme. Yet many crafts but slightly affected by the new machinery still remained, such as the custom tailor, the saddlery and harness maker, sheet-metal workers, bakers, coopers, and wagonmakers.

In the group of industries carried on in small mills and plants, though conditions were generally more favorable for the adoption of the factory system, the shift depended, as elsewhere, on numerous factors. Where the product was inexpensive or difficult to transport, extensively used, and the raw material generally available, the industry continued to be carried on in small plants widely scattered over the country and supplying chiefly local needs. Outstanding examples were the milling and lumbering industries; the Census of 1860 returned far more "manufacturing establishments" in these two lines than in any other—almost 20,000 sawmills and 14,000 gristmills. Though most mills supplied only a local market, those enjoying cheap water transportation often produced for distant markets and assumed a much larger scale of operation. Local slaughterhouses were also numerous; somewhat less widely scattered were the small distilleries, breweries, tanneries, forges, printing plants, and brick kilns.

In many of these industries, the small plant or mill was beginning to feel the competition of the larger factory. The slaughtering business assumed a factory organization with the rise of the large packing plants, and Cincinnati became the leading pork-packing center. The little carding and woolen mills that had sprung up to supply local Western needs began to disappear before the competition of Eastern factory products in the 1850's, the small iron furnaces in the East were being shut down, and the products of the larger farm implement factories were supplying many needs formerly met by the local blacksmith and his forge. By 1850, the mill period was on the wane.

The Rise of the Factory System; the Cotton Industry. What has been called "the first modern factory in America" was started at Waltham,

Mass., in 1814 for the manufacture of cotton cloth. Mills for carding and spinning cotton with power-driven machinery had existed for some time, but here power-driven looms for weaving were also introduced, and the whole process of manufacturing cloth was carried on in one plant under a well-organized system of management. The success of this factory soon led to the opening of others at the same place. When more water power was needed, Boston capitalists turned to the Merrimac River and in 1822 erected a factory at Lowell, where by 1834 there were nineteen cotton mills. One of the early examples of a city whose growth was immediately based on manufacturing, Lowell was the predecessor of other cities which sprang up beside the numerous falls along the Merrimac and made its valley one of the great textile-manufacturing districts of the country. This growth, supplemented by that in the Fall River district, enabled Massachusetts about 1830 to deprive Rhode Island of its position as the leading cotton-manufacturing state.

Along with spinning and weaving, went plants for the bleaching, dyeing, printing, and finishing of cloth. Outside of northern New England, these processes were more frequently carried on in separately owned concerns, following the type of organization prevalent in England. In the middle states, particularly about Philadelphia where there were many hand-loom weavers, spinning and weaving were generally carried on in separate establishments of smaller size, commonly owned by individuals or partnerships. In the case of the larger cotton factories of New England, many of which involved an investment of $1 million or more, the corporate form of ownership was common. In fact, it was here that corporations were first frequently used by manufacturing enterprises.

Outside of New England and the Hudson, Mohawk, and Delaware river valleys, the growth of cotton manufacturing was slow. In the South, a few mills spun yarn and less frequently wove cloth, but their output was small. In the West, the growth centered about Pittsburgh, but this was checked after 1850 by Eastern competition.

By 1860, the consumption of cotton had risen to 423 million pounds as compared with some 5 million around 1790. Measured by the amount of capital and labor employed or the net value of the product, cotton manufacturing had become the leading industry in the country. Although far below Great Britain in output, the United States was second to that country. Though still unable to compete with her in the finer grades of cloth, it was able to produce the coarser grades, which were better suited economically to its factory methods, so as to compete successfully in the export markets.

The Woolen and Other Textile Industries. In the woolen manufacture, the introduction of the factory system proceeded more slowly,

partly because of the later development of satisfactory machinery, partly because the industry was more extensive and more firmly intrenched under the old methods than the cotton industry, and partly because the market grew less rapidly. The abnormal stimulus received by this industry from 1808 to 1815 was followed by a period of great difficulties lasting to about 1830, partly because of unusually severe British competition. During these years, the weak concerns were weeded out and such as survived introduced better machinery and more efficient methods so that, when prosperous times returned, the industry was established on a much sounder basis.

The first woolen factory based on the Waltham system was started at Lowell in 1830. Thereafter the industry enjoyed a substantial growth, though subject to marked fluctuations due to frequent tariff changes as well as to the business cycle. A serious difficulty arose from the fact that the domestic output of wool failed to meet consumption needs, especially for the medium and coarser grades. Moreover the duties imposed on imports of raw wool to protect the domestic growers put a burden on the manufacturers which was not always offset by a compensating increase in the duty on imported manufactures. In fact most of the foreign wool consumed in the country entered in the form of finished manufactures. The introduction of some new fabrics in which cotton was mixed with domestic wool furthered the growth of certain branches of the industry while the manufacture of carpets, using coarse imported wool, was greatly aided by the invention of American carpet looms. Native ingenuity also made notable contributions to machinery for carding and knitting, and the manufacture of knit goods, flannels, Negro cloths, felts, and carpets became strongly intrenched branches of the industry. The lack of long combing wool required for the worsted fabrics, which after 1840 were so rapidly displacing the fine wool broadcloth in popular favor, checked any appreciable growth of this branch before 1860.

Wool manufacturing in general did not develop the same degree of concentration under the factory system as did cotton manufacturing. Even in 1860, there remained many scattered small mills, mostly confined to carding and fulling, though some undertook weaving as well. Hand-loom weaving was still common, especially about Philadelphia where the manufacture of fine cloth as well as of carpets was prominent. Even where larger factories dominated, as in New England, the capital investment in concerns was smaller and the corporation less frequent than in the cotton manufacture. Southern New England, where Massachusetts led, was the chief center of wool manufacturing; Pennsylvania came next and New York, where the production of knit goods in the Mohawk Valley was prominent, was third. With an output whose gross value was about $80 million in

1860, the manufacture of wool ranked among the ten largest manufactures in the country.

In the other textile industries, the only significant development was the beginning of the manufacture of a few silk products. The small amount of raw silk raised in the country was briefly increased by the craze in the late 1830's, and a few mills were erected to convert this into thread and various fabrics; but the process required too much labor to be carried on with success. After about 1840, when foreign silk and new machinery began to be employed, a few concerns, chiefly in Connecticut and New Jersey, developed the manufacture of sewing silk, trimmings, and ribbons the gross value of which in 1860 was only $6.5 million. What few manufactures of flax survived the competition of cotton were largely diverted to making linen thread and sailcloth.

Iron and Other Metal Manufactures. The British iron industry had been revolutionized around the last of the eighteenth century by the substitution of coke for charcoal in smelting and the introduction of Cort's invention for puddling and rolling iron, but little effort was made to adopt the new methods in this country. Consequently, after the abnormal stimulus received in the years just preceding 1815, the industry found itself in a most difficult position, since the British products enjoyed a greater comparative advantage than before. To meet the demand for protection, high tariff duties were imposed, ranging from 40 to 100 per cent between 1818 and about 1838. Somewhat aided by these duties, but chiefly by the opening up of new raw material resources and the expanding market, the output of the industry steadily rose, though no faster than imports. The adoption of the new methods proceeded slowly, partly because there was little soft coking coal where most of the industry was located. First, the introduction of puddling and the rolling mill greatly aided in the manufacture of wrought iron. Just before 1840, inventions for using anthracite in smelting were developed and, as this coal was located near the center of production, its use marks the beginning of a new period in the industry's history.

Though charcoal continued to be used in most of the furnaces scattered along the Appalachians from Lake Champlain to the Carolinas, many of which turned out a grade of iron particularly suited for castings and forgings, their output failed to increase, whereas the output smelted with anthracite, chiefly in Pennsylvania, grew rapidly. In 1855 for the first time, the output smelted with anthracite exceeded that made with charcoal, and by 1860 it was nearly twice as great. Though some progress was made in the use of soft coal for smelting, chiefly west of the Alleghenies where excellent coking coal existed, only about one-eighth of the country's iron output was smelted with soft coal in 1860.

By that date, the country was producing 1 million tons of iron, nearly twenty times the estimated output in 1810. Pennsylvania produced more than half of this total, but a growing proportion of its output came from the Pittsburgh region. As early as 1850, Ohio ranked second in production. The use of Lake Superior ore, later so important a factor in the Western development of this industry, began only in the later 1850's. The manufacture of steel had scarcely started, the output being under 12,000 tons.

The adoption of coal for fuel in place of charcoal, along with the increasing use of machinery, made large-scale operations more and more economical, and a larger number of processes was combined in one concern. By 1860, several concerns with an investment of $1 million or more existed, and small producers in the East were abandoning the business. Though a few concerns adopted the corporate form, this was less common even among fairly large enterprises than in the textile industry. Increasingly, the larger concerns tended to locate in urban centers, but in the more remote districts where many plants were still found, the ironmaster exercised almost feudal powers over the little settlement that sprang up about his furnaces.

On the basis of the raw products of the iron industry, numerous more highly finished manufactures were built up. In addition to the long-established casting of pots, kettles, and other homewares, an extensive manufacture of stoves was developed. The railroads created a new and heavy demand for many products. Previous to about 1845, iron rails were imported, the duty being remitted; subsequently, aided by an effective duty and better methods, they began to be made in this country. The introduction of steamboats had a similar effect, though iron was little used in their framework before 1860. The rapidly spreading use of the steam engine for many purposes, together with the adoption of the new machinery, led to an extensive growth of foundries, machine shops, and engine works, though mostly in the North. Many, such as the Baldwin Locomotive Works established in 1832, or those turning out mill machinery or sewing machines, began to specialize in a few lines. The development of the lathe and other precision instruments was an essential factor in the perfection of much of the new machinery. The rise in the per capita consumption of iron from an estimated 5 pounds around 1800 to nearly 120 pounds by 1860 best suggests the growing importance of the different branches of this industry. Imports appear to have supplied only about one-fourth of the consumption in the last of this period.

Southern New England became the chief center of minor metal manufactures turning out such products as small hardware, firearms, clocks, copper products, tinware, and cheap jewelry. It was here in the manufacture of firearms in the first decade of the century that Eli Whitney and Simeon North first introduced the system of interchangeable standardized

parts and mass production. Successfully applied later in the manufacture of clocks, the system quickly spread and became a basic factor in the achievements of American manufacturing. The success with which so-called "American specialties" built on this system were later to invade world markets was foreshadowed by the 1850's in the rising exports of clocks, sewing machines, printing presses, locomotives, and farm machinery.

The Introduction of Factory Methods in Other Lines of Manufacturing. Slowly and with less spectacular results, what may be called "factory methods" spread to other lines of manufacturing. In the printing and publishing business, following the introduction of the steam press and the great growth in the output of newspapers and books, large plants arose. The refining of sugar and the manufacture of the new lines of farm machinery tended to concentrate in a few large factories; the introduction of illuminating gas gave rise to an industry where the individual plant investment was of unusual size. By 1860, at least two concerns in the glass industry were capitalized at $400,000 and employed 400 to 500 workers. Many of the new lines of manufacturing grew up under the factory system, but in the older lines where production had been carried on in small mills, plants, or shops, a steadily growing proportion of the output was being produced by larger concerns operating under methods more nearly resembling those of the factory. "In 1794 Tench Coxe described our manufacturers as farmer craftsmen; in 1825 Zachariah Allen described them as village artificers; and in 1860 they were rapidly becoming city operatives." [1]

Manufacturing in 1860. By 1860, the gross value of manufactured products was around $1,800 million. This was nearly double the figure for 1850 and almost ten times the estimated figure for 1810, though the population was only 4½ times greater than then. Deducting the cost of raw materials used in 1860 gives a net value of some $800 million, which is the best measure of the direct contribution of manufacturing to the national income. The amount of capital invested—a most uncertain figure in census reports—was returned at over $900 million, and the number of hands employed at nearly 1.2 million, a little less than a quarter being females. In the percentage of the total number of gainfully employed manufacturing ranked next to, but far below, agriculture.

The leading branches of manufacture, measured by the net value of the product of each, were cotton goods, iron, sawed lumber, boots and shoes, ready-made clothing, flour and meal, steam engine machinery, woolen and worsted goods, and leather. This value ranged from over $50 million in the case of cotton goods to $26 million in the case of leather. Three-quarters of the net value of all manufactures was turned out in the North

[1] CLARK, V. S., "History of Manufactures in the United States, 1607–1860," p. 463, Washington, 1916.

Atlantic states and only one-tenth in the region south of the Potomac, the Ohio, and the state of Missouri. Though the South was seriously dependent upon outside sources of supply for manufactures, the nation as a whole had substantially reduced its reliance upon imports of such goods.

The Tariff History, 1816–1860. Though the tariff is a subject that is related to the fiscal needs of the government as well as to various industries besides manufacturing, its history can best be treated at this point since the controversies concerning it centered largely about protection for manufactures. During the first period of our tariff history, 1789–1815, the tariff laws had been shaped chiefly by the government's need for revenue, and the desire to provide protection for industry had been a minor consideration. In the second period of our tariff history from 1816 to 1861, which may be called that of moderate protection, this situation was reversed. Though customs duties still continued to provide most of the Federal government's revenue—usually nearly 90 per cent—the actual duties imposed were shaped largely by the demand for protection for various industries. During this period, however, two different trends in tariff legislation are seen, so that the period can be divided into two parts: (1) an upward trend in duties with greater emphasis on protection till 1832, (2) a tendency to lower duties which continued with but a brief interruption, 1842–1846, until 1861 (see the charts on pages 403 and 570).

A constantly recurring feature of our tariff history is the demand for more protection that arises in the period of readjustment and depression following any prolonged war. Conditions during and preceding the War of 1812 had given an abnormal stimulus to manufacturing, but on the return of peace the market was flooded with British goods many of which were produced by the new methods which had seldom been adopted in this country and so undersold the domestic output. The resulting demand for protection led to the Tariff Act of 1816. Though the need for more revenue to meet payments on the war debt was also influential, and more duties were chosen with this end in view than in the succeeding acts, this tariff reflects the beginning of the shift to a policy of protection.

The protective features of the law were most apparent in the duties of 25 per cent, to be reduced to 20 per cent in 1819, levied on most cotton and woolen goods and in those on manufactures of iron, especially rolled bar iron. Duties of 30 per cent were imposed on hats, carriages, paper, leather, and manufactures of leather and wood. There was also a long list of specific duties, that is, a fixed sum per physical unit of a product instead of a percentage on its value known as an ad valorem duty. From the protective point of view, the most important were those on boots, candles, fish, window glass, various iron products, indigo, lead, spirits, and sugar; others were primarily to secure revenue. Few goods were admitted free, and a

duty of 15 per cent was placed on all items not elsewhere specified. The general average of duties, estimated at about 20 per cent, was little higher than before the war and afforded only moderate protection. Hence as business conditions grew worse, a demand for more protection arose.

The resulting Tariff of 1818 was purely protective in character. It postponed the reduction in the duties on cotton and woolen goods until 1826 and considerably increased those on various iron products. The added distress caused by the panic of 1818–1819 led to another effort to increase duties in 1820, which failed through lack of one vote in the Senate; but the agitation was continued and in the Tariff of 1824 duties were once more raised, notably those on textiles, iron, glass, and paper products. To help the farmers, new or higher duties were granted on wool, hemp, wheat and flour, oats, butter, beef and pork, potatoes, etc., though only those on wool and hemp were likely to prove of an advantage.

As conditions improved but slowly in this country and a reaction in England led to more imports disposed of at distress sales, the continued agitation for more protection resulted in the Tariff Act of 1828 which marks the extreme of protectionism during this period. The law also reflected political maneuvering, for those opposed to it inserted duties on various raw materials used in shipbuilding, rum distilling, and the manufactures of coarse wool in the hope they would prove so obnoxious, particularly to New England, that the bill would be defeated. The scheme failed and the bill was passed, but the act became known as the "Tariff of Abominations." The duty on most woolen goods was raised to 45 per cent, and advances were granted on manufactures of iron, cotton, and glass. Hemp, flax, molasses, and wool duties were put at a high level, and advances were granted on indigo, distilled liquors, and slate.

The dislike of this tariff was so general that it was substantially modified by two laws passed in 1830 and another in 1832. These acts removed most of the "abominations," transferred numerous commodities, chiefly of tropical origin and essentially revenue-yielding in character, to the free list since revenue was abundant, and reduced the general level to about that of the Tariff of 1824.

These concessions mark the beginning of the shift to a lower level of duties; but the South was far from satisfied and in November, 1832, a South Carolina convention passed an ordinance nullifying the Tariff of 1832 and began preparations to resist its execution. As President Jackson took a firm stand to enforce the law and uphold the inviolable character of the Union and as other Southern states failed to support South Carolina's extreme position, the move failed, but it made clear that concessions were advisable. Also, the advent of general prosperity and the more firmly established position of many concerns that had survived the trying years

since 1815 combined to make protection appear less essential. Finally, less revenue was needed, since the surplus was large and the national debt was nearly paid off. This combination of circumstances led to what is known as the "Compromise Tariff" of 1833. This law provided for a gradual reduction of all duties in excess of 20 per cent until 1842 when any remaining excess was to be dropped. In addition, worsted goods and certain silk and linen goods were at once transferred to the free list and in 1842 various minor articles.

A shift in the party in power, which brought in the Whigs, led, as is usually the case, to a change in the tariff in 1842, which considerably increased duties, partly because of the distress caused by the depression and partly because of the reappearance of a deficit in the revenue. In 1846, following their return to power, the Democrats promptly passed the Walker Tariff. This act was constructed on a new basis; eight schedules were created lettered from A to H and a fixed ad valorem duty was imposed on the commodities placed in each schedule. The rate on schedule A, which included only distilled spirits, was 100 per cent; on schedule B, which included luxuries, 40 per cent; on schedule C, which applied to the group including manufactures of metal, wool, leather, paper, and glass, the duty was 30 per cent, while cotton goods were placed in the 25 per cent schedule. Other commodities were granted duties of from 5 to 20 per cent, and a final schedule included those admitted free, tea and coffee being the most important.

Thanks to the advent of a decade of rising prices and general prosperity combined with no shift in the party in power and a surplus in the revenue, the country was spared another change in the tariff until 1857. The demand for lower duties because of the rising surplus revenue and its temptation to extravagant expenditures led to little opposition to the reductions then made in the rates applicable to the different schedules. The rate on schedule C, including the chief protected manufactures to which cotton goods were now transferred, was cut to 24 per cent and the free list enlarged. The period thus ended with a very moderate degree of protection, the general level of duties being about 20 per cent.

In 1854, an important reciprocity treaty was made with Canada. In addition to concessions in the fisheries and navigation of inland waters including free navigation of the St. Lawrence for American ships, it provided that products of the farms, forests, and mines of either country were to be admitted into the other free of duty. Though probably of greater advantage to Canada, it resulted in a large increase in the trade between the two countries. A later increase in Canadian duties on manufactured goods was thought to be contrary to the spirit of the treaty and, combined with the opposition of special interests and the animosity aroused during the Civil War, led the United States to denounce the treaty in 1865.

The Tariff Controversy. The dominant attitude of the different sections of the country toward the tariff was determined largely by what each believed to be its economic interest, though party politics were not without influence. From the first, the Middle Atlantic states, particularly Pennsylvania, were the stronghold of the protectionist sentiment. In New England, the strong commercial interests opposed protection, but as manufacturing rose in importance, this opposition was overcome and in the course of the 1820's New England became staunchly protectionist. In the South, the reverse tendency appeared. In 1816, many Southerners voted for the tariff, partly to promote national self-sufficiency, partly in the hope of developing Southern manufacturing, and partly to ensure a greater home market for their cotton. By 1820, there was more doubt as to the chance for developing manufactures; the foreign market seemed ready to absorb the growing cotton crop, and under these conditions it was felt that protective duties on manufactures would injure that section. So the South became the center of the opposition to protection. The states of the Northwest, at first rather inclined to favor protection, later tended to shift this position. Having relatively little manufacturing and enjoying the added protection of heavy transport charges from the coast, this section looked to the duties on its farm products such as wool and hemp and to the market for its foodstuffs provided by the growing industrial population of the East for the chief benefits to be derived from protection. Also it expected that its support of the tariff would secure Eastern support of the internal improvements it wanted. This was the basis of Clay's American System.

Because the tariff has been such a perennial political issue and most people have shown such a poor understanding of the arguments used on either side, a brief statement concerning the more prominent ones—no thorough analysis is possible here—may promote more intelligent social guidance. The fundamental argument against protection was based on the advantages obtained from the greatest freedom of trade which, by furthering specialization of production by each country in the commodities that it was best fitted to produce, enabled each through the free exchange of such products to supply its wants most economically. All other free-trade arguments were of minor importance, but it was also urged at this time that the spread of manufacturing would demoralize those employed in the factories as it was said to be doing in England; it would increase the power of capital; it would favor private and sectional interests and undermine our democracy. The shipping and importing interests claimed that they would be injured by the checks upon foreign trade. The South argued that the duties had the same effect as an export tax on its cotton, since much of the proceeds from its sale was used to buy manufactures increased in price because of the duties; also it was said that our duties would lead to the imposition of retaliatory duties on American exports by foreign

countries. Finally, the question of the constitutionality of such duties was raised.

In favor of protection, much support was secured for the plea that manufacturing should be developed so the nation would not be so dependent upon foreign countries for essential goods in time of war as it had been. Undoubtedly the country had suffered from this deficiency; the validity of the argument depended primarily on noneconomic factors, though the costs involved should be considered. The home-market argument that an industrial population was needed to absorb the farm produce was designed to appeal to the agricultural interests, especially in the West. Yet it is doubtful whether Western farmers received any appreciable benefit from protection. In the case of a few products where imports were required to supplement the domestic supply such as wool, leather, sugar, and hemp, the tariff did increase the prices obtained by the farmer. But the great staple crops were produced in excess of the country's needs and, since the surplus was exported, duties on imports had no power to raise prices. This was the case after about 1840, when the growing industrial population of the Northeast first began to consume much of the West's foodstuffs, as well as before. The vast majority of farmers lost much more because of the higher prices paid for goods that they bought under the protectionist system than they gained from that system.

After about 1840, the argument that the tariff raised the level of wages in the country, later known as the "full-dinner-pail" argument, began to be used. Though this has always made a wide appeal and in some industries under certain conditions may hold true, most economists deny its validity and believe rather that the tariff has tended to lower real wages. Certainly high wages prevailed long before the adoption of protectionism, and they were due to the underlying economic conditions. Among minor arguments were those that the tariff would decrease the unfavorable balance of trade—a relic of old mercantilist ideas—that it would attract labor and capital from Europe, and that the manufactures developed would afford employment for women and children.

The strongest economic argument used was what is called the "infant-industry" argument. This is based on the fact that in the early period of an industry's development, particularly where decreasing costs accompany increasing output, the cost of production is apt to be higher than later on, so it is difficult to compete with the products from a foreign country where the industry is already well developed. Hence, it is argued, if the industry is one where the conditions are such that it can stand on its own feet once the period of infancy has been passed, then a grant of protection during that period may be justified. The soundness of this argument is accepted by most economists; the question is whether the conditions it presupposes

existed at this period. Lack of detailed data prevents a definite answer but the general conditions prevailing, particularly between 1815 and about 1830, provide good ground for believing there were some industries where these conditions did exist.

1. The war conditions had greatly stimulated many lines of manufacturing. The fact that it was not simply a question of starting new industries but of trying to save and develop those already started and so lessen possible losses gave an added reason for lending aid.

2. The greater comparative advantage which England had secured through the more rapid introduction of the new methods might in time be overcome with the aid of American inventive genius and despite British restrictions on the export of machinery.

3. As was pointed out by Friedrich List, when a country was passing from what he called the "agricultural-commercial" stage of development to the agricultural-commercial-manufacturing stage, as was then the case of the United States, it was more difficult to start new manufactures than in one which had already made that transition, as had England.

4. Conditions between 1815 and about 1830 were abnormally difficult for the infant manufactures in this country. The necessity for readjustment to peacetime conditions, the panic of 1819 and its reactions, as well as the conditions in England which intensified British competition, were such as to have ruined many concerns which with some protection were kept alive and on the return of better times could stand alone. Though conditions varied in different industries, there has never been a period in our history when protective duties in general were better justified—chiefly on the basis of the infant-industry argument—than during these trying years. That some of the actual duties were too high and that many were retained longer than changed conditions justified only indicate that the policy was subject to abuse.

The Effects of Protection on Manufacturing. The question as to the actual effect of the tariff on the development of manufacturing raises such complex problems that, in the absence of adequate data, only a few generalizations can be ventured. The duties on raw materials and semifinished goods, though usually stimulating their production, were a burden on the manufacture of finished products unless offset by duties on the latter. In some cases, notably certain branches of the iron manufacture, excessive duties tended to prolong the use of backward methods. Yet there can be no question but that the tariff somewhat hastened the growth of many lines of industry. Whether the greater output thus obtained justified the costs involved is another question. That the tariff was responsible for very much of the manufacturing development during this period is highly improbable. It was most influential during the trying years between 1815 and

1830. Thereafter, despite the downward trend of duties, manufacturing grew still more rapidly and an increasing number of its products could compete in the world's markets. Basically, the general growth was due primarily to changes in the underlying conditions previously described, the most important of which were the introduction of laborsaving machinery and mass production. In this the contributions of American inventors and entrepreneurs were outstanding.

Chapter XXII

LABOR CONDITIONS AND THE LABOR MOVEMENT, 1815–1860

Introduction. The combined effect of the opening up of the West and the rapid economic development of the country in general was such that, in spite of the great increase in population, labor continued to be scarce as compared with conditions in Europe and the economic position of the laborer remained relatively favorable. However, developments in the economic order and the growing importance of certain branches of industry such as mining and manufacturing were causing marked changes in the conditions affecting labor. Thus the increasing specialization and division of labor, combined with the growing scale of production, were tending to develop a group of hired workers who remained such throughout their life—in short, a distinct laboring class such as scarcely existed in colonial times outside the slaves.

The growth of mining, the introduction of railroads, and the transfer of many pursuits from the household or the shop to the factory greatly altered the conditions under which a growing proportion of the laborers worked. Also, the increased mobility of labor and of the products of labor intensified the competition both among laborers and among the employers of labor, and so reacted upon the worker. Finally, all these developments impelled the wage earners to organize for the purpose of improving their condition and so gave rise to the modern labor movement.

The Supply of Labor. Of the chief factors determining the supply of labor of all kinds in a country, which were listed in Chap. VII, that based on the number of inhabitants has already been covered for this period. The others remain to be considered here.

The general willingness of the people to work (excluding the slaves, a group which, having previously been described, will not be considered here), so striking a characteristic of the colonial period, was still notable. Even among the well to do, who had more choice in the matter, this spirit of work and devotion to business prevailed and, with the possible exception of some of the Southern planters, it may be said that there was practically no leisure class in the country. The contrast with Europe, chiefly with the upper classes, is well illustrated by the comments of an acute French observer, Michael Chevalier. Writing in 1835 he says,

Speculation and business, work and action, these, then under various forms, make the exclusive object to which the Americans have devoted themselves, with a zeal that amounts to fanaticism. . . . The manners and customs are altogether those of a working, busy society. . . . [The American] has no conception of living without a profession, even when his family is rich, for he sees nobody about him, not engaged in business. The man of leisure is a variety of the human species, of which the Yankee does not suspect the existence, and he knows that if rich today, his father may be ruined tomorrow. . . . The habits of life are those of an exclusively working people. From the moment he gets up, the American is at his work, and he is engaged in it till the hour of sleep. Pleasure is never permitted to interrupt his business; public affairs only have the right to occupy a few moments. Even mealtime is not for him a period of relaxation, in which his wearied mind seeks repose in the bosom of his friends; it is only a disagreeable interruption of business, an interruption to which he yields because it cannot be avoided, but which he abridges as much as possible.[1]

These observations suggest how the amount of labor obtained from any given population might be increased through longer hours per day and more years per lifetime of work. Just as in colonial times, children were put to work about the household, on the farm, or in the shop as soon as they were capable of such work; for hands were needed and the old Puritan spirit, though modified, still feared the evils of leisure and play. However, as this period progressed, the increasing economic availability of educational facilities enabled a growing number to postpone the day when their children took up work in earnest. Among adults, retirement from work before incapacity overcame them was seldom thought of and vacations were few and far between. The hours of work remained typically long, both among independent workers such as farmers or craftsmen and among those who labored for wages in the factories or elsewhere. From sunrise to sunset was common around 1800; after 1830, some of the skilled city artisans secured a 10-hour day, and after about 1850 factory workers began to obtain a day of from 11 to 12 hours, but in 1860 New York retail clerks worked 13 or more hours. It is probable that the typical working week about 1860 was a little under 70 hours. Yet the pace at which people worked was considerably slower than today; the faster and steadier rate of work imposed with power-driven machinery was not as yet widely felt. In the lower South, the more enervating climate augmented by the debilitating effects of malaria and the hookworm (the existence of the latter being then unknown) tended to decrease both the hours and the pace of work.

As far as skill, technical knowledge, and general intelligence were factors in the labor supply, this period brought a fair amount of progress, chiefly

[1] CHEVALIER, MICHAEL, "Society, Manners and Politics in the United States," pp. 277*ff.*, Boston, 1839.

through the spread of both vocational and general education. Furthermore, the introduction of machinery, much of which could be run by relatively unskilled labor, tended to reduce the demand for skilled artisans in some trades. This also tended further to weaken the system of training under apprenticeship, despite efforts by some trades to prevent it. Although immigration brought in many skilled artisans, most immigrants either went to the farms or supplied the common labor employed in mining, railroad or canal construction, and the factories. When it came to tasks requiring not only skill but patience, great care, and attention to detail or artistic finish, few could be found either able or willing to undertake them. Then as today, such work was more apt to be done abroad.

The Development of Educational Institutions. This period was notable for evolving and laying the basis of the main institutions upon which the present educational system of the country has been built up. Between 1775 and about 1820, progress had been slow, but from then on a great awakening as to the importance of education occurred. (1) In the demand for more generally available educational facilities that then arose, political considerations played the leading part. At this period, the franchise was being rapidly extended to a full manhood basis so that the successful operation of a democratic type of government would depend more than ever upon the education of the people. (2) Of almost equal influence was the demand springing from the masses that free schooling be provided for all as a contribution toward the greater equality of opportunity required in a democratic society. The increased political power acquired by this group with the widening of the franchise forced more general recognition of this demand. (3) Religious objectives, though still in evidence, especially in the founding of denominational colleges, played a far less important role than in colonial days. The constitutional provision for religious freedom, the separation of church and state, and the existing variety of religious beliefs led to an insistence that at least any education supported by public money be nonsectarian in character. The result of these various influences was greater governmental provision for education by supplementing or taking over and broadening in scope one after another of the activities theretofore carried on by private initiative or philanthropic and religious organizations.

The chief accomplishment of this period was the spread of tax-supported, nonsectarian, free public schools. The struggle to secure such schools between 1825 and 1850 evoked bitter antagonisms, but by the latter date the idea had won general acceptance and, outside of the South, had been very widely carried into practice. Many of the earlier state laws simply permitted towns and cities to vote school taxes; later, the tendency was to make local support of elementary schools compulsory and some states

granted financial aid. In the public domain states, the Federal grant of school lands provided assistance.

The control of the public schools was almost entirely in the hands of local authorities, chiefly those of the school districts, for the district system spread from New England over most of the country. This resulted in a very uneven quality of the schools. The first real state board of education, designed to improve standards, was established in 1837 in Massachusetts with Horace Mann as secretary, and he together with Henry Barnard took the lead in promoting educational progress during this period.

In the field of secondary education, signs of progress are seen in the establishment of the first high school in the country in Boston in 1821 and the passage in 1827 of a Massachusetts law requiring places of 500 or more families to maintain high schools. Elsewhere, however, such laws as were passed were generally simply permissive, and the spread of high schools proved very slow. In consequence, most of the secondary education obtainable was provided by the growth of academies which proceeded so rapidly after about 1820 that by 1850 there were over 6,000 in the country. Offering a broader and more practical group of studies than the old Latin grammar schools, chiefly designed to prepare men for college, the academy quickly displaced them in popular favor. Nearly all charged tuition but also received support from endowments, denominational groups, or the state. Many were designed for women, but others, especially in the West, were coeducational. Out of the academies came most of the elementary-school teachers, for normal schools were slow to appear, there being but eighteen in 1860, one-third of them private and the rest state institutions.

The growth of colleges was a marked feature of the period, the number rising from about 24 in 1800 to nearly 250 by 1860. Most colleges owed their origin to the activities of the various religious denominations. Though the training of men for the ministry was much less emphasized, spiritual and moral education was everywhere stressed. The demand that the state should maintain institutions of higher learning also arose, particularly in the West. Many states adopted constitutional provisions for a state university; in some of the older states private institutions were in part or wholly taken over by the state. Yet the growth of state universities both in number and size was slow—there were seventeen in 1860, all but one in the South or the West—but they provided the basis for a development that has since attained great importance. Better provision for professional training was made through the setting up, either within the universities or separately, of schools of theology, law, medicine, technology, dentistry, and pharmacy. In addition women, to whom no college was open in 1800, now secured colleges of their own and, in the less conservative institutions of the West, coeducation was adopted.

Although these remarkable gains put this young country ahead of any important European country except Germany in the provision of schooling for the masses, there was still much to be desired. The facilities provided, especially in the rural districts, were poor and for many inaccessible, notably so in the South, where the Negro was practically excluded from the public schools. The quality of instruction was weak, and the adoption of the better pedagogical methods evolved in Europe only began near the end of the period.

Even when adequate schools were available, it did not follow that all parents would or could send their children to them. Many a child was put to work as soon as he was able to eke out the family income. The few child labor laws offered but slight restrictions, and the first compulsory school-attendance law was that of Massachusetts in 1852. How little schooling was received can be judged from the rough estimate that in 1860 the average American had received only 434 days of schooling or less than 3 school years. Yet this was five times the figure for 1800. Though broad social objectives were the primary considerations back of the educational effort, it is obvious that widespread and very important economic gains would result therefrom.

Occupational Distribution of the Gainfully Employed. The total number of those ten years of age and over "engaged in gainful occupations" rose from nearly 2.9 million in 1820 to over 10.5 million in 1860, when they constituted 46.9 per cent of the total population in that age group as compared with 44.7 per cent in 1820. The distribution of these people among the chief occupations is shown in the accompanying table.[1] This table is valuable not only as suggesting the relative importance of the different

PERCENTAGE OF THE GAINFULLY EMPLOYED IN THE CHIEF OCCUPATIONS

Occupations	1820	1860
Agriculture	71.88	59.70
Manufacturing and mechanic arts	12.15	18.35
Trade and transport	2.50	7.44
Domestic and personal service	10.00	9.52
Professions	2.81	2.90
Mining	0.28	1.60
Lumbering	0.17	0.22
Fishing	0.21	0.28

[1] WHELPTON, P. K., "Occupational Groups in the United States, 1820–1920," *Journal of the American Statistical Association*, vol. 21, p. 340, 1926. These figures, based on a reclassification and revision of census data, in some cases vary from those used elsewhere.

occupations by which people earned a living but also as indicating the shifts that were taking place during this period in the national economy. Judged by absolute figures, the decline in the proportion of the gainfully employed found in agriculture and the rise of that in manufacturing, reflecting the trend toward a better balanced and more self-sufficient national economy, are most striking. However, outside of mining, the greatest rate of increase is found in the proportion engaged in trade and transport. The fact that nearly three times as large a percentage was found in this group in 1860 as in 1820 is probably the most convincing evidence of the great advantages accruing to the national economy through greater specialization and division of labor, for this group, primarily engaged in the production of place, time, and possession, rather than form and utilities, only increased as more specialization and exchange were found advantageous.

The Wages of Labor. Despite the lack of adequate data on wages, some rough generalizations on the subject may be ventured. In general, the trend of money wages for common labor was upward during this period. V. S. Clark concludes that, "after the beginning of the canal and railway building era, about 1820, the normal day's wage of common labor, without board, seldom fell below 75 cents, and ranged from that point to $1.25, according to locality and season." After about 1850, common laborers generally obtained $1 to $1.25 a day (see the chart on page 601). In Massachusetts, farm labor without board rose from about 50 cents around 1800 to $1 a day by 1860. Coal miners averaged between 80 cents and $1.10 a day during the period 1840–1860. The wages of the more skilled artisans and mechanics in the larger cities were nearly double those received by common laborers, and they advanced similarly from between $1.25 and $1.50 a day about 1820 to between $1.50 and $2 or even more by 1860. In the West, wages were higher than in the East; they were lowest in the South. Also, they fluctuated with the business cycle, but the upward general trend gave a level in 1860 about double that around 1800.

The wages of women in the industrial occupations, which they began to enter at this period, were usually a quarter to a half less than those paid to men. In the 1830's, women in the New England textile factories were paid from 35 to 50 cents a day, in a few cases somewhat more; seamstresses in the seaboard cities, where competition was most severe, earned between 25 and 35 cents a day. The low wages paid women were due in part to the small number of occupations then open to them, combined with the fact that these seldom required much skill, and in part to the fact that so many young women entering them remained only a few years or else did not have to depend on their earnings for the entire support of a family.

Though these wages seem low today, the cost of living in those days was also low. How low is suggested by the fact that in the 1830's board and

lodging for men cost from $1.75 to $2.50 a week and for women in the company-owned houses of the textile mills from $1.25 to $1.50 a week. For the period as a whole, wage rates rose much more than prices and so resulted in a substantial gain in real wages. On the other hand, the rather frequent use of the truck system of payment, which was said to increase the cost of goods so bought from 10 to 25 per cent or more, tended to decrease the real wages of many. It must also be remembered that at this time the number of things which the government undertook to provide freely for all and which today make up no small addition to the real income of the working class, such as provision for education, health, recreation, or the arts, was very limited.

The standard of living about 1860 will be described in some detail in a later chapter; here it may be said that the wages received enabled most laborers to provide themselves with what were then counted among the real necessities of life though not with refinements or luxuries. Actual poverty and misery, such as were common in Europe, were relatively rare. The worst cases were found in the large cities, chiefly of the Northern seaboard where the competition of immigrants and the rise of various semi-parasitic industries cut the earnings of some groups like the seamstresses below a subsistence level and drove many to the poorhouse or dependence upon charity. V. S. Clark concludes that in this country the money wages of unskilled labor were one-third to one-half higher than in Great Britain though for skilled artisans the difference was somewhat less, due partly to a lower degree of skill. Certainly the comments of both immigrants and foreign travelers upon conditions in this country leave no room for doubting that, in general, the standard of living of the laboring class was decidedly above that which prevailed in Europe.

In contributing to this result, the chief factors were the abundance of natural resources relative to the laboring population and the great demand, both domestic and foreign, for the raw materials and foodstuffs that these resources yielded. Access to cheap farming land afforded an alternative opportunity to the hired worker and compelled the employer to offer wages and conditions of work that were nearly as attractive. This possibility is described by the Irish traveler, Thomas Mooney, who wrote home, "Remember that if you please, you can, as soon as you get into a regular employment, save the price of an acre and a half of the finest land in the world every week! and in less than a year you will have money enough to start to the west, and take up an eighty acre farm, which will be your own forever."

It was because this alternative was less available to many, such as women, the inefficient, the immigrant, or the factory worker so burdened with a family it was impossible to save, that the low wages of such groups

are to be explained, for even the money to go West and start farming was not always attainable. The money required was considerable; it has been estimated at about $1,000 as a minimum in the 1850's.[1] Yet many must have made the undertaking with far less, and others going West hired themselves out on the farms or in the towns until they could accumulate enough to start farming on a small scale. Western farm land was most important as providing an outlet for the sons of farmers and certain groups of the more prosperous immigrants, notably the Germans and the Scandinavians, than for most urban laborers. By diverting so much of the surplus population of the older farming sections to the West, it decreased the pressure on the Eastern labor markets.

The Condition of the Factory Workers. The largest group working under the factory system was employed in the textile industry, and this group was marked by its relatively high proportion of women and children. In the textile mills of northern New England, most of the workers were drawn from the farmers' daughters of this region. The hours of work were long, usually from 12 to 14 including some allowance for meals, until about 1850 when between 11 and 12 became more common. The work was extremely monotonous and, as the speed of the machines and the number tended by each operator rose, the physical and nervous strain involved became severe. Provisions for the prevention of accidents and for healthful conditions of work were generally neglected. Ventilation was notably bad, especially in the winter. Many of the mill companies in this region erected boardinghouses for their employees and, if the paternalistic rules governing the boarders seemed to show rather more concern for the spiritual and moral than for the physical well-being of the workers, it must be remembered that this was better than the usual neglect of such matters.

Although the men found in these mills were generally permanent employees, the young women—for most of them were from sixteen to twenty-five years of age—seldom remained in the mills for more than a few years; at least until the influx of immigrants about 1850 led to the farmers' daughters being displaced by foreign workers who were commonly more permanent. That the conditions under which these young women worked, all things considered, were not unattractive is best indicated by the numbers that sought employment there. Many regarded this work as an opportunity to escape from the humdrum life of the farm, enjoy more freedom, obtain some of the advantages of city life, secure more education, and accumulate a little savings. The writer Lucy Larcom, who had been one of them herself, said, "For twenty years or more Lowell might have been looked

[1] For details and reference to other articles on the "safety valve" controversy, see C. H. Danhof, "Farm Making Costs and the Safety Valve: 1850–60," *Journal of Political Economy*, vol. 49, pp. 317–360, Chicago, 1941.

upon as a rather select industrial school for young people. The girls there were just such girls as are knocking at the doors of young women's colleges today."

In the textile mills located in the region extending from Rhode Island southward through Pennsylvania, the condition of the workers was less favorable. Here there were fewer farmers' daughters, and the system of hiring workers by the family was common, resulting in a large proportion of young children being employed. Also the mill boardinghouse was absent, and there was less evidence of any interest on the part of the employer in the welfare of his workers. Immigrants made up a larger proportion of the workers, and the women continued work for longer periods. In this section, particularly about Philadelphia, many textile workers continued to work in their homes or small shops on materials supplied by the employers on the putting-out system.

We have much less information about labor conditions in other industries that adopted factory methods. For the most part, such industries were carried on by relatively small concerns where, in spite of the growing number of workers, the relationship between employer and employee continued to be fairly close and the soullessness of the big corporation was less in evidence. In many industries the conditions of labor showed little change from those of the colonial period.

Women and Children in Industry. The opening up of an increasing number of occupations outside of the home to women and children of course completely altered the conditions of work among those entering such occupations. The change that took place with the rise of the textile mills already described recurred on a smaller scale in many other branches of industry. In some industries, much the same sort of work that had previously been done in the home was now done in the factory; in others, the introduction of machinery that required little strength to run or the development of specialized jobs suitable for women opened up new lines of work for both women and children. It has been estimated that in the 1830's there were at least 100 different lines of work open to women; the Census of 1850 showed nearly twice as many. This census indicated that "87 men and 28 women out of every 1,000 persons of each sex in the population over ten years of age were employed in manufacturing industries." In 1860 out of a total of over 1.3 million such employees, over one-fifth were women.

In fact, however, the employment of women in manufacturing was highly concentrated. In 1860, over three-quarters of the total lived in the seaboard states from New Hampshire to Pennsylvania inclusive, and over one-half of the total worked either in the cotton mills or on the manufacture of men's clothing. The next largest groups were in other branches of the

textile industry, and the manufacture of boots and shoes, straw hats, ladies' clothing, millinery, and paper. Outside of the textile industry most of the work was done in small shops or at home. The worst conditions existed in the clothing industry, especially in New York. There earnings were often insufficient to support a single individual, and the sweatshop and overcrowded tenement, where the work was often done, were already in evidence. As the census did not classify the children of either sex separately, it is impossible to tell the number of young girls employed in manufacturing, but it is clear that there must have been many and that they often began work at a tender age. Children of eight or ten were fairly common in the cotton mills; some were only six. Only in the last decade or two of the period was any effort made to exclude the youngest from the factories or to limit the long hours of their work; even then, these laws were seldom effectively enforced.

It was to these children that the shift of work from the home to the factory brought the most undesirable results. Though there is a tendency to assume that conditions in the home were better than was probably the case, especially in the cities, the work there seldom involved the strain of that in the factory, and the separation from constant parental supervision and the earlier contact with the world had results much more serious than in the case of adults. For women the opening up of pursuits outside the home, though often under conditions far from ideal, was not without some advantages. The most important was the increased freedom of action resulting from the chance to earn their own living and secure economic independence, for economic independence is one of the most essential means for promoting self-development. Though the variety of occupations open in other fields as well as in manufacturing was still very narrow and the wages so low as to leave little above the outlay for necessities for self-development, this change at least meant that women had an alternative to the circumscribed work and life at home, and better use was made of their varied capacities. That so many chose this alternative indicates that this development meant progress for the sex.

Changes in the Economic Position of the Laborer. The agelong trend toward greater division of labor and specialization of functions in the economic order was given a marked impetus by nineteenth-century developments. Inevitably this had many reactions on the economic position of the laborer. Specialization tended to increase the physical productivity of the laborer and so made higher wages possible, but competition tended to shift most of the gain to the consumer, including laborers in general, in the form of lower prices. Specialization not only increased the monotony and strain of work but in many crafts decreased the amount of skill and training required and so made it easier to shift from one job to

another. The resulting increased mobility of labor accentuated the competition between groups of workers in the same or different occupations.

In colonial days, a worker could commonly expect to pass through the stages of apprentice and journeyman to become an independent master craftsman who performed the functions of laborer, employer, capitalist, merchant, and entrepreneur all at once. Thus a distinct class of hired laborers scarcely existed. But as the small plant or craft shop grew to a large one or was transformed into a factory, these functions were specialized and came to be carried on by separate groups of individuals. As the size of business enterprises rose, more and more workers were destined to remain hired employees throughout their lives, the gap between employer and employee was widened, the relations between the two groups became more impersonal, and a distinct laboring class arose. In many occupations the change came slowly and it was never universal, but it was fraught with momentous consequences both economic and social.

One result was to weaken the power of the worker in bargaining with a large employer over his wages. The employer was seldom dependent upon the services of any one worker, specialization made it easier to train new men for most jobs, and it was also easier to secure workers from other localities or even from other countries than formerly. Though it was also easier for the worker to move elsewhere, various factors such as ignorance of openings, the expense involved, or local family ties were obstacles for many.

The better facilities for transportation and communication which, by widening the labor market and augmenting the mobility of labor, accentuated the direct competition among workers, also intensified this competition in an indirect but powerful manner by widening the market for the products of labor. The products made in one locality began to compete with those turned out in an ever-widening circle of other localities. Hence, when an employer found that his labor costs, commonly the biggest item in total costs, were higher than those of a competitor in some other locality so that he was being undersold, he was very likely to try all the harder to reduce wages. On the other hand, competition among employers seeking labor tended to check a decline or in cases to cause a rise in wages. In general, the widening and better organization of the labor market resulted in greater standardization of wages and working conditions throughout the country.

The Beginnings of the Organized Labor Movement. These reactions upon the economic position of the worker furnish the chief explanation for the efforts that certain groups began to make to strengthen that position by the greater power obtainable through organized action. This led in the decade of the 1820's to the beginning of the labor movement in this country.

At first, the efforts at organization were confined largely to the cities where competition was most severe and where the number of workers in a given trade was large enough to give the unions some semblance of power. Also it was among the more skilled artisans of the trades rather than among the factory workers or common laborers that these efforts were most frequent and successful, such as those among the building trades, printers, tailors, coopers, shoemakers, shipyard workers, cabinetmakers, combmakers, and weavers. This was due in part to the higher intelligence of these groups, but still more to their being permanent followers of the trade and, being in a trade where acquired skill was necessary, they were less subject to competition from other workers and less easily replaced. Though artisans took the lead, sharp economic class lines were not drawn, and often small employers, farmers, and social reformers united with the workers; the group represented rather the interests of the poor, though those of hired labor predominated. This was reflected in the more common demands that were advanced. Higher wages and shorter hours were generally at the forefront, but the demands often included free, tax-supported public schools, free public land, abolition of imprisonment for debt, modification of the militia system, mechanics' lien laws, and elimination of what were looked upon as monopolies in the field of banking.

A brief rise in prices served to crystallize the current discontent and led to a series of strikes for higher wages and shorter hours in 1824–1825. The strike of the Boston carpenters at this time, though unsuccessful, was the first important strike for the 10-hour day. This brief outbreak was preliminary to the greater activities commencing in 1827, which Professor Commons calls the real beginning of the American labor movement. This is marked by the assumption of a more aggressive attitude on the part of labor, since such unions as had existed theretofore had had more of the character of benefit societies. In that year, the journeymen carpenters of Philadelphia, who had been working from sunrise to sunset, struck for a 10-hour day and were joined by the painters, glaziers, and bricklayers. They organized the Mechanics' Union of Trade Associations which eventually included fifteen associations. This uniting of different trades to further their common interests marked a step in advance. The next year the *Mechanics' Free Press*, the first labor paper, was started, and the Workingmen's party was organized to enter local politics and fight for greater social and political equality. In this year the first recorded strike of factory hands occurred at Paterson, N.J., where the militia was called out to maintain peace.

The movement soon spread to New York, New England, and Ohio Valley cities. In New York, after successfully opposing efforts to abolish the 10-hour day, internal dissensions arose over varying programs advocated

by such radical reformers as Skidmore, Evans, Owen, and Frances Wright; after entering state and local politics, the movement disintegrated. In Boston, following another failure of the carpenters to secure the 10-hour day, the New England Association of Farmers, Mechanics, and Other Workingmen was organized, which, though always weak, held conventions for 3 years before it disappeared. Its heterogeneous membership soon resulted in subordinating the interests of labor to politics. The disintegration following the entrance of these unstable organizations into politics caused a brief lull in the labor movement, but a rapid rise in prices led to another series of strikes and renewed efforts at organization, 1833–1836. Abandoned local unions were revived, new unions organized in smaller cities, and new trades enlisted in the movement. The discontent was such that even unorganized workers often struck, and at least 173 strikes are recorded during these years.

Progress was made in getting local unions to unite in a city association; more than a dozen such sprang up by 1836 in Western as well as in seaboard cities. In 1833, Ely Moore, the first president of the New York union, was elected to Congress. Thus by united action, supporting one another, starting labor papers, and gaining some political power, greater success was obtained.

Another step forward was the organization of national trade-unions, a move made necessary by the widening of the market and the need for standardizing wages and working conditions in a trade so as to lessen the pressure to lower wages. In the few trades that attempted this, such as the cordwainers, printers, carpenters, combmakers, and hand loom weavers, the result was a weak organization which did little more than hold a convention where discussion rather than action dominated. A final step toward greater unity was the calling of a series of national conventions of the National Trades' Union initiated in 1834. At the 1836 convention there were thirty-five delegates, and it was claimed that the number of union men was then 300,000. These conventions served primarily to bring labor leaders from different cities and trades together and to promote agitation, but half a century was to pass before an effective national organization was secured.

During the long depression following the panic of 1837, labor was put on the defensive and, except for a few strong local unions, labor organizations disappeared. Yet the activities of the preceding decade had not been in vain; though some of the gains then made were lost during the depression, many proved permanent. Thus the militia system had been generally modified so that it was less burdensome for the workingman, mechanics' lien laws had been passed to protect his earned wages, and imprisonment for debt had been commonly abolished. Although less substantial results

had been secured in the cases of the demand for free land and free public schools at this date, progress had been made and the agitation started, aided by social reformers, soon yielded abundant fruit. Another gain soon came through the establishment of the legality of trade-unions.

Evidence of the growing power of organized labor is provided by the rise of employers' associations primarily designed to oppose the unions. Also employers appealed to the courts to stop various union activities, particularly the efforts to secure the closed shop. In several of the earlier cases, such action on the part of the unions was condemned by the courts as a conspiracy—hence known as "the conspiracy cases"—and doubts as to the legality of unions were thus created. In 1842, a Massachusetts decision held that unions were not illegal per se though they might use illegal methods, and declared that a strike for a closed shop, if peacefully conducted, was not illegal. Thereafter the legal right of labor to organize was generally recognized.

Finally, labor had gained through its experiences and even its failures. The advantages of united action and national organization were better recognized; there was a growing sense of power, furthered by the extension of franchise rights. Even though most attempts to enter politics ended in dissension or disintegration of the unions, still the major political parties had to recognize the rising influence of the laboring class, as Tammany did in New York after 1837, and frequently granted some concessions to its demands, all of which was but one phase of the democratic spirit of the period.

The Agitation of the Forties. Though the worst years of the depression had been passed by 1844, recovery was slow and real prosperity scarcely returned much before 1850. The widespread discontent and social unrest common to such prolonged depressions and the desire to secure relief led to much agitation in favor of all sorts of economic reforms. The labor movement of the 1840's was largely colored by this and the decade has consequently been called the "hot-air period."

There were three main general reform movements with which labor became involved at this time. One, known as the "associationist movement" advocated the formation of associations or phalanxes along lines suggested by the Frenchman Fourier. These essentially communistic groups were designed to harmonize all conflicting individual or class interests and secure "universal justice" by working and living together. Their chief advocate was Albert Brisbane, and Horace Greeley became greatly interested in them. In all, some forty phalanxes were organized, mostly in the early 1840's. Brook Farm near Boston, with which a number of New England's literary men became associated, was the most famous; but all were small and short-lived, unable to harmonize the members' individualistic

tendencies. There were also some efforts to establish communities of the paternalistic socialism type such as Robert Owen had started at New Harmony, Ind., in 1826, but little resulted therefrom.

The second reform movement was led by George H. Evans, long an advocate of agrarianism and more particularly of equal distribution of land. Though at this period his program was less radical, he emphasized the class struggle and actively sought the support of laborers, knowing their interest in free land. Evans's agitation helped augment the demand for the Homestead law, but the workers turned to leaders more interested in their other demands.

The third reform movement stressed the organization of producer and consumer cooperative associations. Many disillusioned associationists turned to this idea. The consumers' cooperatives were chiefly confined to New England, where over 400 were started, but producers' cooperatives were formed by craftsmen in various large cities. Few of either type lasted long, and the results were so slight that the workers lost interest in the movement. Although considerable energy was being dissipated in such reforms, some gains were obtained along lines more immediately beneficial to the workers.

Chief among these was the shorter working day, the agitation for which also secured the support of many social reformers. The movement was most active in New England, and the first state 10-hour law was enacted by New Hampshire in 1847. Though this fixed 10 hours as the legal day's work, the effect was practically nullified by the provision that the worker, who found he had little choice in the matter, could contract for longer hours. The Maine Act of 1848 went further by prohibiting the employment of children under sixteen for more than 10 hours a day. A Pennsylvania Act of 1848 applied only to half a dozen branches of manufacturing. The Ohio 10-hour law of 1852 had the usual special contract exception but prohibited the employment of children under fourteen for a longer period. A similar Rhode Island Act of 1853 prohibited the employment of children from twelve to fifteen years of age for more than 11 hours. The same year California made 10 hours the legal day. Though the Massachusetts legislature refused to act, the continued agitation there led to voluntary reductions to an 11-hour working day in the factories in 1853. Connecticut passed a 10-hour law for mechanical factory labor with the contract clause in 1855, but a similar New York law applied only on public works. The Southern states took no action aside from an unimportant law in Georgia. Despite the weak laws obtained, the agitation, by arousing public opinion, did hasten the shift to shorter working hours.

Otherwise this decade brought little in the form of direct gain to the laboring class as such. Few unions were able to maintain any semblance

of power, though some that had disintegrated were later revived. Strikes occurred, often among unorganized workers, but they were mainly defensive in character. Labor was represented in the various industrial congresses about 1850, but these were more concerned with political action to promote some general social reform than the immediate interests of the workers. In the reaction against repeated disappointments and failures, organized labor in the following decade cast aside programs of sweeping reform, shunned political alliances, limited union membership to the wage earner, and concentrated its activities on demands that would most improve his position.

The Beginning of Modern Unionism in the Fifties. At the same time that the general prosperity of the 1850's created conditions favorable to the labor movement, the rising cost of living and the competition of the great influx of immigrants gave workers an added incentive to organize and to take more aggressive action. Also, past experience had taught them that their action must be more practical and businesslike in character.

By this time, the workers were beginning to accept as inevitable the growth of capitalistic industry with its altered relationship of employer and employee; they therefore abandoned the hope of returning to the conditions of the craft workshops and forsook the programs of sweeping reforms that proved so impracticable. This led them to confine membership in their unions to hired laborers and to adopt the most practical measures for strengthening the unions and trying to enforce their demands. Initiation fees, dues, and strike benefit funds were collected on a much larger scale than ever before; rules limiting the number of apprentices employed were generally demanded; the importance of securing a standard minimum wage and fixing the time and method of wage payments was recognized; the closed shop was vigorously fought for; collective bargaining began to appear; and the offensive use of the boycott and strike was frequent. In short the objectives, methods, and practices of organized labor had by this time become such as are common today.

Higher wages and shorter hours were the objectives most stressed at this time. The rapid rise in prices after 1852 led to numerous strikes in 1853–1854, most of which were successful. It is said there was then scarcely a trade in the Eastern cities without a union and wages were from 20 to 25 per cent above the level in 1850. Although many unions went to pieces later, especially after the sharp financial panic of 1857, there was no such disastrous loss of strength or members as after 1837. The struggle for shorter hours so far succeeded that the 10-hour day became general among the crafts in the larger cities, though longer hours were common in mills and factories; after 1860 it was an 8-hour rather than a 10-hour day that the workers began to demand.

The decade was notable not only for the organization of local unions in many new trades but also for the establishment of the first national trade-unions that proved enduring. The printers, whose earlier attempt at this had soon failed, formed a national Typographical Union in 1852; the Hat Finishers' National Association was organized in 1854, and the National Union of Iron Moulders in 1859. Other trades held conventions or formed national organizations, but the latter soon disappeared. In no instance, unless we except the typographers, did these nationals exercise any appreciable power; it was not until the next decade that they became an appreciable factor in the labor movement. At this time, the local unions, chiefly found in the skilled trades in the larger cities and exercising only local influence, provided the real strength of the labor movement.

Chapter XXIII

MARKETS AND TRADE, DOMESTIC AND FOREIGN, 1815–1860

Introduction. The general conditions that determine the character and extent of a country's trade were outlined in Chap. VIII. The chief changes among these conditions in the period 1815–1860 were those affecting transportation and communication, especially the introduction of the railroad, previously described. These, together with the growth of the country and its population, resulted in an enormous expansion of trade both domestic and foreign, though the growth of the former was much more marked than that of the latter, resulting in a decrease in the relative importance of foreign trade. This growth not only necessitated an expansion of marketing facilities but made it economically advantageous to introduce far more division of labor and specialization in the marketing organization than ever before. The resulting economies in marketing in turn stimulated the growth of trade.

It should be noted, however, that changes took place with such rapidity that, even in a given section of the country, a decade or two might see the marketing organization almost revolutionized. Furthermore, conditions varied so in different sections that there existed at the same time all the gradations in marketing methods from those of the isolated frontier to those of the great seaport connected by railroad and steamship with most of the world. Finally, owing to the scarcity of data and inadequate study of the evolution of domestic trade and marketing methods, only impressionistic generalizations concerning this phase of our economic history are now possible.

Trade on the Frontier. Along the westward-moving frontier, two fairly distinct types of trading could be found. Where the early settlers were engaged in general farming and lacked water transport to a market, most of their needs were provided for by their own efforts, but some things such as ammunition, metal utensils and tools, medicinal drugs, paper, salt, and perhaps tea, coffee, and sugar had to be obtained from outside sources. To pay for these, a few products were gathered, commonly those having considerable value in proportion to their weight or bulk, like furs, potash and pearlash, whisky, or something peculiar to the vicinity and carried, probably on horseback, to the nearest country store to be traded for the re-

quired supplies. If near water transport so that the use of a cart or wagon was practicable, the settler was likely to raise a larger amount of produce for sale and more specialization in bulky staples was possible. His surplus produce was sold to a storekeeper or trader located on the waterway, and the proceeds were used to buy supplies and perhaps provide a small residue to pay taxes and other debts, or for savings. Sometimes, as in the Ohio Valley, the farmer might himself take his produce to distant city markets, such as Cincinnati, St. Louis, or even New Orleans, if he thought he could sell and buy to better advantage there.

The second form of frontier trade was conducted on a larger scale and over longer distances. It developed in the trans-Mississippi region between the larger settlements on the Mississippi or the Missouri rivers and such communities as sprang up in the Far West. The trade over the Santa Fe trail and on to Mexico or California was of this character. Though never large in volume, it was in the hands of individuals or partnerships functioning as wholesale distributors. The fur trade with the Indians fell largely into the hands of companies operating on an extensive scale. When the interior mining communities arose, they were largely supplied by merchants operating from San Francisco, St. Louis, and Missouri River points, or later Denver and Salt Lake City, but outside of gold and silver there was little return trade.

In the interior Far West, the sparse population and the lack of waterways—only the Missouri was navigable for long distances—tended to prolong the period when frontier conditions shaped trading methods; only with the advent of the railroad was the situation greatly changed. To the eastward, on the other hand, the shift might occur within a decade or two, so rapid was the growth. Yet even there sections could be found, like the Appalachian highlands of the South or small backwoods groups in every region, where trade was little more advanced than on the frontier.

The Trade of Rural Regions. As frontier conditions passed away with the influx of settlers and the provision of better transport facilities in one after another of the rural regions, trade increased in volume, more of it became sectional or national in scope, and an increasingly specialized organization was evolved for handling it. Where general farming prevailed, the farmer commonly produced a considerable variety of things for sale, though the quantity of each was small. These might be disposed of at the country store or on Saturday trips to near-by towns and cities either to storekeepers and dealers or direct to consumers, perhaps in the open city market. Most of his commodities such as meat and dairy produce, fruits, vegetables, and firewood were consumed in the locality. When he had raw materials for manufactures, they might be disposed of to local concerns such as lumber mills, gristmills, slaughterhouses, tanneries, breweries, and

distilleries. If such an outlet was lacking, there were local dealers, usually specializing in one or more of these lines, who would buy his materials and at intervals ship them out to larger dealers or manufacturers at more distant points. With the store credits or cash thus received, the farmer purchased such goods or services as he needed.

In the smaller towns there were retail stores specializing in meat, groceries, and provisions; dry goods and notions, hardware, druggists' supplies, stationery and books, or wearing apparel which, together with the local craftsmen and professional men, were able to supply most of the needs of the farmers and the townsmen. Storekeepers dealing in supplies obtained from the cities made semiannual trips to market to replenish their stock. In time, apparently starting in the 1830's, the city wholesale distributors or manufacturers began to send out traveling salesmen to push their wares and keep in closer touch with the local retailers. By 1860, there were about 1,000 such.

In agricultural regions where specialization in a few great staples was customary, much of the local trade was similar to that just described. But for handling the staples with a national or international market, a more elaborate marketing organization was developed. In the grain and livestock-raising regions of the West, primary markets arose at places possessing good water transport facilities to which these products were brought by the farmers, often long distances. Since much depended upon the farmer's success in selling his one big cash crop, he wished to attend to the business himself. Here he sold to specialized dealers in grain or other produce who reshipped in large quantities. As railroads spread to this region, grain was taken to the nearest station and sold to the small dealers who sprang up at such points or else shipped direct to commission men to be sold in the primary markets.

In the cotton belt, the small growers, until the railroad arrived, hauled their cotton, sometimes 150 miles, to the nearest navigable water. There it was sold to factors or merchants who had often advanced money on the crop and from whom the grower secured most of his supplies from the outside world. From these interior gathering points, the cotton moved to the seaports where it was sold through brokers to agents of domestic or foreign manufacturers, or more commonly to large dealers in cotton. Larger planters often sent their crop to the seaboard market direct and sometimes consigned it to Northern or foreign commission houses. Southern factors paid for the cotton by bills drawn on Northern cotton houses, who in turn drew on England against shipments or borrowed from local banks. The Northern bills so obtained enabled Southern merchants and factors to meet the heavy debts incurred for manufactures or other supplies, both domestic and foreign, for which the South was so dependent upon the North.

Not to be forgotten was the peddler who with his Connecticut tinware, dry goods, clocks, and various "Yankee notions" became a common sight in most rural districts. His activities were rapidly extended at this time from the Northeast through the South and the West.

Trade in the Large Cities. Naturally, it was in the great cities, where growth was still chiefly based upon trade, that the most extensive and specialized marketing organization developed. Here the purely local trade was not unlike that in smaller places, but its large volume made greater specialization possible. More and more of the food from the neighboring farms passed through the hands of commission houses and wholesalers before it reached the retail stores, the public markets, or the hucksters. Not only was greater specialization among the retailers possible, particularly in luxury lines, but a new development in large-scale retailing appeared, chiefly in the dry-goods stores, where a departmental organization was introduced, notably by A. T. Stewart in New York, out of which in the following period evolved the modern department store. It is claimed that this store first adopted the practice of plainly marking goods with their price, called the "one-price system."

However, it was the wholesale trade that gave the cities their commercial importance, and its organization underwent striking developments during this period. Brokers, commission houses, jobbers, and wholesale distributing agencies, each specializing along some line, arose wherever the volume of trade was large. Auction sales, where goods sent on consignment or owned by wholesalers of imported or domestic merchandise were bought by smaller distributors and retailers, became common in the seaboard cities in the 1820's and offered an increasing variety of goods. Manufacturers sometimes used them, and publishers began to dispose of remainder stock in this manner, but the most conspicuous sales were of imported manufactures often made at distress prices and giving rise to considerable complaint against the system from domestic competitors. Some restrictions, chiefly in the form of taxes, were imposed and with more prosperous times after 1830 the opposition dwindled. In some lines of trade, the auction system became a regular feature; in others, the growth of a permanent marketing organization led to its abandonment, much of this work being taken over by brokers or commission men.

New England textile manufacturers, though sometimes using auctions, sold chiefly through wholesale commission houses or agents, many of which were closely allied financially with the mill owners and often advanced money to them. Originally located chiefly in New England, after 1846 a growing proportion of this business was transferred to New York City. That city also became the center of the cotton trade; most of the financing of the export trade and no small portion of that with the New England

mills was arranged here. Boston and New Orleans were subsidiary markets. The wool trade was centered in Boston where a well-organized market was maintained after about 1830, which soon became national in scope. The wholesale boot and shoe trade also centered there; as it grew, wholesale distributing and jobbing houses also arose in New York, Philadelphia, and Western and Southern cities.

The trade in wheat and flour around 1800 had been concentrated largely in Philadelphia, New York, and Baltimore. Except for some flour sent to New England, most of the surplus not consumed locally was exported. After the rise of wheat growing in the Genesee Valley, New York became still more important. Until about 1840, the surplus wheat of the West was sent down to New Orleans where that not required by the South was shipped to Atlantic coast ports or exported. As the Great Lakes region was settled and railroads built feeders to this waterway, the lake ports became gathering points for Western wheat and a growing proportion of this crop was shipped eastward. The receipts at Buffalo first surpassed those at New Orleans in 1838; there the first grain elevator in the country was erected in 1843, a device quickly adopted at other terminal points.

By the 1850's, Chicago was the leading primary market and had taken a new step in organization by opening a board of trade in 1848. At first, grain was sold by sample, but soon inspection and grading were introduced to secure greater standardization and facilitate trading. Similar organizations soon appeared in the Eastern seaports, and the spread of the telegraph provided immediate communication among all these trading centers. By 1860, the wheat and cotton trades had the most highly developed commodity marketing organizations in the country.

The Main Currents of Domestic Trade. The preceding chapters have shown how the three chief sections of the country—the Northeast, the West, and the South—because of differences in comparative costs had come to specialize in certain general lines of economic activity, and how this tendency had been promoted by the introduction of better facilities for transportation and marketing. Artificial barriers to trade among the states had been practically eliminated following the adoption of the Constitution. As a result of the growth of its population and wealth, the United States in 1860 afforded one of the greatest free-trade domestic markets in the world, though the large area over which that population was scattered somewhat offset this advantage. Thus the main currents of trade became intersectional in character, and a national economy was promoted.

The Northeast specializing in manufactures and the trade in imports sent such goods to the West and the South in increasing volume, first by the coastal or inland waterways and later by the railroads. Previous to about 1840, the West sent relatively little produce to the East; most of

what did go there went by way of New Orleans and the coast. The bulk of Western surplus produce was exported or consumed in the South. Thereafter a steadily rising proportion of the West's staples, chiefly wheat, flour, corn, packed meats, and livestock, went to the East to supply both that growing market and the export trade to Europe. Meanwhile Western buyers flocked to New York, less frequently to Boston and Philadelphia, in ever-increasing numbers to place orders for replenishing their stock. In the 1850's, the trade between the Northeast and the West was the most important intersectional trade in the country.

In the South, the border states sent a few specialties such as tobacco or hemp to the East, but their surplus foodstuffs commonly went to the lower South. From New Orleans, groceries, a little sugar and cotton, and a few imported products chiefly from the tropics were shipped up the river valley. Outside of cotton and some sugar, the lower South sent little to the Northeast; most of its cotton went direct to Europe, though some was routed through Northern ports. Southern buyers seeking Northern manufactures and imported goods went to Baltimore and Philadelphia in the earlier years, but later as New York became the great distributing center more were drawn to that city. In time the growth of interior wholesaling centers like Cincinnati, St. Louis, or Atlanta was such that the smaller buyers in their locality were able to secure needed stock there instead of in the Eastern seaports.

Merchants in the West and, probably to an even greater degree, those in the South leaned heavily on mercantile credit extended by the Northeast. In 1861, Southern indebtedness to the North was estimated at $200 million. After the panic of 1837, there was a tendency to shorten the credit period; 6 months and 12 months with interest after 6 months became common terms, though there was much variation. The rise of credit-reporting agencies after about 1840 greatly aided in reducing credit risks and facilitating trade.

The Organization of Foreign Trade. In foreign trade, the developments during this period both in organization and in volume were much less striking. This was due in part to the fact that the relatively great importance of foreign commerce in earlier periods had already produced a fairly elaborate marketing organization. Also the improvements in transportation during these years were less significant for the bulk of sea-borne trade than for inland trade. Finally, the volume of foreign commerce failed to grow at a rate anything like that of domestic commerce; in fact, it remained almost stationary up to about 1845, though from then on to 1860 growth was rapid.

This commerce was chiefly in the hands of American and English merchant traders operating on a large scale and mainly on their own account.

The English merchant had a branch house or an agent in this country, and the American merchant had similar connections abroad: in England or on the Continent more commonly an agent; in Calcutta and Canton usually a branch house. Often an American firm served as agent for the American exporter, and these houses were apt to be engaged in both the export and import trades. Such early specialization as existed was based on the trade with a given country as England, Holland, India, or China. As the volume of trade rose, greater specialization developed, chiefly in the great staples of the trade with Great Britain such as cotton, grain, and textiles. The keen competition of British manufacturers, who after 1815 shipped goods on consignment to commission houses or set up their own agencies here, led many American importers to withdraw from business or to become agents of the British exporters. Though American importers of British manufactures did better after 1830, English concerns appear to have dominated this trade, being greatly aided by the lower rates and longer terms of credit secured in the London market.

The import trade in products of the Far East was largely in the hands of American merchants who established agencies in Calcutta and Canton. At first carried on chiefly from Massachusetts, later a growing proportion was shifted to New York. These goods, as well as those of European origin, were generally sold in large quantities to jobbers who in turn disposed of them in smaller and more varied lots to retailers throughout the country.

Among exports, cotton became by far the most important commodity, and a highly specialized organization was developed for handling this trade. Though most exports went direct from Southern ports, some were routed through New York, and that city with its financial resources became the headquarters of the chief houses, both domestic and foreign, engaged in the trade. Most exporting was done by cotton merchants, either American firms or agents of British firms, very little by planters. In time, a few English manufacturers had their own buyers in this country, but most preferred to buy in England of brokers or dealers who in turn usually secured their cotton from the importers or commission houses; these latter sold the cotton bought by their American branches and agents or that consigned to them by American exporters.

Developments in Ocean Transportation. Though a new era in shipping was introduced by the invention of the steamboat, the adoption of this device for transatlantic service proceeded very slowly, and it was not until the middle of this period that a regular service was provided; even in 1860, only a small portion of the ocean-borne commerce was carried by steamers. Thus this was still the period of the wooden sailing vessel; it included the days of the sailer's greatest glory but closes with developments foreshadowing its ultimate doom.

During the first half of this period, the chief change in ship construction was to increase size. By 1840, sailing vessels of 600 to 800 tons burden, three or four times the size of those common before 1775, were frequently built, and some of the clipper ships that soon followed were double or triple this size. This greatly helped in reducing costs of operation, and by the early 1840's transatlantic freight rates were a third to a half lower than around 1820.

The first of the so-called "clipper" ships with concave lines and greater length in proportion to the beam was built in 1843, though certain of its features had been foreshadowed in the earlier "Baltimore clippers." Its success was such that over 250 vessels were constructed in the dozen succeeding years, marking what is called the "clipper-ship period" in shipbuilding. These vessels made a remarkable record for speed, owing in no small measure to very efficient management, and were extensively employed in the gold rushes to California and Australia and in the trade with the Far East. The trip from New York to California took from 90 to 110 days. The clipper's cost was not low but its speed—436 nautical miles a day was the record—enabled it to secure the cream of the ocean traffic, until this passed to the still faster and more reliable steamship.

In 1838, steamships began to provide regular transatlantic service. The two British vessels that crossed in that year were wooden ships driven by paddle wheels and made the trip in a little over 2 weeks. The successful completion in 1844 of an English steamship built of iron and using a screw propeller wrought a revolution in ship construction. The substitution of iron for wood, first in the hull and then in the framework, decreased the weight of ships about a fourth and also made possible larger and stronger vessels.

The chief difficulty in the economic use of steamships for carrying cargo was the large amount of space required for coal, a difficulty further increased by the lack of coaling stations throughout the world. Although the introduction of the compound engine about 1854 cut the coal requirement around one-half, it remained for later improvements in marine engineering to overcome this obstacle completely. Even in 1860, it was supposed that ocean steamships could be economically employed only for the transport of passengers, the mail, and the less bulky and more valuable cargoes. For several decades, the sailing vessel continued to be the chief carrier of the ocean trade.

Sea-borne trade also gained from the reduction of various risks. Relatively unknown seas such as the South Pacific were explored, coast lines and harbors were better charted, and the lighthouse service was expanded. By this period, the trade winds and the course of the Gulf Stream became well known, and the safest and quickest courses for sailing vessels were

definitely established. This knowledge combined with the building of ships better adapted to sail against the wind, enabled vessels to follow a more direct westward course across the Atlantic instead of sailing down toward the African coast and over to the West Indies before turning north. Piracy was eliminated after about 1820, and no wars seriously disturbed ocean commerce. These decreased risks made lower marine insurance rates possible, and the passing of marine insurance into the hands of large, firmly established companies gave added security.

A new development in the organization of ocean shipping came with the rise of regular lines, first of sailing vessels known as packet lines and then of steamship companies. This was mainly due to two things: (1) the growing volume of trade along the main routes combined with the need for regular and dependable shipping facilities for passengers, the mails, and goods; and (2) the increasing size and growing cost of ships, particularly steamships, necessitating an investment so large that it was beyond the resources of the old merchant traders or shipowning partnerships and could be financed only by a large corporation. There were still branches of trade, notably that with the Far East, where the merchant traders might employ their own ships, but the bulk of ocean freight at this period was carried by the tramp which sailed hither and thither in a constant search for cargo. Yet the new lines rapidly rose in importance, securing first the passenger traffic and the mail and a growing proportion of the more valuable and less bulky freight.

The first regular ocean line was the Black Ball Line, which began a monthly service between New York and Liverpool in 1818, that at once proved successful. In 1821, the Red Star Line was started. Soon others were organized to engage in the coastwise as well as the ocean trade. The packet lines, mostly owned by American partnerships, grew rapidly and reached the peak of their prosperity about 1840; in the 1850's they lost ground to the faster and more reliable steamship. In the 1840's, they were making the eastbound transatlantic trip in 22 days and the westbound in 33 days; by 1851, the steamship had cut the latter to around 10 days. In the early 1840's, the steamship could make six trips to the sailing vessel's three, and this was a great factor in its success.

The first important transatlantic steamship line, the English Cunard Line, started its service to Boston in 1840, aided by a mail subsidy from the British government. So stimulated, Congress beginning in 1845 granted subsidies to American lines carrying the mails. Thus aided, lines were established running to Bremen, Havre, Liverpool, the Isthmus of Panama, and along the Pacific coast. These subsidies totaled about $14 million up to 1858, when growing opposition led to their being stopped. The basic obstacle faced by American lines was the fact that this country could not build iron steamships so cheaply as Great Britain, and we could not buy

British ships since our navigation laws prohibited the operation of foreign-built ships under the American flag, to say nothing of the requirement of American seamen who got relatively high wages.

The Navigation Laws. At the close of the War of 1812, the earlier policy of protecting American shipping by means of discriminating tonnage and tariff duties was reversed as far as the foreign trade was concerned. In its place, a policy of reciprocity was adopted offering to admit vessels of any foreign nation carrying products from that country to American ports on the same conditions as American vessels, provided the foreign nation made a similar concession to American vessels entering its ports. This Act of 1815 was strengthened in 1817 by a law prohibiting the importation of goods in vessels engaged in the indirect trade where the vessels belonged to a country that did not admit American vessels engaged in the indirect trade.

Finally, in 1828 Congress definitely offered reciprocal treatment in the indirect foreign trade. The abolition in 1830 of all tonnage duties, except on ships of a nation not granting reciprocal treatment, made these offers all the more attractive, and such duties were not reimposed until 1862.

In the case of the coastwise trade, however, Congress by the Act of 1817 specifically excluded foreign-built or -owned vessels, though practically they were already excluded by discriminatory tonnage duties. This gave American shipping a monopoly of the coastwise trade that has remained practically unaltered ever since. This act also imposed extra-high tonnage duties on American ships unless the officers and two-thirds of the crew be Americans (three-quarters for those in the coastwise trade), but the high level of American wages led to much evasion of the law.

The chief reason for the shift to the reciprocity policy was the belief that American ships could compete successfully with those of other countries, provided there was no discrimination against them. Ships then cost less to build in the United States than in Great Britain and, despite the higher wages paid, the cost of operation was generally lower owing to the use of smaller, though hard-driven crews, the lower cost of provisions, and the superior efficiency in sailing that made more trips possible. Also, the high profits and abnormal expansion of shipping during the Napoleonic wars made a larger field of operations seem the more desirable. This policy—the reverse of that underlying the navigation laws in force in most countries for nearly two centuries—marked the beginning of a new era in general world policy. Most European nations began slowly to modify the severity of their navigation laws; the freedom of movement of vessels engaged in international trade was greatly increased; and a marked economy in the use of the world's shipping resulted therefrom.

In the United States, these laws led to a long series of commercial

treaties involving constant bargaining and sometimes severe retaliatory action designed to force concessions. By 1829, treaties with the leading commercial nations of Europe had secured reciprocal treatment of shipping in the direct trade. In the indirect trade this was obtained more slowly. Particular difficulty was experienced in securing full freedom in the trade with the British West Indies, once so important, much of which was based on indirect trade. Finally, in 1830 all branches were open to American ships except that between British possessions. This exception, which England viewed as similar to the United States's prohibition of foreign vessels in its coastwise trade, considerably hampered American ships and continued in force till England abolished her Navigation Laws in 1849. By the 1850's, full reciprocity had been arranged with all important trading nations of Europe and many Latin-American countries.

The Growth of the Merchant Marine. Though practically driven from the seas by 1814, except for vessels engaged in privateering, the total merchant marine of the country in 1816, allowing for previous losses, was probably nearly 1.2 million tons (see the chart on page 642). Roughly one-half consisted of registered vessels engaged in the foreign trade; a slightly smaller proportion was made up of enrolled and licensed vessels engaged in domestic trade, and some 50,000 tons was employed in the fisheries. The total tonnage changed little up to 1830, though that in the fisheries tripled. Thereafter the tonnage employed in domestic trade steadily rose, regularly exceeding that in the foreign trade, and by 1860 was nearly 2,650,000 tons. Foreign ships being excluded by law, this growth was solely due to the expansion of domestic trade and such demand for water transport as arose therefrom. Much the greater portion of this tonnage was employed in the coastwise trade. The tonnage in the fisheries rose to an all-time high in the 1850's and amounted to over 330,000 tons in 1860.

The shipping used in foreign trade slowly increased after 1830 to 900,000 tons in 1845. Then, with the building of clipper ships and the expansion of trade, came a sudden spurt that raised this tonnage to 2.35 million in 1855 and almost 2.5 million in 1861—a figure which was not again equaled for over 50 years. The figure of 5.54 million tons for the total merchant marine in 1861 was also destined to remain unsurpassed until 1902. Of this total less than 900,000 tons was propelled by steam, but barely one-ninth of this was employed in foreign trade.

Throughout this period there was a keen rivalry in shipping between the United States and Great Britain. In 1815, the British merchant marine had been double that of the United States, but the rapid increase in American ships after 1845 brought the total tonnage of this country to a point almost equal to that of Great Britain and her colonies. This caused much alarm in England and led to much chauvinistic oratory in the United States.

Both proved premature and lacking in adequate analysis of the existing tendencies. Firstly, over half the American shipping was employed in domestic trade where foreign competition was excluded. Second, the American shipbuilding industry, except during the clipper-ship period, was not keeping pace with the growth of the world's shipping or the country's foreign trade.

From 1816 until 1846, the tonnage of sailing vessels built showed no growth, fluctuating around 100,000 tons a year. During the next dozen years, the average output was tripled, the maximum of over 500,000 tons

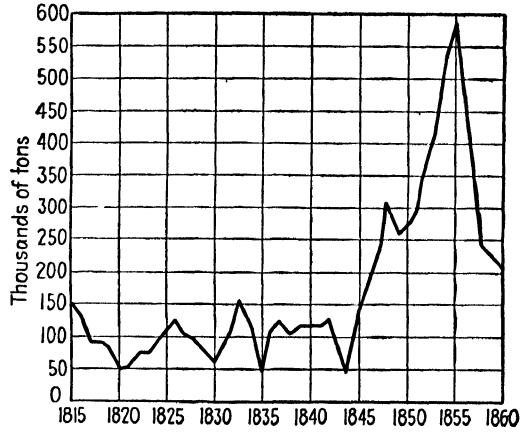


FIG. 20. Tonnage of ships built in the United States, 1815–1860.

being recorded in 1855 (see the chart on this page). But foreign countries took up the construction of clipper ships as well, and the trade in which American ships were most successful was beginning to pass to the iron steamship in the construction of which no country could then compete with Great Britain. However, in 1860, the steam tonnage constituted less than a tenth of the world's merchant shipping. Though the sailing vessel had many decades of life ahead, American builders, facing rising costs after 1830, were already finding it more difficult to compete with those of the Baltic region or of British North America. It is significant that in the period ending in 1860 only a tenth of the tonnage of sailing vessels built in the United States was sold abroad. The repeal of the British Navigation Laws in 1849 brought only a brief rise in such sales.

That the merchant marine engaged in the foreign trade was not keeping pace with the growth of that trade is shown by the decline in the percentage of the value of foreign trade carried in American ships. In the decade 1821–1830 this had averaged 90 per cent, a figure never equaled either before or since, though closely approached under the abnormal war conditions 1794–

1810. Even in this decade, the high figure was due partly to abnormal conditions created by the controversy with England over the carrying trade. Thereafter, this figure steadily fell to 66 per cent in 1860. A more accurate measure of the proportion of American shipping in this trade is the percentage of American tonnage in the total of vessels entering and clearing in the foreign trade, shown on the chart on page 643. In the decade 1821–1830 this was 88 per cent; then came a sudden drop, most marked in the trade with British North America, to about two-thirds of the total in 1832, and it fluctuated about this level until 1860. Compared with the preceding figures, these indicate that after 1830 American shipping had greater success in keeping its hold on the more valuable cargo than on bulky freight, but that toward the end this was also slipping away, presumably to foreign steamships. Of the foreign tonnage that entered and cleared American ports in 1860, four-fifths was British; nearly half the remainder was German.

One reason for this decline was that during these years the most rapidly growing section of our foreign trade was that with northern Europe which was just where we faced the most severe competition from other carriers, chiefly England, the German states, and Scandinavia. In most of the other branches of our foreign trade, American ships were far more predominant. How much American shipping was employed in trade that did not touch at American ports is uncertain, but it has been estimated at one-fifth of the registered tonnage. Though the American merchant marine still ranked second in the world and still had more than its proportion of the world's carrying trade (assuming 50 per cent of the tonnage carrying our foreign trade to measure that proportion), it is clear that the underlying trend of developments during this period boded ill for the future. The brilliant but temporary successes of the clipper-ship period proved so dazzling that the significant facts were generally lost to sight.

Among these facts was the growing competition from cheap wooden ships built in the Baltic countries or in British North America and from iron steamships built in Great Britain. The purchase and operation of such ships under the American flag were prohibited by our Navigation Laws. Also the country's rapid growth provided new and profitable opportunities for the use of capital in other fields. Finally, the relative advantages based on the cheap construction of wooden ships and the intelligence, daring, and efficiency with which American sailing vessels were handled, were now passing away. The latter advantage, which had helped to offset the high wages, was much less marked when it came to running the mechanized steamship, as developments in the following period made only too clear.

The Growth of Foreign Trade. The course of foreign trade during these years can be divided into two periods: (1) the first ending in 1845

and showing little enduring growth though marked fluctuations; (2) the second showing a rapid and fairly continuous growth to 1860 (see the chart on page 650). For the years 1856–1860 the average annual value of exports was $294 million and of imports over $320 million, both of these figures being more than four times those for the decade of the 1820's, though the higher price level then prevailing meant a lower rate of growth in the volume. The reexport of foreign goods, so important during the Napoleonic

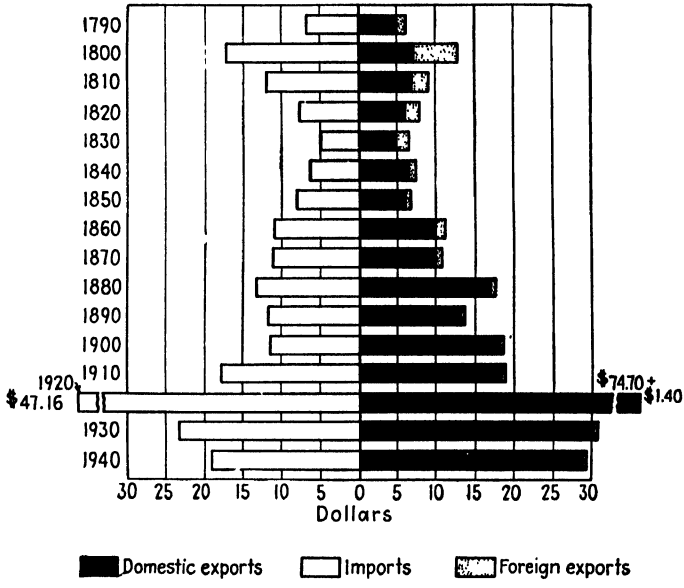


FIG. 21. Per capita exports and imports since 1790.

wars, remained practically stationary and fluctuated around $20 million a year, indicating a relative loss in this trade. Throughout the period, except for a few years of depression, imports exceeded exports in value, and this unfavorable balance of trade became much greater in the 1850's.

A most significant fact, as shown by the chart on this page, is that between 1818 and about 1850 the annual value of our total foreign trade fluctuated around $12 per capita, a figure much below that of any other period since 1790. Even after making allowances for changes in the price level and the reexport trade, this would indicate that foreign trade was then a relatively less important factor in the economic life of the country than at any period since, and probably less important than in colonial times, especially the eighteenth century, though no satisfactory statistical basis for this comparison is available. This reflected the increased economic self-sufficiency of the country and facilitated its policy of isolation.

The Commodities of Foreign Trade. In the case of exports, the outstanding development of the period was the growth in the shipments of cotton. Previous to 1820, they had never reached 100 million pounds; in 1860 over 1,700 million pounds, or three-quarters of the crop, was exported. During the 1820's, cotton took the predominant position among exports formerly held by breadstuffs and tobacco. In 1860, this export, valued at over $200 million, made up nearly two-thirds of the value of all exports. Never since the opening of the eighteenth century, if even before, has one commodity so dominated the exports. Such heavy dependence upon one export, moreover, is dangerous, for a serious crop failure or drop in price or interference with the trade may badly disarrange a country's economy, as the South soon learned. But in 1860 it strengthened the Southern cry that "Cotton is King!"

The former great staples of the South lost all importance in the export trade. Indigo disappeared, rice remained stationary, and tobacco leaf though doubling in value to $15 million in 1860 made up less than a twentieth of the total exports. Next to cotton in rank came the exports of foodstuffs, among which wheat, flour, and pork products took the lead. Up to 1846, these showed practically no gain, but thereafter growth was rapid and in 1860, with a value of $50 million, they were nearly one-sixth of all exports.

Throughout the period, agricultural products contributed about four-fifths of the exports (see the chart on page 652). The products of the mines, the forests, and the fisheries, though showing some absolute growth, fluctuated around 7 per cent of all exports and were never important. The remainder, consisting of manufactured goods, made up about an eighth of the total in 1860. Though still small, this reflected a great relative increase during this period. Manufactures of cotton were far in the lead and those of iron next; others were chiefly products only slightly worked up.

Among imported commodities, this period brought less striking changes than among exports. Finished manufactures fairly regularly made up slightly over half of the total value of imports. Among these, textiles, chiefly wool, silk, and cotton, were far in the lead; iron and steel products made up the only other single item of importance. Partly finished manufactures constituted about an eighth of all imports and foodstuffs between 25 and 30 per cent, tropical and semitropical products such as sugar, coffee, tea, molasses, wines, and liquor being predominant. The most significant change was the growing importance of crude materials for manufacturing, reflecting the rise of domestic industries, though these imports made up but an eighth of the total in 1860. Hides, skins, and wool were the chief items in this group.

The Direction of Foreign Trade. The chief change in the direction taken by foreign trade during this period was the decline in relative importance of the trade with the West Indies. This was due mainly to the unfavorable developments affecting the older British, French, and Dutch sugar-growing islands which were explained in Chap. XVI. Though the trade with these islands remained nearly stationary or declined, the rapid

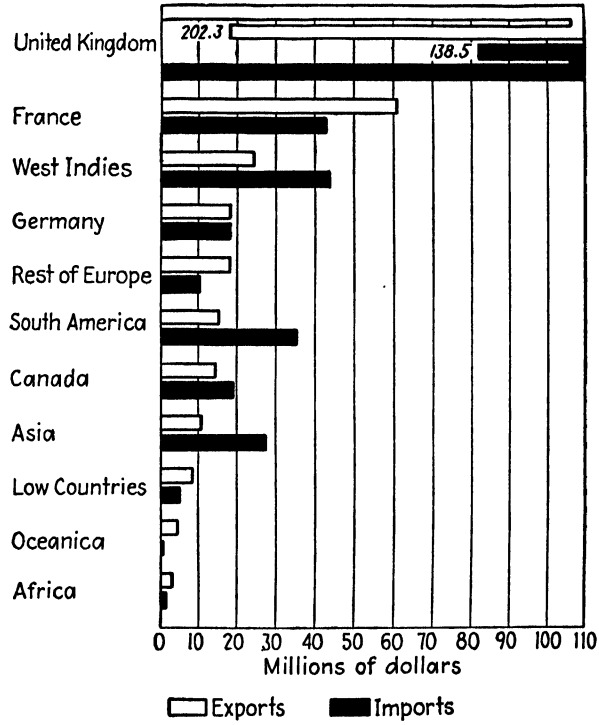


FIG. 22. Imports from and exports to chief countries or continents, 1860.

growth of Cuba was such that this island soon absorbed the bulk of the West Indian trade and prevented an absolute decline for the group as a whole. After about 1830, however, these islands ceased to play the important part in our foreign trade that they had theretofore.

As the chart on page 655 (which includes coin and bullion) and that on this page indicate, Europe took about three-quarters of all our exports and furnished nearly two-thirds of our imports. Though more than half of this European trade continued to be with the United Kingdom, the period witnessed a considerable growth in the direct trade with the Continent, chiefly with France and the German states. Other changes of note included the rise of the trade with Canada, especially after the reciprocity treaty; a

marked relative increase in that with South American countries following their attainment of independence; the expansion of the China trade; and the start of a small trade with Australia and South Africa.

The developments in transportation and the changes in the commodities entering into foreign trade were chiefly responsible for the shifts in the seaports through which this trade passed. Of the two striking changes during this period, the first was the rise in the export trade of the Southern cotton ports. In 1860, excluding specie and bullion, practically all of which

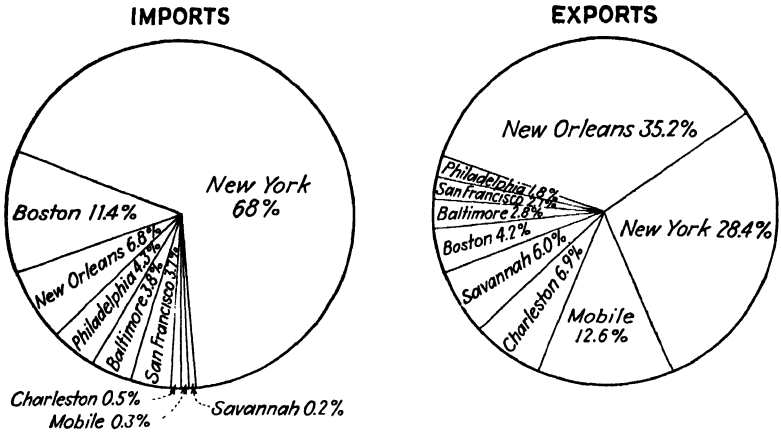


FIG. 23. Imports and exports of commodities by chief ports, 1860 (excluding gold and silver).

was shipped from New York, the value of New Orleans' exports exceeded that of any other port, though New York was a fairly close second. Next in order, though far behind, came the ports of Mobile, Charleston, and Savannah; after them came Boston, Baltimore, San Francisco, and Philadelphia.

The second change was the preeminent position attained by New York among the rival Atlantic coast ports. In the import trade it became even more predominant than in the export trade, receiving about two-thirds of the total in 1860. Boston was then a poor second and New Orleans third, followed by Philadelphia, Baltimore, and San Francisco in order. This contributed to building up the great supremacy among commercial cities that New York definitely secured for herself during this period.

The International Balance of Payments. Except for a few scattered years of depression the country's balance of trade was unfavorable throughout this period (see the charts on pages 656 and 658). In the trade with Europe, the balance fluctuated but by the close of the period was generally favorable, as was also the case in the small trade with Oceania and Africa.

On the other hand, in the trade with Asia and South America the balance was decidedly unfavorable, and this also came to be the case in the trade with Canada and the West Indies.

It might be expected that with an unfavorable balance of trade there would be a net outflow of the precious metals; in fact, up to the California gold discoveries, gold and silver were coming into the country. After that date there was a large net outflow. To explain these results, it is necessary to examine the other factors—the so-called "invisible" items—entering into the balance of payments. For this purpose the period may be divided into two parts at the date when net imports of the precious metals ceased and regular exports first appeared, say 1850.

During the first period, 1821–1849, the total excess of imports over exports amounted to some $150 million.[1] Even larger in amount was one of the invisible items, the interest on foreign capital invested in the United States estimated as totaling $224 million for the period. These two items made up most of the total on the debit side of the account of the United States with the rest of the world. The remainder consisted of minor items, the largest being the outlay of Americans traveling abroad.

Of the items that showed a balance on the credit side, the earnings of American ships carrying cargo for foreigners was much the largest, being estimated at $450 million for the period. The only other large item on this side was the net increase in foreign capital invested in the United States, possibly amounting to $170 million. It was chiefly because these two items brought the total credits above the debits that the net flow of the precious metals, totaling $72 million, was into the United States. This helped to provide a substantial addition to the circulating medium.

This net inflow was the result of varied movements. Throughout the period there was a very regular outflow, chiefly of silver, in the trade with the Far East. Though specie and bullion were imported from the western coast of South America, they were exported to countries on the eastern coast. Europe, though occasionally getting exports, was the main source of the imports, presumably mostly of gold. Next in importance were the imports from Mexico, doubtless mostly from its silver mines. Though of much less importance than formerly, the West Indies continued to be a source of supplies of the precious metals, and a little came from Canada.

Whereas the first period in the history of our balance of international payments was characterized by a moderate unfavorable balance of trade and an inflow of the precious metals, the second period, 1850–1874, was marked by an increasingly unfavorable trade balance and a large outflow

[1] The following is based on the figures given in C. J. Bullock, J. H. Williams, and R. S. Tucker, "The Balance of Trade of the United States," *Review of Economic Statistics*, vol. I, p. 215, Cambridge, 1919.

of the precious metals. Though we are here concerned with only the first decade of this period, the causes for this change should be understood.

The basic cause was the enormous output of gold from California. The resulting rise in prices helped to usher in a period of marked prosperity and, as usual under such conditions, imports rose much more rapidly than exports. This led to a great increase in the unfavorable balance of trade, the total for the years 1850–1860 amounting to $384 million. At the same time, the rising volume of interest charges on foreign investments in the country and the growth of American travel abroad also increased the debts due foreign nations. The resulting total was so great that, although the foreign investments here increased by nearly $200 million and the net credit from the earnings of our shipping was nearly $250 million, the total credits now fell far short of equaling the debits, and to meet the balance there was a net export of $430 million of the precious metals. The only important shift in the direction of this movement was that Europe began to receive gold from the United States instead of exporting it to this country.

Chapter XXIV

FINANCIAL INSTITUTIONS—MONEY AND BANKING

Introduction. The economic progress of the country during this period called for, and was aided by, a substantial development in its financial institutions. As capital funds accumulated, as business enterprises grew in size, and as trade mounted in volume, an expansion and improvement in the institutions for promoting savings, for aiding those needing capital and credit, and for providing the facilities required in the transactions involved were essential if economic progress was not to be seriously handicapped.

The developments during this period were in the main along lines laid down in the preceding period in the effort to provide for some of the deficiencies in the financial institutions of colonial times. In part, changes were due to the need for eliminating the abuses and defects that arose, particularly the reckless expansion of credit which helped to create the cyclical swings in business that now appeared; in part they were designed to meet new needs arising from alterations in the economic order. Both remedial measures and innovations reflected ideals that have always greatly influenced our financial legislation: the strong dislike for anything resembling a monopolistic "money power" and the even stronger desire for cheap money and easy credit.

The Coinage and Circulating Medium. The coinage under the Act of 1792 proved insufficient for the country's needs, and foreign coins continued in circulation. This combined with long-established habits led to a fairly widespread use of the English pounds, shillings, and pence as the money of account. Despite the resulting inconvenience, this practice was continued in some sections well into the period. The history of the coinage at this time can be divided into three periods: (1) that ending with the Coinage Act of 1834, (2) that between 1834 and the opening up of California gold mines, and (3) that covering the effects that followed from this event.

In the first period, the dominating factor determining coinage was the same as during the preceding period. Since the commercial ratio of silver to gold continued to fluctuate around 15½ to 1 while the coinage ratio remained at 15 to 1, silver was overvalued at the mint and gold undervalued, thus discouraging the coinage of the latter under the principle of Gresham's law. As a result, from 1816 to 1833, inclusive, $27 million in

silver was coined but barely $6 million in gold (see the chart on page 365). Most of the silver probably came from Mexico; the gold was presumably the output of domestic mines. In 1834, Congress, desiring to attract gold to the mint and keep it in circulation by overvaluing it, changed the coinage ratio to 16 to 1 through a reduction in the weight of the gold coin. The Act of 1837, which fixed the fineness of both gold and silver coins at nine-tenths pure metal, resulted in a slight alteration in the coinage ratio which then

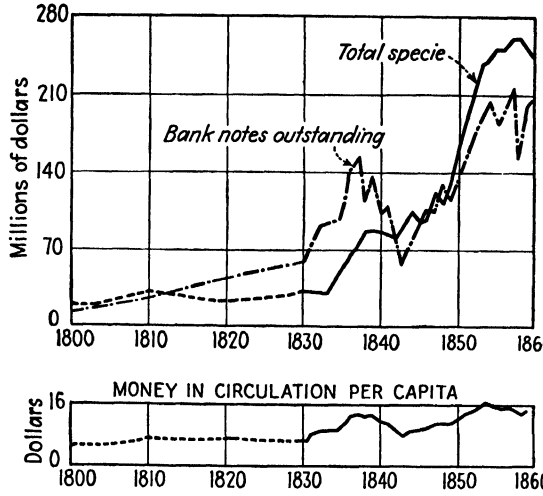


FIG. 24. Estimated amount of money in the United States, 1800–1860.

became 15.988 to 1. This ratio, except in the case of the subsidiary coins, remained unchanged for nearly a century.

In the second period, the Coinage Act of 1834, being based on a well-recognized economic law, had the desired effect, and there was a marked increase in the flow of gold to the mint, the total coined between 1834 and 1847 being over $60 million. As the domestic mines produced less than $11 million, most of this must have come from foreign sources. The coinage of silver during these same years totaled $35 million. Practically all of this was in the form of small change. Though the coinage of the silver dollar was resumed in 1836, only 2.7 million were minted up through 1860—over half of these in 1859–1860 when Western silver began to be mined.

The third period was ushered in by the outflow of gold from California and Australia, the effects of which were felt throughout the world and naturally with especial force in the United States where the total production from 1848 to 1860, inclusive, is estimated at over $650 million. Though much of this gold never reached the mint, some $390 million had been coined by the close of 1860. Despite the large net outflow of coin and

bullion which began at this time, the net result practically doubled the country's supply of specie, and for the first time this could be considered as adequate.

Within a decade, the world's output of gold practically equaled that for the preceding 100 years and, since there was only a slight increase in the output of silver, gold declined in value relative to silver. Consequently the commercial ratio of silver to gold, which had generally fluctuated between 15.7 to 1 and 15.9 to 1 from 1820 to 1850, fell below 15.5 to 1 in 1851

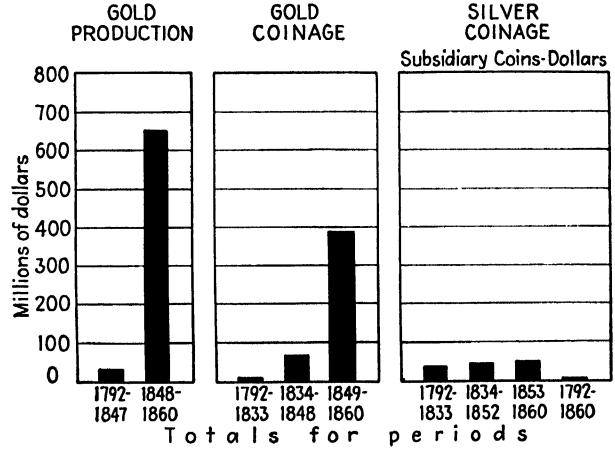


FIG. 25. Production and coinage of the precious metals, 1792–1860.

(see the charts on page 666). As this meant a still greater undervaluation of the silver coins, it hastened the flow of such coins to the melting pot since they would bring more as bullion. The resulting lack of small change caused great inconvenience.

To provide relief, the Coinage Act of 1853 reduced the amount of silver in all silver coins except the dollar so that the coinage ratio was slightly less than 14 to 1. Since this overvalued the silver in the new subsidiary coinage, there was no inducement to convert it into bullion. In fact it would have been profitable to take silver to the mint to be coined into small change, and the country would have been flooded with it. To prevent this, the law suspended the free coinage of subsidiary silver, and thereafter the government simply bought such silver for making subsidiary coins as seemed to be needed. Also, the law very properly limited the legal tender of these new coins to $5. This legislation, based on sound theory, had the desired result; $44 million of subsidiary silver was coined, 1853–1860, and the scarcity of small change was relieved.

As is shown by the chart on page 364, distinct progress was made in

securing a more adequate basis of specie in the circulating medium after 1833, though it was not until after 1850 that specie could be said to be abundant and complaints as to its scarcity ceased. However, until after 1840 paper money in the form of bank notes made up the greater portion of the circulating medium, and many of these issues were far from satisfactory, as will appear from the account of banking development that follows.

The Functions of Banks. To understand the efficiency of a banking system, there must be a clear conception of the chief functions that banks perform in the economic order and of the practices and principles essential for the best performance of these functions. Hence a brief summary of these points will be given before the description and criticism of the banking system that was developed at this time.

The main functions of the ordinary bank are commonly stated to be three in number: (1) the function of deposit, that is, providing a place of deposit where funds not immediately needed can be kept in safety until wanted and then promptly withdrawn, (2) the function of discount or lending, that is, providing people who need lendable funds and whose credit is good with the opportunity to borrow, (3) a common, though not necessary, function, that of issue, consisting in the issue of the bank's notes which become a part of the circulating medium. On the basis of its own capital resources and the funds deposited with it, a bank creates the credit which it lends to borrowers either in the form of giving them its notes or by granting them a deposit credit. Besides functioning as a creator of credit, banks provide for lendable funds the sort of marketing organization that promotes efficiency in the distribution of goods or services generally. The result is not only better facilities for lending and borrowing funds but also a tendency to distribute them, and in consequence the economic resources which they buy, among those who can make the best economic use of them. Thus banks help to increase the efficiency and productive capacity of the economic order.

If these functions are to be properly performed, certain practices and principles must be carefully observed. To perform the function of deposit properly, a bank must not only provide a place for safekeeping but must make sure that its own investments or loans are safe so that it will be certain to repay depositors. Also it must be ready to repay deposits, savings or time deposits excepted, whenever they are demanded. Hence it must keep enough cash reserve to meet ordinary demands and enough of its other assets in such form that in case of unusual demand they can, without serious losses, be quickly converted into cash. The proper performance of the second function, making loans, is obviously closely linked up with the safeguarding of deposits. The loans and investments must be scrutinized with care to

be sure that they are safe and sufficiently liquid; borrowers who can offer the proper type of security should be accommodated; yet the bank's credit must not be overexpanded. In performing this function the bank, by extending or refusing loans, helps to fix and to guide the flow of lendable funds and the use made of a portion of the country's supply of capital; if this is wisely performed, waste in its use can be checked and greater economic productivity will result.

The third function, note issue, is not an essential one, and nowadays many banks do not issue notes. But in the earlier period of banking in this country it was an important function—for most banks an essential one—a point which is basic for an understanding of banking history prior to 1860. Of the two means employed by banks for extending their credit and making loans, most banks then depended almost exclusively on the issue of their notes. Though the method of granting deposit credits against which the borrower drew his checks was increasingly employed, it was largely confined to the banks in the larger cities. The general use of checks required easy and quick means of communication, extensive facilities for getting credit information, and a sound well-organized banking system. As such conditions were lacking in most sections of the country, the great majority of banks depended on the right to issue notes, and in the interior most banks, had they been deprived of this right, would have gone out of existence.

The consequent large issue of bank notes resulted in their making up the chief circulating medium of the country until after 1840. Such specie as existed, outside of the small change, was kept chiefly in the banks where it served as a reserve and could be obtained for making international payments or used for settling balances between banks. The predominance of bank notes in the circulating medium made it the more essential that these notes conform to the principles of a sound currency; particularly they must be safe and stable in value. The best method to ensure safety is to take measures such that the notes can always be easily and promptly redeemed in specie; this will tend to check overissue and prevent depreciation. Still greater stability in value is ensured if the note issue is so elastic as to expand and contract with the fluctuating needs of business.

In addition to these basic functions, there are many other minor ways in which banks aid the financial transactions of the business world such as by the collection and transfer of funds, acting as a trustee, and dealing in investments. Though only a few of the principles most essential for the successful performance of a bank's functions have been noted, these should be kept in mind to understand the banking problems that arose during this period.

The Second United States Bank. The difficulties experienced by the government in handling its financial operations and the chaotic conditions

that developed in state banking after the closing of the First United States Bank in 1811 led Congress to charter the Second United States Bank in 1816. Though the strain of war financing was then passed, it was expected that the new bank would improve the condition of the state banks and hasten their resumption of specie payments.

The charter provisions were rather similar to those of the First Bank. As before, the charter ran for 20 years and the government subscribed for one-fifth of the capital stock, now increased to $35 million. Private subscriptions were to be paid, one-fourth in specie and the balance in government bonds. Branches were to be established and the issue of notes, not under $5 in denomination and to be redeemable in specie, was authorized. The bank's charges on loans and discounts were not to be above 6 per cent. Government funds in all places where the bank had an office were to be deposited with it, unless the Secretary of the Treasury, because of special reasons that must be explained to Congress, directed otherwise. The bank paid the government a bonus of $1.5 million for the charter.

The Second Bank began business in January, 1817, with its main office in Philadelphia. Shortly, eighteen branch offices were opened and later eight more, though one was abandoned. The bank at once found itself in a position where it was certain to arouse the opposition of the state banks. (1) It was a competitor and took away some of their business. (2) The transfer to it of government deposits, coming at a time when the state banks were overexpanded, was particularly trying and many required delay. (3) To force resumption of specie payment, Congress had resolved that after Feb. 20, 1817, all dues to the government should be paid in specie, treasury notes, or bank notes redeemable in specie. The pressure thus put on the state banks necessitated a contraction of their note issues and loans and helped to develop their ceaseless hostility to the Second Bank.

During its early years, the bank's management left much to be desired. Its large capital proved a temptation to make unwise loans. Its note issue quickly rose to over $8 million in 1818, most of it being put out in the South and the West. Thereafter the branch offices ceased redeeming any notes but their own, except those of $5 denomination. The depression after 1818 led to the failure of the Baltimore branch, where speculative operations had been most marked, and finally to the appointment of Langdon Cheves, a sound, conservative man, as head of the bank. Under his administration, 1819–1823, loans were contracted, the note circulation cut in half, and the branches better controlled. In 1823, Nicholas Biddle became president and held that office for the rest of the bank's life. He was progressive, energetic, and ambitious and at first followed sound banking policies, but after about 1828 he became less cautious and finally, after the charter expired and the bank secured a state charter, involved it in a disastrous failure.

Seeking to secure a sound currency for the whole country, Biddle adopted a policy (1) of increasing the issue of the bank's notes and (2) of trying to compel the state banks to redeem their notes in specie, thus checking their overissue and depreciation. For this purpose the bank paid out only its own notes and presented the notes of state banks which it received to the issuing bank for redemption in specie. In consequence, the bank's circulation rose to over $21 million in 1832, nearly four times the figure in 1823. Though a more liberal policy was adopted for the redemption of the bank's notes, the notes of branches were often at a slight discount in sections remote from Philadelphia or the branch of issue. This discount was so slight—seldom 1 per cent—that as between individuals the notes were commonly accepted at par and so were a great improvement over the state bank notes, especially those in the South and West, where much the greater portion was in use. Also, the pressure put on the state banks helped to check excessive issues—their total was never so great during the life of the bank as in 1816 despite the growth of trade—and so to lessen their depreciation. Though facing constant opposition and far from securing complete success, the bank did markedly improve the country's circulating medium.

It was also useful in other ways. After 1826, Biddle began to extend its dealings in both foreign and domestic exchange and soon dominated this field of service. With its widely scattered branches and large capital, it could provide exchange in greater amounts and at lower and more stable rates than any other institution. Similarly it was of great help to the government in handling its receipts and expenditures and the transfers of funds incident thereto; also, the government never lost a dollar of its deposits with the bank, in marked contrast to its experience with the state banks.

The bank became the main holder of the specie reserve of the country and, as most state banks kept relatively small reserves, they tended to fall back upon it in time of need. But in meeting the needs during a general financial strain the bank was less successful, chiefly because of the lack of centralized control in the banking system as a whole, yet in part owing to its own mistakes. In the stringency of 1825, it could afford relief by extending loans; in 1828 and 1831–1832 it could not, being too seriously embarrassed itself by excessive loans and discounts in the South and West that were not promptly paid. It was in those sections that the greater part of its business was carried on, and its services and measures of control proved most valuable. By this time, New England had developed a fairly sound banking system, and a marked improvement was taking place in the banks of the Middle Atlantic states. Elsewhere the condition of most state banks was far from satisfactory.

The bank's charter was to expire at the end of 1836, and the question of

its renewal was raised in 1829 when President Jackson expressed doubts as to the bank's constitutionality and its success in establishing a sound currency. The question soon became a prominent political issue resulting in the "Bank War" in which extraneous factors entered into the discussion and exaggeration prevailed. Though Congress in 1832 passed an act to renew the charter, Jackson, whose hatred of the bank had then become violent, vetoed the bill and, after his reelection that year, the bank accepted its fate as settled. Government funds began to be deposited in the state banks; the bank proceeded to wind up its affairs and at the close of 1836 went out of existence. In some cases state banks were organized to take over the business of the branches and Pennsylvania chartered a bank to take over that of the main office. This bank, continuing under Biddle's management and burdened with excessive capital, became reckless and soon failed disastrously. Despite renewed agitation, the country's experiment with a great central bank was ended.

The Growth of State Banks, 1816–1860. The growth of state banks and the fluctuations in their condition during this period are shown in the accompanying table, though the figures, especially those before 1836, are not complete. As the table shows, the rapid expansion of state banking

Year	Number of banks	Capital, millions	Loans, millions	Deposits, millions	Circulation, millions	Specie, millions
1815	208	$ 82	$150	...	$45–$100	$17
1820	307	102	...	$ 31	40	16
1830	330	145	200	...	61	22
1836	713	251	457	115	140	40
1845	707	206	288	88	89	44
1850	824	217	364	109	131	45
1860	1,562	421	691	253	207	83

that began in 1812 did not end abruptly with the close of the war. The opening of the Second United States Bank and the pressure to resume specie payments checked the movement, and the panic of 1818–1819 brought it to an end and led to a general contraction. Uncertain business conditions and the restraining influence of the United States Bank resulted in but moderate growth up to 1830. A great speculative expansion then occurred culminating in the panic of 1837. The following depression was so prolonged and severe that, despite the country's growth, the business of the state banks as late as 1850 had not returned to the level reached in 1836. The 1850's was an unusually prosperous decade, although there was a

reaction, 1854–1855, and a brief but sharp financial panic in 1857, so that by 1860 both the number of banks and the volume of their business were about double the figures for 1850.

The organization of banks at this time was often owing not simply to the need of some community for the facilities provided thereby but also to the wish of the organizers to secure the means for financing some of their own enterprises. Thus Secretary of the Treasury Crawford, writing in 1820, said that most of the banks started after 1812 were organized

> . . . not because there was capital seeking investment, not because the places where they were established had commerce and manufactures which required their fostering aid, but because men without active capital wanted the means of obtaining loans which their standing in the community would not command from banks or individuals having real capital and established credit.

Similar reasons led to granting banking powers to certain railroad companies, chiefly in the South, it being expected that the powers would be used to finance construction. The organization of banks for such purposes led to unwise practices as their funds were apt to be tied up in nonliquid or unsound assets.

In the case of banks partly or entirely owned by the states, of which many were organized, chiefly in the South and West, it was expected that the bank would help in financing state enterprises as well as in handling state funds. Also the states wished to share in the profits of the business and to exercise some control in the wielding of the financial power by the banks. At first a bank could secure a charter only by a special act of the legislature, and this often involved political wirepulling and favoritism as well as expense. The desire to eliminate these evils and prevent any danger of a moneyed monopoly led to the adoption of free-banking laws under which any group conforming to the requirements of a general law could start a bank. The first free-banking law was passed in Michigan in 1837 but soon was repealed; New York followed in 1838; by 1860 sixteen states had such laws. There were also numerous private individuals or partnerships that performed many of the functions of a bank. Though commonly prohibited from issuing notes, they were often active in dealing in domestic or foreign exchange.

Bank Loans and Specie Reserves. The character of bank loans naturally varied with the business activities in different sections. Most of the banks lent money on real estate, since this was the chief tangible asset of most of the people. The greatest dangers in this for a commercial bank were (1) the tendency to grant too large a loan in proportion to the value of the property and (2) the nonliquid character of such a loan. The more conservative Eastern banks tended to discourage such loans, but in the West and South

they were very common. In the South loans secured by slaves or by liens on existing or prospective crops were frequent; in the East merchandise was often accepted as security. Everywhere those with good credit might obtain moderate loans on their personal note, preferably endorsed with a second name.

As the volume of stocks and bonds increased and stock exchanges rose to provide a good market for them, collateral loans backed by such securities became more frequent, especially in the chief financial centers; yet there was much popular opposition to such loans as tending to encourage speculation and to decrease the funds available for other purposes. Loans secured by the bank's own stock, chiefly to accommodate subscribers unable to pay in full, and excessive loans to a bank's own directors led to such abuses that restrictive legislation had to be invoked. The general situation is well characterized by Professor Dewey who says,

> During the earlier years of banking borrowers were apt to regard a bank as a benevolent rather than a money-making institution, and as it held special grants by legislative favor it was held bound to accommodate the public. A bank was therefore criticized when it demanded that notes be paid at maturity, and that no renewals be allowed.

A basic difficulty was the undeveloped state of the financial institutions well adapted to make the long-time loans which were so widely needed. In consequence, the commercial banks were called upon to provide such loans to a far greater degree than was safe for that type of bank. Under these conditions, the chief dangers arose from overextension of bank credit, loans made on improper or inadequate security, and insufficient liquidity of assets.

The maintenance of an adequate specie reserve was neglected by most banks throughout the period. Where the state required that a certain amount of specie be on hand before a bank could begin business, the law was frequently violated in spirit if not technically; even where observed, the specie held was likely soon to dwindle to a dangerously low level. At one time a New England bank with $500,000 of its notes outstanding held only $86.48 in cash. There was much difference of opinion as to the desirable proportion of specie holdings to the demand liabilities, but most were inclined to fix it at between one-fifth and one-third. In practice the ratio, even for considerable groups of banks, commonly fell below one-fifth and sometimes below one-tenth; many individual banks made a still poorer showing. In those days of slow transport and communication and a poorly organized banking system, a larger reserve was needed than would be the case today.

Progress in lessening this evil either by voluntary action on the part of

banks or by state legislation was very slow. Since outstanding notes made up most of the banks' demand liabilities till near the close of the period, the specie reserve was regarded as to be used mainly to ensure their prompt redemption; hence many laws designed to secure adequate specie reserves fixed the required proportions in terms of the note issue. After about 1840, as deposits rose in relative importance, especially in the Northeast, it came to be seen that a reserve to protect depositors was also essential and laws to require this began to be enacted. Thus when Massachusetts in 1858, after nearly 20 years of agitation, finally acted, it required specie reserves of 15 per cent of a bank's circulation and deposits, though country banks could count their noninterest-bearing deposits in Boston and New York as a part of this reserve.

In New York the Free-Banking Act of 1838 required a specie reserve of 12½ per cent of the note circulation, though this was repealed in 1840. After the panic of 1857, the New York City banks voluntarily agreed to keep a reserve of 20 per cent of their net deposits. Pennsylvania had no specific requirement until 1860. Virginia in 1837 required a specie reserve of one-fifth of the note issue, but most Southern states took no action, with the notable exception of Louisiana. There the New Orleans banks in 1838 agreed to keep a specie reserve of one-third of their demand liabilities, and in 1842 a state law fixed the same ratio with the added requirement that the banks must hold short-time paper equal to the remaining two-thirds. This was the soundest commercial banking act of the period and later attracted much attention, especially after the New Orleans banks weathered the panic of 1857 without suspending. Ohio in 1845 required a 30 per cent reserve against notes as well as a safety fund and Indiana in 1852 a 12½ per cent reserve. After the panic of 1857 Missouri, Iowa, and Minnesota also required substantial reserves. Yet outside of Louisiana, Iowa, and Massachusetts the need for reserves to protect the rapidly growing deposit liabilities as well as the note issues was little recognized by law. In practice, the well-managed banks did better than the law required.

The Note Issues of the State Banks. The importance of bank notes because of their predominance in the circulating medium and because they were the main device used for the extension of bank credit has previously been noted. Although the practice of extending loans in the form of deposit credits steadily grew, it was not until 1855 that the total deposits in state banks came to exceed the total of their note issues, though in New York state this situation existed after 1837. Although specie surpassed the note issues in circulation after 1840, most of it, outside the small change, was kept in the banks, at least up to 1850, after which it was found in more general use. Consequently, everybody was vitally concerned with the character of the bank-note issues.

Unfortunately, the most essential quality in bank notes—unquestionable and stable value—was the one in which the issues of this period were most defective. Immediately the depreciation of bank notes was due to lack of easy and quick means for presenting them for redemption in specie. Such means, though not always adequate when expansion is general, will serve to check overissue and depreciation, but they can be supplemented by other regulations designed to keep a bank's assets both sound and liquid in character. The efforts at reform during this period followed both of these lines of attack.

The period is often called that of "wildcat banking," derived from the fact that many banks were located in the backwoods regions, where wildcats abounded, for the very purpose of making it difficult for anybody to present their notes for redemption. Even when no such purpose existed, the difficulties of transport were a serious obstacle in the case of country banks. The banks themselves sometimes added to the obstacles and certainly encouraged the widespread feeling that it was both undesirable and impolitic to present notes for redemption. Thus, when the notes of such banks once got into circulation, there was little effective check on their overissue and they commonly depreciated in value. This depreciation often varied with the distance from the place of issue. Thus in Boston, at one time during the War of 1812, the notes of New York banks were at a discount of 20 per cent, of Philadelphia banks at 24 per cent, of Baltimore banks at 30 per cent, and those of Southern banks were not accepted at all. It was a common saying in 1811 that inside of 24 hours a good horseman could outride the district bounding the circulation of most banks. Basically, of course, the trouble was due to the failure of the banks to maintain an adequate specie reserve which in turn was a product of too great expansion of credit in the form of notes and lack of sufficient liquid assets.

Measures for Safeguarding Bank-note Issues. The early bank charters seldom included any requirement for the redemption of notes. The limitations on issue, if any, were lax; the most common limited a bank's total indebtedness to two or three times its capital. Sad experience made it clear that something more was necessary, but the first important device for safeguarding notes was a product of voluntary action on the part of a group of New England banks that joined in the Suffolk Banking System.

The initiative came from the Boston banks which found that their own notes, being easily presented for redemption and so worth par, were constantly driven out of circulation by the depreciated notes of the New England country banks. The Suffolk Bank of Boston, founded in 1818, adopted the policy of sending the country bank notes which it received to the issuing bank for redemption and other Boston banks soon joined in

the practice. In 1825, a system was adopted under which the Suffolk Bank agreed to redeem the notes of such country banks as either kept a deposit with it and forwarded funds as needed to cover the redeemed notes, or otherwise provided for the redemption of their notes in Boston. Boston being the business center of most of New England, this afforded a convenient clearinghouse for the redemption of country bank notes and so tended to check their overissue and depreciation. As many New England banks entered the system, the bank notes of this section soon became the soundest in the country.

The success of this system was such that in 1840 New York passed a law requiring its country banks to redeem their notes at a discount of not more than ½ per cent at either Albany or New York; in 1851, this discount was cut in half. In 1850, Pennsylvania similarly required redemption at Philadelphia and Pittsburgh, though this was repealed during the crisis of 1857. In Ohio, a group of Cincinnati banks, beginning in 1845, set up a system similar to the Suffolk System. In Boston, the Bank of Mutual Redemption was set up in 1858 as a rival of the Suffolk Bank and, as a majority of the New England banks soon joined it, the Suffolk shortly withdrew from the business. Although such provisions for redemption did not eliminate bank failures and losses to noteholders, they greatly lessened the likelihood of such an occurrence.

Another method for safeguarding note issues was that of the Safety Fund System adopted by New York in 1829. Banks belonging to this system—ninety-three in all came under it—had their note issue limited to twice their capital and were required to deposit with the state a sum equivalent to 3 per cent of their capital to provide a safety fund out of which the notes of any bank that failed were to be paid. Though designed to protect noteholders, the fund was made liable for other debts as well and proved insufficient to meet the burden imposed following the many failures after the panic of 1837. Eventually, the state loaned the fund enough to meet the deficiency. In 1842, the fund was made liable for the note issue only and, in 1846, its notes were made a prior lien on the assets of a failed bank and a double liability was imposed on the stockholders beginning in 1850. Even this did not prevent some small losses to noteholders. After 1839, no more charters were granted under this system, and those in existence had all expired by 1866. A somewhat similar system was adopted in Vermont in 1831. The Safety Fund System, though introducing a marked improvement, failed of greater success chiefly because of defects in matters of detail many of which were later eliminated. The main idea was subsequently adopted in Canada where, aided by the sounder banking methods of a later period, it has proved successful.

In New York, the banks in this system were eventually supplanted by

those formed under the free-banking system adopted in 1838. By authorizing any group conforming to the general requirements to organize a bank, it met the popular demand for greater freedom of entrance into this field to prevent monopolies. To protect noteholders, a specie reserve of 12½ per cent of the note issue was required, though this was soon repealed, and the issue was limited to between 1 and 1½ times a bank's capital. Also a bank had to deposit with the state certain classes of securities equal in amount to its outstanding notes, these to be sold and the proceeds used to redeem its notes in case a bank failed. The classes of securities named included bonds of the United States, of the state of New York, or of any state approved by the comptroller, or up to one-half the total, approved mortgages on New York real estate. Unfortunately, when many banks in the system failed, as soon happened, the proceeds from the sale of their securities proved insufficient to pay off their notes, the greatest losses occurring in the case of the real-estate mortgages and the bonds of certain states which were then greatly depreciated, some selling at less than two-thirds of their face value. Subsequently the law made only bonds of the United States and the state of New York acceptable, and thus eliminated the most serious defect.

The main features of the free-banking system, especially the ease of securing a charter, made a wide popular appeal; by 1860, they had been adopted by sixteen states and later were embodied in the National Banking System. Unfortunately, in the rapid spread of the system in the 1850's, there appeared the same defect in the securities that at first existed in New York. The worst results developed in the Northwest where the failure of a large proportion of the free banks resulted in losses of several millions to their noteholders.

Improvement in the note issue was also secured by other laws and by the spread of sounder banking policies. The states generally set a definite limit on the note issue, commonly fixed at some proportion of a bank's capital. In the North this was usually from two-thirds to twice the capital; in the South, three times the capital prevailed. The states also came to require specie redemption and to impose penalties for violation of this provision, though the results obtained were slight. Obviously, the laws designed to improve the character of the banks' assets, increase their specie reserves, and promote sounder banking in general together with the voluntary adoption of better practices by the banks themselves helped to protect the noteholders as well as the other creditors of the banks.

The Elasticity of the Bank-note Issues. Though security is the first requisite in a note issue, it is also desirable that such issues be so elastic that their volume will fluctuate with the volume of business, thus avoiding the stringency that checks sound business and may cause unnecessary

losses, and the redundancy that gives an abnormal stimulus to business and leads to inflation. Such elasticity was particularly desirable in the United States at this period, chiefly because (1) there was no other element in the circulating medium that was elastic, since specie was not so by its very nature and deposit currency was little used, (2) agriculture, which is markedly seasonal in its need for currency, was so predominant an activity, and (3) the use of money in business was much more general than in colonial times. The lack of the proper elasticity in the bank notes, particularly in contraction, was no small factor among the financial evils with which the country was plagued.

Generally, it was much too easy to expand the note issue far beyond the legitimate needs of business, and there was seldom sufficient pressure to secure the proper contraction. The need to check undue expansion by raising interest rates—always unpopular—was very seldom recognized. Such expansion helped to engender the speculative booms culminating in the panics of 1818, 1837, and 1857. Then when the crash came, the credit structure collapsed and the contraction was acute. It was just at this point that the need to extend credit to really sound enterprises was most urgent if the panic was to be checked and unnecessary losses prevented. Such sharp contractions were due in part to the lack of any special provision for such an emergency and in part to the decentralized character of the banking system which prevented that unity of action among the banks which was essential to success and led every bank to try and save itself regardless of others. It was the same lack of a centralized restraining authority which made general overexpansion possible in the first place.

Not much progress was made in securing greater elasticity in the note issue. The chief gains were derived from the measures to secure quick and easy means for the redemption of notes previously mentioned. These were supplemented by laws in Louisiana in 1842 and Massachusetts in 1843 forbidding banks to pay out any notes but their own. It was estimated in 1857 that the notes of New England banks were redeemed at least eight times a year, doubtless making them the most elastic in the country. The bond-secured notes of the free-banking system, however, tended to be inelastic; in time of stringency, few banks would buy more bonds to increase their note issue.

Bank-note Issues and the Circulation of Specie. The relatively small amount of specie in circulation and its slight use in ordinary business transactions previous to 1850 were due largely to the uncertain character of so much of the state bank-note issues. Just as in colonial times, wherever depreciated notes were found they tended to drive out specie, and there were constant complaints of its scarcity. The issue of bank notes of small denominations only aggravated the situation. In 1830, there were but three

states where notes under $5 did not circulate—in the Carolinas there were some for a few cents—and the total of such notes was estimated at $7 million. The "hard-money" agitation led by Jackson induced a number of states to prohibit notes under $5. Following the suspension of specie payments in 1837, most of these laws were temporarily suspended, repealed, or ignored and, in 1840, outside of Pennsylvania and the South, small notes were generally current. Popular opposition prevented much improvement before 1860.

The chief difficulties incident to the small supply of specie appeared when an increased need for specie arose either for export or following a sharp contraction of the note circulation. Previous to 1850 the country's supply of specie was ordinarily so small that even a moderate foreign drain was likely to cause trouble. Heavy merchandise imports after 1815 drew off much of the specie acquired in the prosperous period before the War of 1812, led to a premium of 20 per cent on London's exchange, and aggravated the difficulties ending in the panic of 1818; another outflow brought similar trouble in 1837. A larger supply of specie would have helped to secure greater stability in the money market, in foreign exchange rates, and in the circulating medium.

Other Banking Reforms. Certain reforms of a more general character deserve brief notice. The chaotic condition of the note issues was improved by laws prohibiting issues by other than incorporated banks which were general by 1830, though sometimes disregarded, especially when small change became scarce. Even then, the variety of issues was so great that counterfeits or issues of spurious banks easily found their way into circulation. Until after 1860, bankers had to use daily lists of counterfeit and spurious notes to protect themselves, and the general public was left practically helpless.

In some states, banks were strengthened by laws requiring the accumulation of a surplus, though earlier such a policy had been opposed as tending to create monopolies. Imposing a double liability on the stockholders became common in the 1850's as providing additional security for the creditors. The reaction against state-owned or -controlled banks after the panic of 1837 had a beneficial effect, for some had been ruined because employed to bolster up state finances or promote state enterprises.

Better enforcement of the laws was secured by a fairly general requirement that banks publish annual reports. In the earlier years this was seldom enforced, and even when reports were made they might be so meager, vague, or infrequent as to be of little value. Far better results were obtained when, about 1829, some states began to appoint bank commissioners with powers to require reports and make examinations for themselves; yet, even in 1860, this essential safeguard was relatively undeveloped.

Specialization in Banking Institutions. Until the latter part of this period, specialized banking institutions were rare so that commercial banks—and nearly all the banks at least pretended to this character—were constantly called upon to render services for which they were not the best adapted—services which today are generally provided by specialized institutions such as savings banks, trust companies, and investment bankers. One reason for this was that which always checks specialization—the lack in most sections of a sufficiently large volume of business to make specialization profitable. Another reason was the undeveloped state of banking practice and a lack of understanding of the principles essential for the successful performance of the various functions that banks were being called upon to assume.

Consequently, commercial banks were expected to make loans the proceeds of which were put into various forms of fixed capital or other relatively permanent investments that were not self-liquidating in character. Surprisingly enough, though agriculture was the predominant economic activity, there was almost no development of institutions particularly fitted to provide its needs for long-time loans, so that this task was largely assumed by commercial banks or private individuals. The bank's danger from too large a proportion of nonliquid assets was increased by the undeveloped state of the markets in which such assets could be disposed of quickly and without too heavy a loss. Also, unlike today, only a small proportion of the assets representing such property were in the form of readily salable securities for which a well-organized market existed. Though the presence of such markets would not have ensured against having to sell at a loss, it was likely to lessen the loss and make cash more quickly obtainable.

Among the first specialized banking institutions to appear was the savings bank. The Provident Institution for Savings in Boston, chartered in December, 1816, was supposedly the first incorporated one in the world. The Philadelphia Saving Fund Association started business a month earlier but was not incorporated until 1819. By 1820, there were ten savings banks in the country but up to 1850, when there were 108, the growth was slow. The 1850's brought a rapid increase; by 1860 there were nearly 300 with almost 700,000 depositors and total deposits of about $150 million.

The trust company business was at first very commonly combined with that of insurance and the granting of annuities. There the first company given authority to execute any and all trusts in its corporate capacity was the Farmers' Fire Insurance and Loan Company chartered in 1822; the first company to use the word "trust" in its title was the New York Life Insurance and Trust Company, organized in 1830 with the expectation of putting its funds chiefly into real-estate mortgages. Several such companies

were formed up to 1837, but the movement was then halted until just before 1860 when a few more, including the first one in the West, were organized. Barely half a dozen of the companies of today were in existence before 1860. After about 1835, these companies began to withdraw from the in surance field; most of those organized thereafter did not enter that field. Besides handling trusts, these institutions, like the savings banks, helped to meet the need for long-time loans, especially loans on real estate.

The Banking System in General. The banking system in 1860, despite many improvements, still fell far short of functioning efficiently. Yet banking was a relatively new line of economic activity with rapidly expanding functions; the principles of sound banking were none too well understood even in Europe, and it took time and experience to train a group of capable bankers. It required much more time to educate the people to the point where they realized the limits to what banks could accomplish or were prepared to demand sound banking methods. Too frequently a bank was looked upon as a form of Aladdin's lamp only needing a little rubbing to evoke the jinn in the form of bank notes and make everybody prosperous and happy. "To make a bank," said Niles, "is a great panacea for every ill that can befall the people of the United States." Also, the growth of the country was exceedingly rapid and created a great demand for lendable funds to be used in every way, which the banks were expected to meet. Thus banking methods were in part a product of frontier conditions where capital was scarce, credit institutions undeveloped, and the debtor class large.

In addition to the defects already noted, the highly decentralized character of the whole banking system created added difficulties. The many states chartering banks caused confusion, and the lack of uniformity in their regulations sometimes intensified the competition among them and lowered the standards of banking practice. United action to check an over-expansion of credit in a speculative boom or to provide credit in a financial panic could not be obtained, thus aggravating the swings of the business cycle.

During their existence, the two United States banks helped to counteract the effects of this decentralization and, within a smaller area, the better managed large state banks. Some of these state banks, in marked contrast with the general record, proved eminently successful; notably those in Ohio, Indiana, Missouri, Virginia, and the Carolinas. Their history shows the necessity for sound management as well as adequate laws for success in banking. A greater development of branch banking might also have lessened the decentralization and provided stronger banks in small places, but local jealousies and the popular fear of monopolies commonly opposed such a system. In the early period, some branch banking was authorized,

but the Northeastern states generally came to prohibit this. Except in a few states such as North Carolina, Virginia, and Louisiana, or the hybrid systems of Ohio and Indiana, branch banking failed to develop.

Apparently each section of the country had to learn from sad experience just how much banks could accomplish and what sound banking involved. Up to 1812, the New England states were passing through this period of wild banking; then reforms began to be introduced. The turn of the middle states came next, followed by that of the South. The Northwest was passing through the same experiences in the latter part of the period, though the big state banks in Ohio, Indiana, and Missouri were well managed. Every disastrous panic brought a wave of reform and better banking laws, though occasionally the reaction against banks was so strong as to leave a state without any banks. By 1860, the slow process of training a group of experienced bankers and securing needed control through state legislation had done much to lessen some of the worst evils, as far as individual banking practice was concerned.

Chapter XXV

FINANCIAL INSTITUTIONS—OTHER DEVELOPMENTS

Panics and the Business Cycle. The recurrent periods of boom, panic, and depression which swept over the country have been frequently mentioned. This business cycle in the widening scope and growing intensity of its reactions was comparatively new. In colonial times, certain sections had occasionally suffered from a depression, due ordinarily to the low price of some important staple, as in the case of the tobacco-growing region. Often war, by deranging the usual economic life, brought a similar reaction, usually more widespread in effect, as after the Seven Years' War. Although similar causes were operative in the period under review, it is clear that other factors must have entered in to bring about the cyclical movements and the intense nation-wide reactions that characterized this phenomenon in the nineteenth century. Some explanation of these factors is therefore necessary.

It must be admitted that the phenomenon of the business cycle is none too well understood even today, and there are widely varying theories as to its chief causes. Still it is possible to point out certain developments in the economic order which most would agree have played some part in the rise of this disturbing phenomenon. Probably first place should be given to the developments in the field of monetary and banking institutions which were described in the preceding chapter. The use of money and credit was rapidly increasing in importance; hence anything that seriously affected the soundness and stability of these instruments wrought all the greater disturbance. Proper control of them—an extremely delicate and complicated problem—has not even yet been attained and the abuses that arose greatly contributed to the maladjustments that created the business cycle.

Another cause arose from those changes in the organization of industrial society that made it more difficult to adjust supply and demand at a profitable price level. In a frontier household economy, no such problem exists; only what the family wants is produced. In a local economy, the problem is relatively simple; needs are fairly easy to determine and many goods are made only to order. But when markets widen and become national or international in extent and the number of those producing for the market

is much larger, this problem of adjustment is far more difficult. This widening of the market also leads to greater specialization and division of labor which involve greater interdependence among various lines of business. Thus the problems of business management become more complicated and control more complex; a depression in one line of business spreads out in a widening circle of reactions on other lines until the whole country and even foreign countries become involved.

Another difficulty in adjusting supply and demand arose from the changes in technological methods of production, the introduction of the factory system, and the spread of modern capitalistic industry. One result was to lengthen the period required in the process of production. When we make machines to make machines to make still other machines and so on to get ready to produce a commodity, it involves long planning ahead and so greater risks. A second result follows from the increased use of fixed and highly specialized capital. Such capital goods cannot be easily diverted to other lines of production to meet variations in the demand. Also the overhead cost representing interest on the capital so invested becomes a large item, and the effort to cover it and reduce unit costs by increasing output often leads to overproduction and cutthroat competition involving heavy losses.

In addition to these characteristics of modern capitalistic industry common to any country, there were certain features in the economic life of the United States that tended to accentuate the cyclical swings of business. Most important was the unprecedentedly rapid pace of the country's development. This tended to create a spirit of unlimited optimism and speculation. The demand for lendable funds thus arising aggravated the serious abuses in banking methods previously described. Another feature was the predominant position of agriculture in the nation's economy. The marked fluctuations in the crops and the market price of a few great farm staples was a seriously disturbing factor in general business conditions. Finally, there was the undeveloped state of the knowledge of economics, all the more serious in a democracy, and of business methods. Adequate statistical data as to business conditions were almost totally lacking; cost accounting scarcely existed and often even the simplest accounting was ignored. Fallacious economic notions were widely held. Though other factors affecting the business cycle might be listed, these at least suggest some of the most important.

The Panic of 1819. The panic of 1819 was in part a product of the inevitable postwar readjustment; in part it was due to speculative activities engendered after the return of peace. The prices of imported goods, which had experienced much the most rapid rise up to 1815 (see the chart on page 221), dropped precipitately with the great influx of foreign goods on

the return of peace, thus spreading ruin among many of the infant manufacturing concerns. On the other hand, the prices of the great farm staples were sustained at a level around the 1814 peak until 1818 and then, when the European demand was sharply reduced, quickly dropped. These sustained high prices stimulated speculation in land, especially among the throng that surged to the West. In 1818, the sale of public lands rose to nearly 3.5 million acres, far exceeding any previous figure.

Though the pressure to resume specie payments in 1817 forced some contraction, chiefly in the East, the first serious trouble appeared in the middle of 1818 when the United States Bank was in difficulties. There fol-

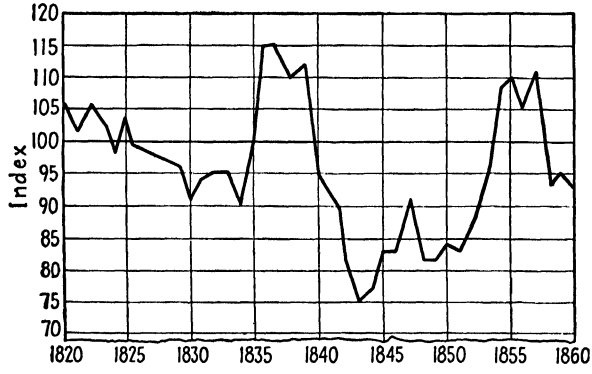


FIG. 26. Index numbers of wholesale prices, 1820–1860. (Based on the Warren and Pearson index. 1910–1914 = 100.)

lowed the decline in the European demand for foodstuffs and cotton, and prices quickly fell. The gathering storm broke in 1819. Within a few months cotton fell from 32 to 15 cents a pound, wheat from $2 to $1.05 a bushel, corn from 90 to 51 cents a bushel. The decline continued in 1820 until the general price level had finally returned to that prevailing before the outbreak of the European wars in 1793. Thus the abnormally high level of prices, engendered by war and maintained for a period the length of which is unequaled in the nation's history, came to an abrupt end.

The most acute distress was felt in the Middle Atlantic states and in the Ohio Valley, though the cotton belt was also hard hit. New England, at least the agricultural section, fared somewhat better. Banks suspended, commercial paper paid 3 per cent a month, rents in some cities were almost cut in half, and in many sections farm land suffered a still more drastic decline in value. Never before had there been such widespread unemployment, one observer estimating the total at 500,000. In New York City in 1820 a tenth of the people was said to be receiving poor relief, and for the first time the country was forced to consider the serious problem of

urban pauperism. Attempts to enforce the severe laws against debtors filled the prisons to overflowing.

As always at such times, a widespread demand for relief arose, and varied measures to provide this were advocated. The most extreme appeared in the West where the collapse of the land boom and drop in prices left the large debtor class, including those who had bought government land on the installment basis, facing ruin. To protect debtors, stay and replevin laws were passed and the statutes governing imprisonment for debt modified. When a Kentucky court declared one of these laws unconstitutional, the legislature abolished the court and created a new one. In the debt-ridden frontier communities, the legal rights of creditors received scant consideration at such times. Another device was to create new banks to issue notes to make loans to debtors. Kentucky, Illinois, and Tennessee adopted this plan, and Missouri created a loan office for the same purpose. This helped the debtors, but as the notes soon depreciated, the creditors and the public suffered.

The depression lasted longer in the West than elsewhere, but by 1823 more normal conditions prevailed, and there followed a decade with only moderate fluctuations in business, though a declining price level clouded the outlook and there was some financial pressure in 1825, 1828, and 1831.

The boom in business and speculative activity that culminated in the panic of 1837 began about 1833. The outstanding feature was the wild speculation in Western land which was carried to a point unequaled in the country's history. The sharp rise in the price of cotton increased the price of slaves and the cotton lands of the Southwest, and the advance in the prices of grain and livestock had a similar effect in the Northwest. Urban sites shared in the rise, notably in the newer communities like Chicago, but New York also had a great real-estate boom. In 1836, the sale of public lands reached much the highest figure on record (see the chart on page 252). Various factors contributed to this speculative land boom such as the great activity in canal and railroad building, the rapid increase in banks and bank notes after 1832, and the shift of government deposits to Western banks, facilitating their expansion, as the United States Bank neared its end. Another stimulus came from the inflow of both specie and foreign capital in unusual amounts. When the bubble finally burst in 1837, it produced one of the four most severe and prolonged crises in the country's history, the others occurring in 1873, 1893, and 1929.

The Panic of 1837. Among the immediate factors that precipitated the crash the most important was Jackson's Specie Circular of July, 1836, which, with minor exceptions, forbade the acceptance thereafter of anything but specie in payment for public lands and so ended the speculation carried on by aid of inflated bank-note issues. In the fall, trouble developed

in England, due partly to the previous drain of specie to the United States: three concerns with overextended credits in this country became financially involved and had to contract. Cotton began to fall in price, and American planters and brokers were unable to meet payments coming due. Domestic crop failures in 1835, 1837, and 1838 similarly affected other farm groups and necessitated imports of wheat. The distribution of the government surplus to the states starting in 1837 involved the shift of considerable deposits from the Western banks to the East and forced the former to contract their loans.

The panic broke in May, 1837, when the banks in New York were forced to suspend, followed by most of those in the rest of the country. In the ensuing reaction, New England suffered the least; Pennsylvania and the Southern and Western states the most. In New York and much of New England, the banks adopted a policy of severe contraction and favored the early resumption of specie payments, but elsewhere a policy of delay, extension of credits, and relief measures was advocated. By the early part of 1839, specie payments had been generally resumed, but another reaction soon set in.

In October, 1839, the United States Bank of Pennsylvania, involved in a vain speculative effort to keep up the price of cotton, suspended and in 1841 failed disastrously. Philadelphia banks followed suit, and most of those in the South and West that had previously been able to resume. Thereafter it was simply a question of giving the process of liquidation full time to run its course. Prices rapidly dropped and by 1843 reached one of the two lowest levels in the century; in New York City, rents had fallen 30 to 50 per cent by 1840, in Mississippi, land and slaves lost half their value. Banks failed by the hundred, and unemployment spread through the industrial centers. The usual crop of relief laws followed, chiefly in the states from Pennsylvania to the south and west. Many states suspended interest payments on their recent excessive bond issues, and some fell back on repudiation.

By 1842, the process of liquidation had fairly run its course, and the country was in the midst of the dull period of depression. People were much the sadder and somewhat the wiser for their disastrous experiments with speculation, hastily undertaken internal improvements, and reckless banking. The reaction led many states to adopt constitutional prohibitions against the use of state credit for internal improvements or banks and to make numerous reforms in their banking laws. The losses of government funds in the state banks led Congress in 1840 to create the Independent Treasury as a depository for such funds. The Whigs repealed the law in 1841, but in 1846, when the Democrats returned to power, a similar law was passed. In the Independent Treasury, the funds were at least safe and

subject to more certain control than when kept in the state banks, though subsequently there were times when government receipts considerably exceeded expenditures and money piled up in the Treasury, causing serious disturbances in the money market.

Starting about 1845, business conditions began to improve. The Irish famine followed by the repeal of the English corn laws hastened the rise in the price of foodstuffs and cotton also advanced. Economic and political disturbances abroad produced only a brief setback in 1847–1848. There then followed nearly a decade of great prosperity, sometimes referred to as the "Golden Age." The marked stimulus from the flood of California gold was supplemented by another period of rapid growth of banks and expansion in bank credit. With the sharp rise in prices after 1852, agriculture, manufacturing, and trade flourished. A new speculative boom in land developed in the West and the Southwest, though less extreme than that of the 1830's. A European crop failure in 1853 and the Crimean War, 1854–1856, increased the demand for foodstuffs and shipping. As cotton rose, the price of slaves advanced to the highest point in our history. Railroad construction reached an unprecedented volume, especially in the North Central states where it hastened the advance in land values. Over $800 million was invested in this construction, not a little coming from abroad as foreign capital, with renewed faith, again flowed in.

The Panic of 1857. Signs of coming trouble first appeared in 1854 when there was a brief panic on the New York Stock Exchange, a tight money market, and numerous failures, especially in the Ohio Valley region. The check was only temporary, and the boom continued until the summer of 1857. The panic that then occurred was very acute while it lasted, but its effects were felt most in financial circles rather than in industry in general. A financial stringency in Europe combined with abnormal imports augmented by a sugar-crop failure increased the outflow of specie at a time when country banks were withdrawing deposits from New York. Efforts to get New York banks to cooperate and extend their loans failed, and in the struggle of each bank to save itself a sharp contraction resulted. Trouble started in August with the failure of the Ohio Life-Insurance and Trust Company, which was really engaged in banking and heavily involved in the railroads. Failures rapidly multiplied; money was scarcely to be had on any terms; in October, all the New York banks but one agreed to suspend specie payments, their action being at once followed by most of the banks in the rest of the country with the notable exception of those in New Orleans. This action made possible a somewhat more orderly liquidation.

One of the chief causes of trouble was the great investment in new railroads, particularly in regions where it would take time to develop traffic enough to yield a fair return. The excessive use of bonds rather than stock

in financing the roads, which became common at this time, put many in a precarious position; railroad securities dropped, and banks having such holdings were forced to contract. In the autumn within a month some fourteen railroads proved unable to meet their obligations. The Western land speculation collapsed, railroad construction halted, imports declined, and much unemployment resulted. The cotton belt suffered less than other sections, as short crops kept up the price of its staple, and in the Ohio Valley the difficulties were probably no worse than in 1854. Being primarily a financial crisis, once the panicky stage had passed, the skies cleared and recovery was fairly rapid. Between November, 1857, and February, 1858, most banks in the Northeast had resumed specie payments, and within a few months resumption was general. Business quickly picked up and, until war seemed imminent, remained fairly prosperous.

The Rise of the Stock Exchange. Among the financial institutions that first became important during this period was the stock exchange. Its rise was due to the rapidly growing volume of bonds issued by various governmental units or of stocks and bonds issued by business concerns that adopted the corporate form of organization, and to the need for a highly organized market where securities could be bought and sold.

Apparently the first attempt at any organization among security dealers was in New York in 1792 when a group accustomed to gathering in Wall Street agreed upon a fixed commission charge. In 1800, the American Stock Exchange was organized in Philadelphia, then the financial center of the country, and in 1817 the New York Stock and Exchange Board was formed. At first, trading was chiefly in government bonds and the stocks of banks and insurance companies, the first railroad stock being listed in 1830. By this time New York was rapidly forging ahead of Philadelphia as the financial center of the country, and its stock exchange quickly assumed the preeminent position that it has held ever since. Boston then had the only other considerable security market and organized a Brokers' Board in 1834. The speculative activities of the 1830's brought a marked increase in the stock-exchange business, and the newspapers began to give it more attention. From that decade on, the dealings in railroad securities rapidly increased and by the 1850's they predominated in the trade on the exchanges. National, state, and local bonds were next in importance, and there was a growing trade in the stock of banks, insurance companies, gas and coal companies. In Boston, stocks of textile corporations and, in the 1850's, of copper-mining companies were also prominent. Even though attended by the evils of manipulation and gambling, the stock exchange provided for securities the advantages accruing from any highly organized market.

The Development of Insurance. Another important development during this period was in the field of insurance, notably the rise of fire and

life insurance. Marine insurance—practically the only form of insurance available in colonial times—now passed largely into the hands of companies, and in the early years some of these began to provide insurance against fire. Up to the great New York fire in 1835, most of the fire companies organized were local in character. The danger of so concentrating their risks in one place was shown by the failure of most of the New York companies at that time, and the following years brought many reforms. The expansion of the territory covered, furthered by the general adoption of the agency system, scattered the risks and, by increasing the volume of risks carried, lessened the likelihood of overwhelming losses in any year by giving a broader basis for the play of the law of averages. The unsound financial management of many companies led to laws providing for state control and the creation of state insurance commissioners or departments. There was also a movement to lessen fire risks and losses. In a few cities, paid fire departments replaced the old volunteer companies, and insistence on precautions to prevent fires became more general.

Insurance companies were organized either as stock companies where the profits went to the stockholders or as mutual companies where any profits were returned in one form or another to the policyholders and thus reduced the cost of their insurance. At this period there was a marked growth in popular favor of the mutual plan. Some mutuals confined their business to one class of risks. Farmers' mutuals appeared about 1820; by 1850 there were over 100, mostly in the Northeast and doing a small local business. The first factory mutual was formed in 1835; half a dozen more were organized by 1860. Their risks were confined chiefly to textile mills and, by insisting on fire-preventive measures, they substantially cut insurance costs. The absolute necessity of property insurance to provide a basis for credit, security, and stability for business enterprise, as well as to protect individuals against loss of home and property, is so generally accepted today that one wonders how people got along before it was available. That it was widely welcomed is clear for, by 1860, about $3 billion of fire and marine insurance was estimated as in force.

A recognition of the desirability of life insurance developed far more slowly. Since the immediate advantages inured chiefly to the family—life insurance to protect a business not being thought of—the provision of this safeguard was left to the decision of each individual. In 1800, there was practically no regular life insurance in force. A few people held annuities; occasionally people got insurance for a sea trip; one company, the only business corporation to do so before 1800, may have written half a dozen life policies. A little more interest developed up to 1830, though short-term insurance or annuities were most in favor. Underwriting by private individuals was abandoned during this time, but most companies offering life

insurance or annuities were engaged chiefly in some other form of insurance or in the trust company business and did little to push the sale of life policies.

The 1830's witnessed a growing interest and activity in this field, but it was not until 1843, when revolutionary changes were introduced, that the rapid expansion of the life-insurance business started. Among the changes then inaugurated was the divorce of the life companies from other forms of insurance or the trust-company business, the new companies then formed, including some of the leaders of today, being exclusively life companies. Companies organized on the mutual or participating basis soon far surpassed the stock companies in importance, and the agency system was adopted to push sales aggressively. Insurance for life instead of for a short term or an annuity became customary, soon constituting most of the business; and progress in actuarial science put insurance on a sounder financial basis. The Census of 1860 estimated that there were then forty-seven life-insurance companies with policies on 60,000 lives for a total of $180 million. Though probably an underestimate, it is clear that even then life insurance was just beginning to win popular support; its advantages in promoting savings and in distributing more evenly the financial burdens resulting from death were still but slightly appreciated.

Capital and Its Accumulation. With the growth of roads, canals, and railroads, the increased use of machinery in production, the rise of factories, and the expansion of trade, capital was steadily becoming a more important and essential factor of production. A rapid increase in the supply was therefore necessary, not only to further the country's development but also to enable the people to supply their wants more economically. This was the more desirable since capital continued to be scarcer and interest rates higher than in the countries of western Europe. This disparity, however, was less marked than in colonial times, and the factors contributing to the improvement need explanation.

The accumulation of capital within a country, as previously noted, depends upon (1) the amount of the annual output of wealth that can be saved and (2) the portion of this savable fund that is actually saved as determined by the effective desire of accumulation. Though accurate data are lacking, the annual output of wealth undoubtedly increased more rapidly than the population during this period and thus the savable fund grew. This was due to all the developments in science and the economic order that tended to increased efficiency in production. Yet not all of the larger savable fund was saved; there was an increased per capita outlay for consumers' goods; the actual standard of living of most people rose. Despite this greater deduction from the savable fund, a larger amount was actually saved. This was due to a desire to save more as well as to the larger savable fund.

The wish to save more was a product of many factors only a few of which can be noted. The spread of education increased people's foresight and their determination to safeguard their future by provision against a rainy day. Also it increased their wants and led to saving so that in the future they or their children might enjoy a higher standard of living. The maintenance of peace and order and the greater safeguarding of property rights, by increasing the assurance that those who saved would enjoy the fruit of their abstinence, stimulated thrift. The absence of any serious and prolonged war added to the sense of security and minimized the waste of wealth that war involves. In time of peace, the insignificant outlay for defense aroused the envy of Europeans with their heavy burden of armament and military service. Finally, the development of financial institutions such as savings banks, trust companies, and insurance, gave an impetus to saving, not only by providing places of safekeeping, but by paying interest on the funds saved and helping to direct investments into lines where they would be more secure and profitable.

In addition to the domestic savings, the supply of capital was increased by the funds brought by immigrants—partly offset by their remittances home—and by the inflow of foreign capital to take advantage of the high rate of return obtainable. As the credit of the nation and of the states improved and the great future of the country became assured, foreign investments rapidly increased, to say nothing of the short-term mercantile or banking credits secured from abroad. At first, much of this capital was invested in land, government bonds, or stock of the two United States Banks; some went into canals and manufacturing enterprises. In the 1820's foreign banking houses began to establish branches or agents here and American private bankers secured better financial connections abroad, thus facilitating international transactions. In the earlier 1830's, many of the new state bond issues were sold abroad and a little later some of the new railroad securities. The collapse after 1837 stopped this and led to withdrawals, but confidence soon returned and the 1850's witnessed a heavy inflow much of which went into railroads. The permanent foreign investments, estimated at nearly $200 million in 1850, had about doubled by 1860. Most of this capital came from Great Britain; France and thrifty Holland were the two other chief sources.

The total national wealth of the country in 1790 has been roughly estimated at $552 million or $171 per capita for the free population. Of this total nearly two-thirds represented buildings and real estate, and most of the remainder was about equally divided between slaves and personal property. By 1860, the estimated national wealth subject to taxation had risen to over $16 billion or $590 per capita for the free population. This increase, even after allowing for the higher price level of 1860, meant an

enormous growth in the economic resources of the nation and a marked advance in the material well-being of the people. Doubtless the greater portion represented a growth in dwelling houses and land values, and only a part of the latter could be attributed to capital spent in improving the land itself. Yet a substantial proportion must have represented an increase in capital goods taking the form of internal improvements, factories, machinery, shipping, stores, office buildings, etc., made possible by the net savings which each generation added to those inherited from the preceding generation to increase the productive power of that which followed.

The Mobility and Distribution of Capital. In addition to the gain secured by the greater supply of capital, there were gains (1) from the improved quality of the capital goods and (2) from the greater mobility of capital. The former was the product of all the technological progress which led to the introduction of better tools, machines, equipment, factories, etc., tending to make these capital goods more efficient. The greater mobility of capital was largely a product of the development of financial institutions previously noted, but the improved means of communication also aided. Though lendable capital is the most mobile of the four factors of production, even it does not move with perfect freedom. The developments in banking, insurance, stock exchanges, corporation law, and protection of property rights during this period all increased the mobility of capital; in this country they facilitated the flow of capital from the wealthy Northeast to the South and the West, as well as stimulating the inflow from abroad. This added mobility increased the likelihood that capital would be diverted to the places and the industries where it would prove most productive and so augment the efficiency of the national economy.

Usury laws fixing the maximum legal rates of interest existed in most states and might have lessened the mobility of capital, but they had little effect. Though justifiable if intelligently drawn up to protect the ignorant and poor who borrow chiefly for consumption needs, such attempts to fix the price of capital borrowed for investment purposes are fairly certain to fail; for if the market rate of interest is above the legal limit, either the law will be evaded or, if actually enforced, capital is so mobile it will go elsewhere and so increase its scarcity in the enforcing state. Somewhat more influential were various state laws designed to keep local funds at home by discriminating against loans outside the state.

Along with the general increase in wealth and capital, private fortunes grew in size; millionaires, apparently unknown before 1775, became common and multimillionaires arose, the $20 million estate left by John Jacob Astor in 1848 being the largest known before 1860. In colonial days, land and trade had been the chief sources of large fortunes. During this period, the rise of urban real estate values became a more important factor while

foreign trade declined in relative importance. New sources of large fortunes appeared with the growth of manufacturing, mining, railroads, banking, and security speculation. Such fortunes further increased the disparity between the very rich and the poor. This growth of private wealth tended to give its possessors greater influence in the economic and social life of the time; in political life, it was somewhat offset by the spread of democracy.

Chapter XXVI

THE STATE AND THE ECONOMIC ORDER

Introduction. In the interaction between the economic life and the political institutions of the country during this period, two factors played a predominant part. One was the steadily growing demand for a more truly democratic and representative government. The ideals underlying the revolutionary movement had by no means been carried out to their logical conclusions in the political institutions that were afterward set up, for the Constitution reflected a fear of the masses; the same was true of the state governments, though they represented an advance over those of colonial times. History reflects an agelong struggle of man to attain the ideals of democracy, and the whole social environment in the United States during this period, just as in colonial times, tended to accentuate this demand. The results were reflected in a marked broadening of the franchise and in the various changes designed to give the people a more immediate and direct control in the affairs of the state.

The second factor was the rapid economic development of the country and the marked changes in the organization of industrial society. The state performs so numerous and such important functions in the economic life of a people that the interaction between political and economic institutions is very close, and basic changes in either generally necessitate changes in the other so as to secure the proper coordination between the two. During most periods in American history, the changes in the economic order have been taking place more rapidly than those in political institutions and legislation; the former have set the pace, and the latter have tended to lag behind. In this period such changes as followed the opening up of the West, the introduction of railroads, the rise of the factory system, the spread of banking, the increase of the laboring class, the growth of cities, and the development of a national economy created new problems and necessitated much legislation and alteration in government so as to enable the state to function more successfully in promoting the economic development and the general welfare of the nation.

As the state was called upon to assume greater activities, both in the form of regulation and in that of providing goods and services deemed important for the promotion of the general welfare, the cost of government rose and the problem of securing the needed revenue became more serious.

The Broadening of Suffrage Rights. The outstanding result of the demand of the people for more complete control in government was the rapid broadening of the suffrage rights, chiefly through the practical elimination of all qualifications based upon wealth either in the form of ownership of property or in the payment of taxes, which were the only important limitations left on white male suffrage following the elimination of religious restrictions after the Revolution. The struggle to abolish the restrictions based on wealth was confined largely to the original thirteen states, for the democratizing influence of the West and the spirit of the times were such that only four of the states later admitted to the Union came in with such limitations in their constitutions.

Typically, the first step, seen even before 1775, was to accept ownership of personal property, which was rapidly growing in importance, as an alternative for ownership of real property. Next came a reduction in the amount of property that had to be owned, or the acceptance of the payment of taxes, either as an alternative to property ownership or as the only requirement. Finally, the requirement was abolished altogether. After 1821, property ownership remained a requirement in but five states; it disappeared entirely in 1856. The tax-paying requirement remained in but five states after 1851, but it amounted to little more than a nominal registration fee. Thus during this period, another step was taken toward the attainment of the ideals that underlay the Revolution.

The elimination of these restrictions, however, helped to raise the issue of new limitations, the franchise rights of the free Negro and the alien being the chief points of controversy. Despite the abolition of slavery in the North, there were but six states, New York and five in New England, where the Negro was not excluded from the ballot box in 1860. The great influx of immigrants, so many of whom settled in the cities where they were used by the political rings to control local politics, as in the case of Tammany Hall, gave rise to the question of the alien vote which was the chief suffrage controversy between 1845 and 1860. The opposition to aliens centered in the Northeast and led to the rise of the Native American or Know-Nothing party which attained its greatest strength in the 1850's. The South, believing that aliens were hostile to slavery, generally opposed granting them the ballot. In the Northwest, however, where they sought to attract immigrants, aliens were more commonly granted franchise rights, often after only 6 months' residence. Though the agitation for woman's rights led to a demand for woman's suffrage following the first woman's convention in 1848, it secured too little support to yield any results. The extension of the ballot to practically all white male citizens enabled this group to protect its economic or other interests, as far as the free exercise of the right to vote permitted, and had far-reaching reactions on economic legislation.

The Developments in State Government. The most significant trend in state government at this time was that to give the people a more direct control of affairs. This became most marked after about 1830 under the stimulus of Jacksonian democracy and the organization of new states in the West. Amendment of state constitutions was made easier, and frequent constitutional conventions made possible more sweeping changes; the practice of submitting both amendments and new constitutions to the people for final approval became customary. Property and religious qualifications for office holding disappeared along with those for suffrage, and more and more state officials and judges were chosen by popular vote instead of by appointment. A bicameral legislature, usually meeting every 2 years, became customary, and efforts were made to adjust representation in accordance with population changes. But the power of the legislature was increasingly limited by the new constitutions and by giving the popularly elected governor the veto power, including the right to veto specific items in appropriation bills. The legislatures also lost the choice of Federal representatives and presidential electors, which was granted to the people. Just as in the case of the extension of suffrage rights, this process of democratization went on more slowly in the older seaboard states, where vested interests and mere inertia stood in the way, than in the newer states to the west where the traditions established under the Ordinance of 1787 combined with the frontier environment left such a strong impress upon political institutions.

The changing economic life of the time was reflected in the state governments, partly in the form of provisions for the assumption of new activities by the states in providing for various wants, and partly in regulatory measures designed to curb different evils that had appeared. Most of these have previously been noted and need be summarized here only as indicating the general trend of development.

Where the state attempted to provide for certain wants, it was usually either because the need was one which it was believed the state rather than private enterprise ought to supply, or else because the want was so urgent and the outlay so large or the risks so great that sufficient private capital was not likely to be forthcoming. The former reason was responsible for but few activities outside of those almost invariably performed by the state, such as the maintenance of courts and the provision for a militia. The latter reason chiefly explains the state internal improvements, the use of state credit to aid railroads, and the creation of state-owned banks.

However, the state did require its subordinate political units to provide for certain needs and occasionally, on a limited scale, undertook such provision itself. The provision for education was the most important development of this type; road building was another; care for the poor, criminals,

and insane may be included here. More significant as far as state action is concerned were the regulatory measures designed to meet the problems arising from economic changes such as the laws dealing with banking, insurance, railroads, labor, and corporations.

The Development of Local Government. In local as well as in state government, an increasing number of important county, town, and city officials were made elective, this being the chief change in the older states. In the new states, the forms of local government adopted closely followed those prevalent in the states of the same latitude to the east, partly because they were settled chiefly by people from those states, partly because economic conditions were more nearly similar.

Thus in the Southwest, with a widely dispersed agricultural population, the county was the dominant unit of local government as it had been in the old South. In the Northwest, where agriculture predominated but villages and towns were frequent, the system adopted more closely resembled that of the Middle Atlantic states where the functions of local government were more evenly divided between the county and the township, though the county was generally more important and the town never so predominant as in New England. Throughout the country, when a considerable population had become concentrated in one place, the need for government of a comprehensive type was provided by the incorporation of towns or cities.

The activities of these local governments, both positive and regulatory, were much the same as in earlier times, the most important including the levying and collecting of taxes, the maintenance of law and order, the administration of justice in the local courts, the construction and upkeep of roads, the care of the poor, and the holding of elections. During this period, there was generally added the maintenance of public schools, often placed under a special political unit known as the "school district." On the other hand, with the separation of church and state, the support of the church ceased to be a governmental function. Many of the detailed regulatory activities of the New England Puritan type were abandoned, and few were ever adopted in the more liberal and cosmopolitan West. Large towns and cities, as they grew and became incorporated, began to assume the more numerous functions of the modern municipality, which increased as the size of the place either made them necessary or rendered their support less burdensome for each individual. Among these activities were lighting, waste disposal and sewerage, the preservation of public health, fire protection, water supply, and maintenance of parks. Outside of the fields where municipal action became absolutely necessary, such as public health, the community was apt to remain content with relying on private initiative and philanthropy to provide many of these services. The general desire

for the greatest freedom of action tended to favor the laissez-faire policy almost everywhere; yet the force of changing conditions creating new problems, somewhat augmented by the rising spirit of democracy and humanitarianism, was compelling the government to assume greater activities, though chiefly in the fields under state and local control.

State Finance. Until after 1820, the activities of the states were so limited that their expenses, except in time of war, were kept at a low level, generally between $100,000 and $200,000 a year. As their revenue was ordinarily sufficient to cover their outlay, practically all states outside of New York had little or no debt. Then the states began to sell bonds to finance internal improvements and banks, some $26 million being put out in the 1820's, chiefly for canal construction. In the speculative era that followed, this policy ran riot and by the close of 1836 nearly $150 million more of state bonds had been issued. In 1838 out of a total of $172 million outstanding, $60 million had been put out to finance canals, $54 million for banks, and $42 million for railroads, chiefly in the trans-Allegheny region.

When most of these enterprises failed after 1837, instead of yielding a revenue that would enable the states to reduce taxes, as had been hoped, many of the issuing states found themselves in a desperate financial plight. In most of these, interest payments were suspended or made in script; Mississippi, Florida, and Michigan fell back on repudiation of some of their issues. The Eastern states resorted to increased taxes, but such a policy was violently opposed in the West. In some states, new loans were obtained, though only under onerous terms, and by 1841 the total of outstanding state bonds was around $200 million. An effort was then made to get the Federal government to assume the state debts, but it failed.

By 1850, the worst of the states' financial difficulties had passed, and the lessons learned were yielding some reforms. Whereas no state had had constitutional limits on its debt before 1840, nineteen states adopted some form of limitation within the next 15 years, and eleven prohibited the state from lending its credit to, or becoming a stockholder in, these state enterprises. Gradually the states disposed of many of the undertakings in which they had become financially interested, often at a heavy loss. Yet previous experience did not prevent many Southern and Western states from endorsing railroad bonds or issuing their own bonds to aid railroads during the boom years in the 1850's. The total of state debts, estimated at $192 million in 1853, had risen to around $257 million in 1860.

For revenue, most states depended chiefly on the general property tax, especially those in the South and the West. As corporations rose in importance, the states began to impose special taxes on the different classes. Banks were first singled out for this purpose and later, in some states,

insurance companies; but unless we add the special provisions for taxing railroads (sometimes inserted in their charters) these were the only important groups of corporations so taxed before 1860. The property of other corporations, being mostly in tangible form, was subject to the general property tax.

A variety of minor forms of taxation or fees were employed by one state or another at different periods. There was also some state-owned property that yielded a revenue in addition to such as was obtained from the state investments in banks and internal improvements, the most important being that from the sale of state lands during the earlier portion of the period. Finally, there were the grants received from the Federal government, described elsewhere. Outside of the debt burden resulting from state enterprises, state expenses were small and were ordinarily covered by revenue. In 1839, ten of the states—only one of them west of the Appalachians—had little or no debt, and by 1860 the number had slightly increased. It was the desire to hasten development by state enterprises that was responsible for most of the difficulties in state finance during this period; New England, where Massachusetts alone indulged in the practice, but very moderately, was the only section to escape these troubles.

Local and Municipal Finance. Though no comprehensive data on local finance are available for this period, the activities of the local units of government were so much more extensive than those of the states that their total expenditures must have been considerably greater. Certainly this would be true outside of the states extensively involved in banking and internal improvements. The chief items of expenditure among the towns, villages, and counties were those for streets, roads, bridges, schools, the maintenance of peace and order, support of the poor, public buildings, courts and jails, elections, and general administration.

Nearly everywhere the main source of local revenue was the general property tax, commonly made up of specific levies for the town, the school district, the county, and the state. The total levy of general property taxes for the whole country in 1860 has been estimated at $94 million, most of which went to the local political units. Other sources of revenue varied considerably and were seldom very important, the largest sums probably being obtained from the different license charges and fees. Taxes were generally adjusted to meet the ordinary expenses, but unusual and heavy outlays for such things as public buildings and bridges, were commonly met by borrowing on a bond issue. Sometimes towns and counties, like the states, sought to aid various enterprises, chiefly railroads, and sold their bonds for this purpose.

In the larger cities, the more numerous and extensive activities made the problems of finance assume larger proportions. Expenditures for streets,

sewers, water works, public health, schools, police, lighting, various public institutions, and interest on the debt mounted rapidly. In New York the total expenditures including interest were nearly $8.5 million in 1860 or $10.62 per capita, the latter figure being over three times that for 1830. In Boston city expenditures in 1860 were about $3.5 million and in Baltimore nearly as much. By that date New York had piled up a debt of $23 million, while the debts of Philadelphia, New Orleans, and Boston fell between that and $8.5 million. In most cases, these debts were incurred for local improvements; in some instances, they were created to aid railroads, notably in Philadelphia and Baltimore, each of which issued about $8 million for this purpose. The general property tax was the main reliance for municipal revenue, but the larger cities also secured considerable amounts from a variety of other sources such as license charges or fees, special assessments for public improvements, and productive property like the water system. Although no figures for the total of local and municipal indebtedness are available before 1870, when the amount was over $500 million, there is little reason to doubt that it exceeded the total of the state debts in 1860 and so constituted the largest item in the total of all public indebtedness.

The Development and Activities of the Federal Government. Aside from the Bill of Rights embodied in the first ten amendments of the Constitution, the Eleventh Amendment denying the Federal courts jurisdiction over any suit against a state by citizens of other states or countries, and the Twelfth Amendment further defining the methods for choosing the President and Vice-President, no changes had been made in the Constitution up to 1860. Consequently such development of activities on the part of the Federal government as occurred during this period was determined by the decision to exercise its powers within the narrow limits originally granted and by the Supreme Court's interpretation of those limits.

After the new Constitution went into effect in 1789, the Federal government, in addition to assuming such obvious and necessary activities as the establishment of courts, the provision for defense, the conduct of foreign affairs, and the levying of taxes, established the post-office service, provided for a mint and coinage, and chartered the United States Bank. During the first three administrations, the Federalists were in control and they strove to broaden the activities and increase the power of the central government. The widespread spirit of individualism and the fear lest states' rights be endangered led to a reaction against this tendency, and the opposition was increased by the feeling that the Federalists were too closely allied with wealthy classes engaged in commerce, finance, manufacturing, or slaveholding and neglected the interests of the masses, particularly those of the small farmers.

This reaction led to the election of Jefferson as President in 1800 and the advent into power of the Republican party, as it was then called, which stood for a strict construction of the Constitution and a minimizing of the Federal activities. However, the force of circumstances and practical expediency impelled Jefferson and certain of his followers to deviate somewhat from their principles in actual practice. The purchase of Louisiana was accepted in spite of their constitutional scruples; construction of a national turnpike was authorized, though Madison and Monroe put a check upon internal improvements, and a second United States Bank was chartered. Under President J. Q. Adams the Federal government did more for internal improvements; under Jackson, this activity was once more checked. Meantime, the Supreme Court, under Chief Justice Marshall, 1801–1835, had handed down many important constitutional decisions which tended to strengthen the powers of the Federal government. Subsequently under Chief Justice Taney, 1836–1864, the strict constructionist point of view tended to dominate. In Congress the growing influence of the South, a section increasingly insistent on upholding the doctrine of states' rights to protect its interest in slavery and a low tariff, was exerted to curb the activities of the Federal government. This, however, did not prevent frequent appeals to Congress to aid the states by grants of land or the distribution of Federal funds, and in this indirect manner the central government promoted state activities.

Among the activities assumed by the Federal government, outside of the more essential, may be noted: the survey and sale of the public domain, control of the Indians and their trade, the coast and geodetic survey and lighthouse service, the issuing of patents and copyrights, the bureau of navigation, the consular service, and the census. For the most part, these activities were of a positive character. The regulative activities were reduced to a minimum by the constitutional limitations, the strength of states' rights groups, the belief in *laissez faire*, and the strong spirit of individualism. Where action by the Federal government was wanted, it was generally for the purpose of assisting rather than for controlling the economic activities of the people.

The Finances of the Federal Government. By 1816, as a result of war borrowing, the national debt stood at $127 million. The revival of imports and higher duties increased customs revenue and, combined with the increased receipts from the sale of public lands, produced such a surplus that the internal revenue taxes were quickly repealed and the debt substantially reduced. After the panic of 1819, the drop in customs receipts, the item that yielded about nine-tenths of the revenue, resulted in a small deficit for 3 years in the early 1820's, but from 1825 on there was an annual surplus of $6 million or more most of which was used to reduce the debts

(see the charts on page 403). During the prosperous 1830's and in spite of greater expenditures, this surplus rapidly mounted, owing to increased customs revenue and the unprecedented sale of public lands. This was the only period in our history when the receipts from the sale of public lands became an important item in the revenue; in 1836 for the first and last time they actually exceeded the receipts from customs duties; for the whole decade they provided about one-quarter of the total revenue. Through this surplus, the national debt was practically extinguished in 1835. For a young country to pay off its debt so promptly was regarded as a great achievement and did much to establish the nation's credit in Europe.

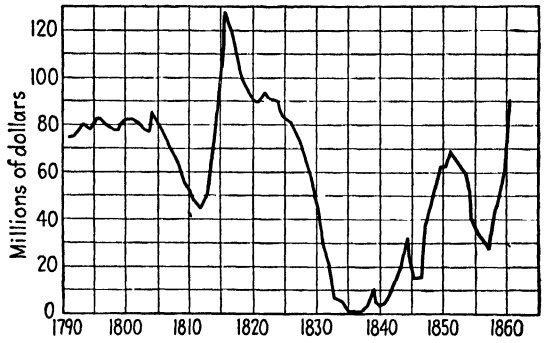


FIG. 27. Principal of the national debt, 1790–1860.

The states had long been viewing with envious eyes the prosperous condition of the Federal treasury so that, when the debt was paid off and revenue continued to pour in, thus raising the problem of what to do with the surplus, they had a ready answer. The solution adopted in 1836 was an act distributing among the states the surplus above $5 million in the treasury on Jan. 1, 1837, which amounted to some $37 million. Technically, to overcome the constitutional scruples of some, this took the form of a loan, but it was generally understood that the states would not be asked to return it, and they never have. The distribution was to be made in quarterly installments during 1837, but when the panic turned the surplus into a deficit, payment of the fourth installment was stopped.

Deficits continued, except for one year, until 1844, and so the government again went into debt. The Mexican War, 1846–1848, entailed no serious financial strain, the additional army and navy expenditures being about $64 million; but no effort was made to increase taxes, so borrowing became necessary and by 1848 the total debt stood at $63 million. At this time, in marked contrast with the situation, 1812–1814, the government was able to sell its 6 per cent bonds at par or above and for specie, so great had been the increase in the nation's wealth and the improvement in its credit.

In the prosperous 1850's, the customs revenue, which still made up about nine-tenths of all revenue, more than doubled, and there was also a sub-

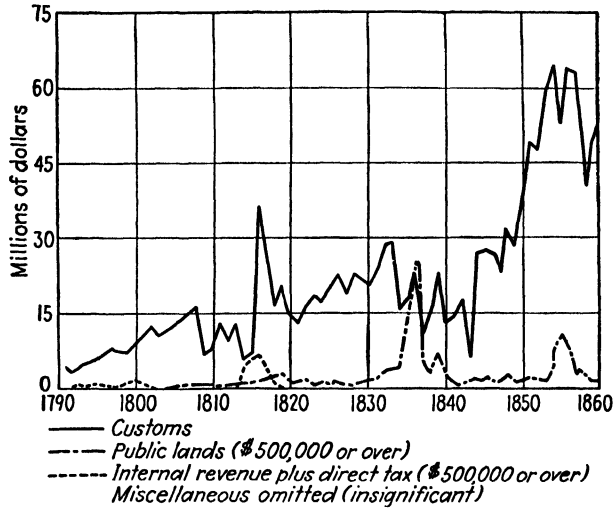


FIG. 28. Ordinary receipts of the Federal government, 1791–1860.

stantial increase in that from the public land sales. The flush treasury, as usual, led to a rapid rise in expenditures. Previous to 1812, total yearly Federal expenditures had only twice exceeded $10 million; in the 1820's

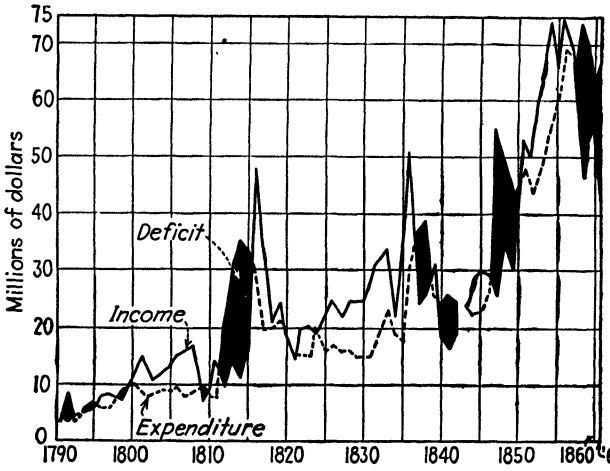


FIG. 29. Total ordinary receipts and expenditures of the Federal government, 1791–1861.

they fluctuated around $16 million and in the 1840's around $25 million; in the 1850's this was more than doubled, and a peak of $74 million was reached in 1858. Nearly three-quarters of the Federal outlay was for

purposes of defense, including under this head that for the army and navy, pensions, and interest on the debt. Despite the rising outlay of the 1850's, more of which was used for civilian purposes, there was a surplus which was employed to cut the debt to $28 million in 1857. The panic of that year, as usual, brought a deficit which continued through the rest of the period, and the resulting borrowing raised the debt to $64 million in 1860.

This period well illustrates the undesirable consequences of relying heavily for revenue upon a source so subject to great fluctuations as customs receipts. Since the bulk of the expenditures was relatively fixed in time of peace, or at least not subject to similar changes, the fluctuations in receipts resulted either in a large surplus, which tempted Congress to extravagant expenditures, or in a deficit, which necessitated borrowing. Also it was likely to lead to tariff changes which had a disturbing effect upon business. The lack of any system for drawing up a regular budget only aggravated these difficulties.

SUMMARY OF THE COUNTRY'S ECONOMIC DEVELOPMENT, 1816–1860

Having surveyed the various fields of economic development during the period 1816–1860, we can summarize the results for the purpose of obtaining a clearer idea of the basic factors responsible for the progress made in enabling the people to raise their standard of living and increase the economic power of the nation. This progress was attained chiefly through (1) increasing the economically available supplies and improving the quality of the four agents of production: natural resources, labor, capital, and business management, (2) the increase in knowledge secured by the advance in the natural and social sciences, and (3) the development of economic or other social institutions which introduced a more efficiently functioning economic order. These factors will be taken up in the order named.

The nation's natural resources were largely augmented during this period by the acquisition of new territory—Florida, Texas, Oregon, California, and the Gadsden Purchase. Though enormous in extent, much of this new territory, because of its semiarid character, was unsuited for ordinary methods of agriculture and incapable of sustaining so dense a population as most of the rest of the country. However, it did contain forests, minerals, and grazing land which were important additions to the nation's natural resources. In both the new and the older sections of the country, the economically significant resources were being increased by exploration, new scientific processes, the westward movement of population, and the introduction of better transport facilities.

The growth of the labor supply was primarily a product of the continued

high rate of the natural increase in the population, though this was augmented by the rising influx of immigrants. The result was that by 1860 the population had surpassed that of the United Kingdom and almost equaled that of France or Germany. This, combined with the expansion of territory and economic growth, gave the nation a position among the world powers. The spirit of work that characterized the people continued unabated, and the spread of education helped to increase the efficiency of the workers. The mobility of labor, as between both regions and occupations, increased the likelihood that potential capacities would be employed in the most productive way. Yet the demand for labor kept pace with the supply so that, compared with Europe, labor still remained a relatively scarce factor of production.

The supply of capital goods was also increased at a rapid rate, chiefly by the savings accumulated from the rising national income, but to a small extent from the inflow of foreign capital. The productive capacity of each new generation was increased by the larger per capita supply inherited from the preceding generation. But the demand for capital also rose rapidly so that it still remained scarce as compared with Europe, though the disparity was less than in colonial times.

General conditions favored the development of an able group of entrepreneurs. Since there was no serious social taboo upon engaging in business and the accumulation of wealth was increasingly recognized as giving power and social prestige, many of the ablest men entered business. The unusual economic opportunities being opened up combined with the freedom of individual initiative, permitted and helped to foster the full development of their abilities in this field of endeavor. The lack of stratified classes and the relative ease of shifts between economic groups made it more likely that latent ability would be developed and used; the ambition, energy, and adaptability of such people favored success; and the optimism that induced them to take great risks was frequently justified by the remarkable rapidity of the country's development.

Although the absolute increase in the factors of production was the basis of the growth in power and prestige of the nation, the progress in the economic condition of the people was promoted chiefly by the advances made in the methods in which these factors were employed in the production of economic goods and services due to (1) the progress of science and (2) the evolution in the organization of the economic order. Nor should it be overlooked that the very increase in the supply of the factors of production was in no small measure a product of these other developments.

Concerning the advance of knowledge in the sciences and its application, little has been recorded in the preceding chapters; yet this was one of the most important factors in promoting the increase in the production

of wealth and the economic progress of the people. In chemistry, physics, and geology discoveries were being made that gave man a better understanding of his physical environment and thus enabled him to make greater use of the forces and resources of nature—to cooperate more effectively with nature—in the effort to supply his wants. As this knowledge was applied in mining, metallurgy, or engineering and took form as an improved quality of capital goods in innumerable inventions, only a few of which have been mentioned, it transformed the methods of producing wealth. These developments underlay the growth of mining, the revolution in methods of transport and communication, and the rise of the factory system in manufacturing. Progress in the biological sciences as well as in chemistry furthered the adoption of better methods in agriculture, and the advance in medicine played a part in increasing the supply and improving the quality of labor.

The increased attention given to the study of the social sciences such as history, government, and economics helped to develop a better understanding of man's social processes and of the conditions under which social institutions could be made to function more effectively. In economics, which is commonly said to have begun as an organized scientific study only with the publication of Adam Smith's "Wealth of Nations" in 1776, marked progress was made in the formulation of its principles and their application to current problems. For the first time, a course in the subject began to be offered in colleges, but among most ignorance or neglect of its principles prevailed.

The evolution in the economic order that took place was primarily determined by the technological developments resulting from the progress of science. The outstanding feature in that evolution was the tendency toward increased division of labor and specialization of functions which was evident in every phase of economic activity. In the use of the different factors of production, this was reflected in the trend toward regional specialization, not only within the United States but also on a more nearly world-wide basis, thus increasing the chance to secure products more economically. In the case of labor, workers increasingly concentrated on one process, and machines took over others. The growth of different classes rendering personal services and the rise of the highly trained professions illustrate the same point.

The forms that capital goods took also became more specialized; the new machines were only highly specialized tools; buildings also became more specialized in construction and use. As the size of business undertakings grew and the problems of organization became more complicated, greater specialization in the various functions of business management became necessary for efficiency. The growing use of the corporation simply reflected

the advantages of a form of business organization where there was greater specialization of the functions of owner, creditor, and manager than in the partnership or individual ownership. Finally, as will be described shortly, this specialization in the use of the factors of production promoted specialization in the methods and institutions through which the economic activity of the country was carried on.

This specializing tendency was a product of various factors, most of which are covered by the common statement that specialization is limited by technological processes and by the extent of the market. The progress in science and invention improved technological processes so as to make specialization possible. But specialization is not economical unless there is a sufficient market to justify production on a large scale. The cost of plant and machinery or of technical training is so great that this overhead must be spread over a large volume of output to reduce the cost for each unit of product to a low level. To take full advantage of the degree of specialization made possible by technological and scientific advances, there must be a widening of the market; in fact each reacts upon the other to further the process.

The growth of the markets during this period was a product of various interacting factors. The growth in the per capita national income would have enabled even a fixed population to consume more goods. Added to this, however, was the great growth of population within the country, not to mention that in other countries with which we traded. Both of these developments increased the market for goods within a given area. Finally, the market area for most commodities produced at a given place was greatly extended by all the improvements in the means of transportation and communication previously described.

Also, as trade increased in volume so that greater specialization in the various middlemen's functions became economical, there arose numerous institutions and groups of individuals that engaged in carrying on these specialized activities. Wholesalers and retailers, brokers, commission houses, jobbers, traveling salesmen, importers, exporters, warehousemen, and produce exchanges first appeared or became more common in one or another branch of trade. Through the greater efficiency so secured, a further reduction in the cost of the middlemen's services was made which also increased the extent of the market and furthered the trend toward specialization.

The marked developments in the field of financial institutions during this period facilitated all forms of trade and promoted a better allocation of economic resources. A fairly adequate supply of specie for the circulating medium was secured, though not until the last decade of the period. There was a decided improvement in the quality of the paper money in most

sections, even if the bank notes were still defective in certain respects in 1860. The rapid spread of banking institutions, the beginnings of specialization in the form of savings banks and trust companies, and the steady though slow progress in banking practices, wrought a vast change in the conditions under which financial transactions were carried on. The rise of the real-estate mortgage business, the introduction of stock exchanges, and the spread of various forms of insurance brought similar results. By these means, the accumulation of capital was stimulated, and its flow into the most productive uses was facilitated, both by increasing its mobility and by providing more intelligent guidance in its investment. Similarly, domestic and foreign trade was aided by the improved facilities for carrying out the financial transactions involved.

Although the part played by the state and political institutions in this economic progress must not be overlooked, the policy of *laissez faire* and freedom of individual initiative was dominant at this time. Where individual enterprise seemed unable or unwilling to finance undertakings deemed of great importance, the people fell back upon the resources and credit of the state, now greatly strengthened, and without which many of these undertakings would have been impossible at the time. In the very limited field of economic activity left open to it under the Constitution and the dominance of strict constructionist political parties, the economic activities of the Federal government were narrowly circumscribed. Aside from providing protection, peace, order, and justice, it was chiefly influential in aiding trade, domestic and foreign, and in maintaining freedom in interstate commerce. In other fields, it enacted the protective tariff, chiefly for manufactures, opened up the public domain, established the two United States banks, and in a limited way promoted science and the arts, not to mention less important activities. The states and local political units were assuming a steadily growing variety of activities for furthering economic progress: in the positive form of providing goods and services, such as education, internal and local improvements, or better care for the poor and the sick; and in the negative form of regulation and control, such as maintenance of peace and order, safeguarding public health, supervision of banks and insurance companies. Though the activities of these political units were very limited in scope as compared with today, they reflected the early phase of the movement away from an extreme laissez-faire policy. This was a product of new problems created by the changing economic order and the growing spirit of democracy and humanitarianism.

In closing this summary analysis of the factors responsible for the country's economic progress during this period, it is wise to note certain important results that followed therefrom: (1) the rise of a national economy, (2) the attainment by the United States of a position among the world

powers, and (3) the appearance of new problems created by changes in the economic order.

The concept of a national economy is not sharply definable, but it implies a situation where a very large proportion of the goods consumed in a country is produced within that country and where there is such a degree of specialization among different sections of the country that there is a large volume of trade among them. There was a very marked trend toward such an economy during this period. This was aided both by the acquisition of new territory with new resources and by the spread of population which opened up the resources in the old as well as in the new regions. Improved transport facilities promoted specialization in the different sections and trade among them. Domestic trade experienced an enormous expansion while foreign trade declined in importance; in no other period was it so unimportant as between 1820 and 1850. Cotton was the only great domestic staple largely dependent on the foreign market, though this was also important for tobacco and after 1846 for pork products and wheat. Dependence on foreign goods, other than semitropical products, was greatest in the case of manufactured products, notably textiles, iron, and steel; but the growth of domestic manufactures substantially reduced this and was an important factor in the development of greater national self-sufficiency.

Within the country, the trend toward sectional specialization and intersectional trade was very marked. The Northeast specialized in manufacturing, commerce, and finance; the Northwest in raising grain and livestock; the South in growing cotton, tobacco, and sugar. The South and Northwest obtained manufactured goods from the producers or importers of the Northeast and in part depended on that section for financial assistance and the carrying on of trade. The Northeast obtained raw materials and food supplies from the other two sections. Thus a close interdependence of these sections was built up. The relatively undeveloped Far West played only a very minor part in this national economy, though even there specialization in mining and agriculture prevailed, and there was some trade with the rest of the country. Although this specialization intensified the conflicts in economic interests among the different sections that became so prominent in the political history of the times, it also increased the bonds of economic interests that held them together, though these proved insufficient when passions were aroused to prevent fratricidal war.

At the opening of the nineteenth century, in population and economic resources the United States ranked far below the leading nations of Europe; by 1860, it had to be reckoned among the world powers, so rapid had been its growth. Its area had been increased to a figure many times that of any European power outside of Russia; its population had grown to exceed that of Great Britain and was only slightly below that of France or Ger-

many; its natural resources, though relatively far less developed, were vastly greater than those of these three countries.

In agriculture and other extractive industries, the position of the United States would compare favorably with the other powers. Even in manufacturing, the field where it had been most backward, though distinctly inferior to England and weak in lines where labor costs were large, it was ahead of France or Germany in the use of machine methods and could claim that most of the more important branches of manufacturing were firmly established. East of the Mississippi at least, the transportation system, if not so intensively developed as in western Europe, was not appreciably inferior in general efficiency. The merchant marine nearly equaled that of Great Britain and was much larger than that of any other nation; in volume of foreign commerce Great Britain alone far surpassed the United States. In an age when political power and success in warfare were becoming increasingly dependent upon economic resources as compared with mere man power, this economic growth was a basic factor in establishing the country's prestige and security.

Yet the innovations that contribute to progress are seldom productive of unalloyed benefits; and it could not be expected that the great changes in the economic order that took place would not be accompanied by some undesirable results and create new problems of control and readjustment in social institutions. As the more important problems that thus arose have been previously noted, a brief summary will suffice here.

The growing scale of business enterprise, which characterizes modern capitalistic industry and was most conspicuous in the fields of manufacturing, public utilities, and steam transportation, widened the gulf between the employer and his employees, altered working conditions in many ways, and helped to develop class consciousness among the workers with a resulting labor movement. The greater use of fixed and specialized capital increased the difficulties in the organization and control of various branches of industry. The growth of the corporate form of business organization created another problem of control. The spread of banking and other financial institutions led to new problems in the use of these highly sensitive and easily abused mechanisms, particularly that of the business cycle. The expansion of markets and improved marketing organization intensified competition in ways that sometimes led to unfair forms and sometimes to combinations. The greater interdependence and complexity in the economic order made not only the problem of management of private enterprise more difficult but also that of social control. At the same time, the extension of franchise rights, by giving a much larger and presumably less well-educated group a vote, though in accord with democratic ideals, was not without certain drawbacks. Finally, the development of a national economy

and the consequent increase in the number of problems that were national rather than state or local in character was certain in time to bring to the front the question whether the existing framework of government provided the best distribution of powers for meeting these problems and furthering the economic progress of the nation.

The economic development of this period did not make clear the full scope or character of the problems that it was creating; it only foreshadowed the importance that these problems were to attain in the following period.

Part IV

THE END OF THE WESTWARD MOVEMENT AND THE GROWTH OF CAPITALISTIC INDUSTRY

CHAPTER XXVII

THE PERIOD IN GENERAL AND THE WORLD BACKGROUND

Outstanding Tendencies. In Chap. XVI, dealing with the general background of the preceding period, certain outstanding tendencies affecting the economic development of the world during the nineteenth century were mentioned. The way in which these tendencies reacted upon that development in the period after 1860 must now be noted.

Most fundamental and far-reaching in its effects among all these tendencies was the progress in science and its application in inventions or otherwise. In all the sciences—natural, biological, and social—the advance in knowledge proceeded at a rate unparalleled in history, for the effects were cumulative; the acceptance of the scientific point of view spread rapidly and an ever-increasing amount of wealth was made available for the advancement of science and for spreading abroad a knowledge of its achievements. Hitherto unknown or unused resources and forces of nature were made use of for supplying man's needs, and the more effective guidance in cooperating with nature that science provided enabled the world to supply its existing wants, to say nothing of many latent and undreamed-of wants, more completely than ever before. Also this advance in knowledge made possible more effective cooperation between men throughout most of the world in carrying on their economic activities. The spread of railroads, barely started in 1860, began to open up vast continents; the steamship minimized, and later the airplane vaulted, ocean barriers; the telegraph, cable, telephone, wireless, and radio made distant communication a matter of minutes instead of months. Innumerable economic and other social institutions developed to further a more effective cooperation among men in the process of supplying their economic wants. Increasing wealth made

possible greater savings and in many countries each generation added to the accumulation of wealth and capital handed on to the succeeding generation. In the more advanced nations, modern capitalistic industry arose in all its magnificent powers; it transformed the economic order and raised standards of living; but it brought in its train problems among the most difficult that confront the world today.

It was chiefly by means of this economic progress that the rapid increase in the world's population was made possible. By 1900, that population was estimated at 1,500 million of which over one-half was in Asia and over one-quarter in Europe; by 1940, it had risen to over 2,000 million or about twice the estimated total in 1700. Most of the increase was in countries under, or largely influenced by, Western civilization. Between 1860 and 1900, the population of Europe rose from less than 300 million to almost 400 million, so that in the course of the century it had more than doubled.

Most of the rising annual output of wealth, which of course was in part made possible by the growth in population, was consumed; yet the increase was sufficient to raise the standard of living of most of the growing number of people. In fact, the desire to raise the standard of living still higher was becoming a factor in checking the rate of population growth among the more advanced nations where, in the latter part of the century, the birth rate showed a marked tendency to decline. In consequence of this and the losses from war, Europe's population in 1940 showed little growth over the figure in 1900. But the people of Europe also contributed through emigration, which continued to rise up to 1914 and was increasingly drawn from south-central and eastern Europe, to the population and economic development of other continents.

The increase in wealth and capital, particularly in western Europe, was of far-reaching economic significance. It made it possible for Europeans to buy many more things, chiefly food and raw materials, from other continents; and it enabled such countries as England, France, and Germany to export capital to the less developed countries. Similarly, the spread of such scientific knowledge as originated in Europe made another contribution to the economic advancement of those countries.

The tendency toward greater economic freedom, which had been so marked during the first half of the century, was furthered in many ways by the economic developments in the succeeding period. Better means of transport and communication, the spread of education, the development of financial institutions, the abolition of slavery or serfdom, and the extension of greater political rights to the people, all helped to increase the mobility of labor, capital, and business management. But the trend toward *laissez faire* in the relation of the state toward industry may be said to have been reversed in the last quarter of the century.

Originally largely a product of the rapid economic changes that made the elaborate system of regulation and control that had been developed in earlier centuries increasingly burdensome and antiquated, the laissez-faire movement in Europe had removed many of these restrictive measures by about 1875. The reaction that subsequently arose against this trend can be traced to various causes. Most important was the group of new problems arising from the economic changes, for by this time these problems had become so pressing that the state was forced to action involving increasing regulation and control. Other causes are to be found in the intensification of economic conflicts among nations that accentuated the spirit of nationalism, and in the rising power of the masses who were demanding that the state undertake various social reforms.

Though the growth in the spirit of nationalism could be traced back for several centuries, it became accentuated during the latter part of the nineteenth century and then was further intensified by the First World War. Political developments such as the unification of Italy, the organization of the German Empire, and the modernization of Japan contributed to the tendency. The economic developments within the larger countries helped to knit the people together by increasing the bonds of common economic interest, replacing a local or provincial economy by one that was national in scope, and augmenting the power of the central government. Governments increasingly resorted to a policy of strengthening the nation economically and what has been called "neomercantilism" arose. The resulting effort to make the nation more nearly self-sufficing or an autarchy led to economic imperialism and a renewal of the active struggle for colonial empire. How international economic competition became keener and the causes of conflicts in economic interests more numerous will be made clearer in the succeeding narrative. Here it may be noted that the rising nationalism took a heavy toll of the world's resources to support the growing burden of armament, played no small part in the events that culminated in the two world wars, and today constitutes one of the world's great problems.

Finally, there was the great force of the spreading spirit of democracy demanding more liberty and greater equality of opportunity in both political and economic activities. As economic conditions improved and education spread, new wants developed and new or latent ideals were aroused among the people; the masses brought into closer contact, especially in the cities, began to organize, both in trade-unions and political parties; as many reforms demanded by the radical groups of the 1840's were slowly won, still more radical demands were advanced as the socialist and communist movements gained strength. In the twentieth century, the communist regime won control in Russia, and a labor ministry appeared at the

head of the government in Great Britain, events that would scarcely have been deemed credible in 1860, so rapid had been the progress of this movement.

These nineteenth-century tendencies were chiefly felt in the world of Western civilization. Partly as illustrating their reaction in the leading countries of western Europe, partly because the economic development of those countries was especially significant for the United States, and partly because the comparison provides a better basis for appreciating this country's growth, we now turn to a brief summary of the economic development of England, France, and Germany during the period 1860–1914, but one confined chiefly to points significant because of their international reactions.

England. The trend in the economic development of the United Kingdom after 1860 continued to be in the direction of greater specialization in manufacturing, commerce, and finance, and this steadily increased the country's dependence upon trade with the rest of the world. It was only by means of this specialization that the growing population could be supported and their standard of living raised. Though the population of Ireland steadily dwindled until in 1911 it was barely 4 million, or about one-half the figure before the great famine, the total for the United Kingdom rose to over 45 million in that year, an increase of 50 per cent since 1861. In England proper, the population had more than quadrupled since 1801. By 1900, the United Kingdom had surpassed France in population, though about 1750 France contained more than double the population of her neighbor. After 1850, moreover, the British Isles contributed through emigration to other lands, chiefly to the British colonies and the United States, an average of almost 200,000 people a year.

For British agriculture, this period was destined to prove most trying, particularly in the two decades after 1875 when prices steadily declined following the opening up of new lands and lowered costs of transport. By the 1870's, over half the wheat imports were coming from outside of Europe and by 1900 seven-eighths. At the same time, the introduction of refrigeration rapidly increased the imports of fresh meats. British agriculture was forced to resort to better methods and to give more attention to dairying, market gardening, or fruit growing, where the competition was less severe. Oats, wheat, and barley in order were the chief grain crops; potatoes and turnips, the chief vegetables; and sheep and cattle, the most numerous livestock. Intensive cultivation prevailed, and two-thirds of the farm holdings were under 50 acres in size. Since only one-eighth of the owners worked their farms, tenancy was extremely high.

The decline in the relative importance of agriculture is reflected in a decrease of one-third in the number of agricultural laborers in England

proper, 1850–1900; in 1901, about one-tenth (for the United Kingdom one-eighth) of the male population earned a living through agriculture as compared with four-tenths in 1800. Meanwhile the growth in population was such that, just after 1900, the country was importing almost four-fifths of its wheat supply and two-fifths of its meat. It is said that typically there was about 7 weeks' supply of food within the country. The danger thus involved was only too vividly realized during the world wars; yet this was

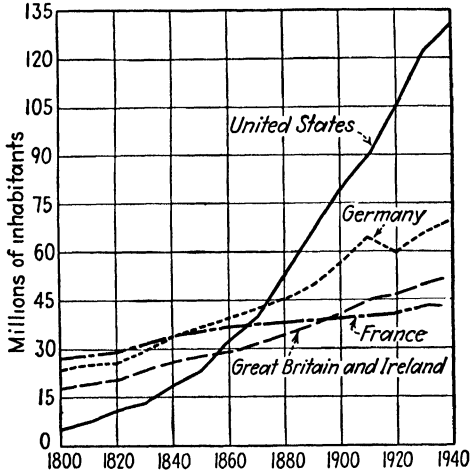


FIG. 30. Increase of population in the United States, the United Kingdom, Germany, and France since 1800.

inherent in the line of economic development that made industrial Britain possible.

In manufacturing in 1860, England led the world in volume of output and in most lines in technology. Though this leadership was seriously challenged before the end of the century, it was the continued success in the development of her manufacturing industries that afforded the main basis for her economic progress. The leading branch of manufacturing was the iron and steel industry together with the related machinery, engineering, and shipbuilding trades. This was closely connected with the mining industry, especially coal mining, which showed the greatest growth among the country's mineral products. Iron mining was next but, although the output rose, a steadily growing proportion of the ore used had to be imported. The same was true of tin where the domestic output remained nearly stationary. Lead and salt continued to be produced in considerable amounts, but the output of copper became negligible.

The textile industry ranked second in importance, the cotton and wool branches being far in the lead and enjoying the greatest growth. Next in

rank came the group manufacturing food, drink, and tobacco. The first Census of Production in 1907 indicated that nearly half of the 20 million people engaged in work in the United Kingdom were in manufacturing, mining, quarrying, building construction, and local public utilities.

The history of Britain's foreign trade during this period was shaped largely by the course of her development in agriculture and manufacturing. The growth in the value of foreign trade was fairly regular except for about a quarter century (a period of falling prices) after 1872; by 1910, the value was more than triple that in 1860. Throughout the period it considerably exceeded that of any other country. The balance of trade, which had become unfavorable in the 1850's, remained such and steadily rose in amount till after 1900 it was fluctuating around $750 million a year. Except for coal, the exports were chiefly manufactured products and the imports were foodstuffs and raw materials. About a third of the trade was with other parts of the British Empire. The policy of free trade, except for a few revenue duties, was continued down to 1914, though after 1890 there arose a demand for protection, due partly to the movement toward higher protection in other countries and partly to the desire for a system of imperial preference. Conditions after the First World War accentuated this demand, and by 1932 the shift to moderate protection and imperial preference had been made. The merchant marine grew rapidly, and in the 1900's the United Kingdom was building two-thirds of the world's ships, owned a third of the world's merchant-marine tonnage, and carried over half of the ocean-borne commerce of the world, a supremacy unequaled since that of the Dutch in the early seventeenth century.

It was chiefly upon the expanding manufactures and commerce that the growth in the country's capital and wealth was based. This together with the development of her financial institutions assured England's continuance as the financial center of the world. Her capital flowed out to less intensively developed regions till by 1910 her foreign investments were estimated at $17,500 million, a little over one-half being outside the Empire. The income from this source and from shipping proved more than sufficient to meet the payments due on account of the unfavorable balance of trade. The country's wealth about 1913 was estimated at some $86 billion, or greater than that of either France or Germany.

Considering her very limited area and natural resources, England's economic growth during the nineteenth century was a remarkable achievement and strikingly illustrated the advantages of specialization and the use of the new technology. Nonetheless, those limiting factors were a basic handicap upon growth. By the twentieth century, the still more rapid development of other nations with greater area and resources and an opportunity to adopt the most modern technology had deprived the

country of the preeminent position among the economic powers of the world which it had held during the greater portion of the nineteenth century.

France. Compared with that of the other leading nations, the economic growth of France, 1860–1914, was slow. The brief Franco-Prussian War ended in the imposition of a heavy indemnity and the loss of Alsace-Lorraine with its valuable iron ore and potash deposits. Population increased very slowly, the net gain being barely 10 per cent, and the total in 1910 was under 40 million. There was very little emigration, and the declining birth rate combined with a none too low death rate was mainly responsible for this result.

Although agriculture still remained the chief pursuit of much the largest group among the people, it declined relatively, and the rural population fell from 70 to 50 per cent of the total. About three-fifths of the holdings were operated by the owners, mostly peasants, and their size remained very small, over a third being less than 2½ acres and five-sixths less than 25 acres in extent, so that additional means of support were often necessary. By the late 1870's, French agriculture, like that of other countries of western Europe, was beginning to feel serious competition from overseas; but unlike England the country promptly resorted to protective tariff duties. Thus protected, agriculture underwent less of a transformation than in England, though there was a similar trend toward more dairying and market gardening. Except for sheep, there was a moderate increase in livestock, and the wheat, oats, and barley crops also rose. The cultivation of sugar beets advanced rapidly, but the important viticulture suffered through pests from which recovery was slow. Silk culture declined with heavy imports from the Far East. The adoption of such machinery as was suited for the intensive farming proceeded slowly and, though methods were improved, they were seldom up to the best current standards. However, the progress made, combined with an almost stationary population, enabled the country to remain relatively self-sufficing as far as its food supply was concerned. Moreover, the industry and thrift of the agricultural class were important economic resources of the nation.

In manufacturing, particularly in the adoption of modern methods, France advanced faster than before 1860. In the iron and steel industry, where new processes made the domestic ore usable, though much of the coal had to be imported, there was a rapid growth, yet the output continued far below that of England or Germany. In shipbuilding and the manufacture of machinery and chemical products, France was behind her neighbors. In the textile industries, linen excepted, and particularly in the manufacture of the finer grades of goods there was marked progress, and a considerable export trade was maintained. Except in a few heavy industries, French manufacturing continued to be characterized by a relatively small

scale of production, due partly to its preeminence in artistic finish. By 1911, nearly a third of the active population was classified as engaged in industrial activities.

The foreign commerce of France, aided by the reduction of tariff duties, continued to expand until about 1880. There followed a strong reaction toward protection for both agriculture and manufacturing, and this policy remained dominant for the rest of the period. Combined with falling prices, this resulted in the value of foreign commerce remaining about stationary until 1900; then, aided by rising prices, it grew rapidly till, in 1910, it was nearly triple that in 1860. After 1895, the balance of trade, theretofore generally favorable, was almost invariably unfavorable. The merchant marine failed to grow, despite heavy subsidies and favoring regulations, until after 1900; by 1914, the tonnage had increased about 50 per cent, though nearly a half was still made up of sailing vessels.

The economic growth of France, though slow, was fairly steady and, since it did not involve marked specialization, the country remained relatively self-sufficing economically—a situation not without certain advantages in the First World War but a product of conditions that failed to produce so rapid a growth as in England or Germany. The capital accumulated by the people's thrift flowed out to other countries, especially to eastern Europe. The wealth of the nation about 1913 was estimated at $62 billion, not far below that of Germany, and the national income at some $7,300 million, a sum which, though less than that of Germany, provided a higher income per capita. However, the relative position of France among the economic world powers after 1900 showed a marked decline as compared with its position a century earlier.

Germany. The rapid rise of industrial Germany during the latter portion of the nineteenth century was unequaled in any other country on the Continent. Though the developments before 1860 helped to prepare the way, a great impetus was received from the organization of the German Empire in 1871 following the successful Franco-Prussian War. A renewed self-confidence, a new spirit of self-assertiveness, and a greater interest in material development appeared. The centralized government promoted a spirit of nationalism, and its paternalistic organizing tendencies helped to direct and to stimulate the country's economic development.

The economic advance promoted, and was also promoted by, the rapid growth in population, which by 1914 had risen to 67 million as compared with 37 million in 1860. This growth occurred in spite of a decline in the birth rate, only partly offset by a decline in the death rate. Emigration reached the highest point, over 200,000, in 1881; with the expansion of industry it declined rapidly till after 1900 it was seldom over 30,000 a year and was exceeded by the number of immigrants, chiefly from the east

and southeast. The decline in the rural population from two-thirds to two-fifths of the total reflected the shift toward industrialization.

As elsewhere, German agriculture began to feel the competition from other countries in the 1870's, for it was then that the nation ceased to export and began to import grains. Just as in France, a reaction from the previous trend toward free trade appeared. The farming class, particularly the Junker landlords of the east, wanted protection; statesmen wished to keep the nation as self-sufficient as possible in its food supply; the rural population was thought to supply better recruits for the army than that of the cities; manufacturers sought protection for their rising industries; and the rapidly mounting expenditures of the imperial government made this source of income from indirect taxation particularly attractive.

Under protection, agriculture, chiefly by the use of more scientific and intensive methods, secured a considerable increase in the output of the main products. Rye, oats, wheat, and barley, the chief grain crops, increased; the potato crop advanced rapidly, also the beet-sugar crop stimulated by an export bounty. Except for sheep, the number of livestock rose, especially swine, though more significant was the gain in quality. Increased use of machinery together with better methods of cultivation raised the output per acre of the chief crops above that of most countries. In 1907 out of 5.7 million holdings nearly three-fifths were under 5 acres—seldom sufficient to provide a living without other work—and less than 300,000 were more than 50 acres in extent, though these included over half the total acreage. Nearly five-sixths of the land was cultivated by its owners, either peasants or the holders of large estates, the latter being most numerous in the north and east. The proportion of the population obtaining a living by agriculture declined to 28 per cent of the total. The growing output of foodstuffs, however, failed to keep pace with the rising demand, and Germany's dependence upon imports steadily rose, being estimated at one-fifth of the domestic consumption about 1914. This situation was a factor in the nation's expansionist policies and an element of weakness in both world wars.

The outstanding feature in Germany's economic development during this period was the transformation and expansion of manufacturing following the adoption of modern machine methods and the close connection maintained between science and industry. Based on the improvements in coal mining and the iron-ore deposits acquired in Lorraine, the output of iron rose to a point considerably larger than that of Great Britain. The production of coal, including the inferior lignite, reached a figure not far below that of the latter country. The extensive and varied industries of the Ruhr district centered about this growth and another district arose in upper Silesia. Closely connected therewith and greatly aided by science was

the chemical industry, notably the manufacture of dyestuffs, in which Germany led the world. In the making of electrical machinery and apparatus, marked success was achieved; shipbuilding also rose to a position of importance. The textile industries, linen excepted, expanded rapidly, though concentrating on lower grades of products than in France or England. The tariffs generally admitted raw materials free, and the duties on finished manufactures were moderate in contrast to those on farm products. The spread of cartels, favored by the tolerant attitude of the government, became very marked. As a result of industrialization five-twelfths of the population was dependent upon manufacturing and mining by 1907.

The history of Germany's foreign commerce naturally reflected the changes in her domestic economy. The imports of foodstuffs and raw materials steadily rose and manufactured products made up a growing proportion of the exports, nearly two-thirds of the total by 1914. Among these exports the most important were machinery, iron and steel manufactures, and textiles. Great Britain and Austria-Hungary were by far her best customers; her imports from both Russia and the United States were about twice those from any other country. Between 1871 and 1914, the value of her foreign trade quadrupled and came to exceed that of any country but the United Kingdom. The balance of trade, except for a few years in the 1880's, was unfavorable and latterly fluctuated around $300 million a year. The net tonnage of the merchant fleet more than tripled, and in the ocean-borne carrying trade it attained a position next to, though still far below, the United Kingdom.

Obviously, German economic development was following the path earlier taken by England toward specialization and an international economy involving increased dependence on foreign trade, though the country's greater area and resources lessened the extent of that dependence. This dependence was a factor in the rising demand for expansion and distant colonies—"a place in the sun." The growth of capital was such that an increasing amount sought outlets abroad, often closely connected with foreign trade, and by 1914 the total had risen to over $7 billion. As in the case of England, the income from this source together with that from shipping more than offset the unfavorable balance of trade. In the expansion of these foreign investments, as in the growth of domestic industry, the development of the great German banks played a particularly active part. By 1914 the total wealth of the country was estimated at around $76 billion and the national income at $10,460 million—both figures only slightly below those for the United Kingdom, though the per capita income was only about three-fifths that of the latter country.

Other Countries in Europe. Concerning the economic development of other European countries the briefest statements must suffice. Belgium

and Holland shared in the advanced development of their neighbors and were able to support their dense population by specializing, the former in manufacturing and mining, the latter in commerce and agriculture. Switzerland prospered with the growing tourist trade and, in the more habitable sections, developed much the same activities as the adjacent countries. The union of the crowns of Austria and Hungary in 1867 secured somewhat greater unity, though the country still suffered from the complex racial composition of its inhabitants and the difficulty in reconciling conflicting interests. Railroads helped to develop greater economic unity and to promote foreign trade. Aided by a high tariff, a considerable growth of manufacturing occurred in Austria, but Hungary remained largely devoted to agriculture. In the 1860's, Italy achieved political unity and became recognized as one of the six great powers of Europe, a position that entailed a staggering burden of armament. The people were extremely poor, and their rapid increase led to an emigration which in proportion to the population was the largest in Europe. The lack of varied natural resources, especially coal and iron, made agriculture the main pursuit, and only latterly was there an appreciable growth of manufacturing along modern lines coupled with use of the available water power.

Up to about 1860 vast Russia had scarcely been touched by modern industrial developments. The freeing of the serfs, 1858–1863, marked the ending of this surviving stronghold of European feudalism. An adequate railroad system was recognized as the first prerequisite for the modernization of the country as well as for purposes of defense; but the resources of the government were limited, and it was only very slowly that even the outlines of the main system were completed. Aided by a high tariff and foreign capital, some progress was made in introducing modern manufacturing methods, chiefly in Poland. Even in 1914, it is probable that nearly 90 per cent of the population was primarily engaged in agriculture. Foodstuffs and raw materials were the only important exports, but the country was relatively self-sufficing. The development of the Scandinavian countries was greatly influenced by the industrialization of their neighbors and the resulting demand for foodstuffs and raw materials. Denmark concentrated on agriculture and was notably successful in dairying. In Norway and Sweden with their more varied resources, mining, fishing, forestry, and shipping were also important activities. Spain and Portugal suffered from unstable or inefficient governments and general poverty and remained relatively backward—a condition that was even more marked in the Balkan peninsula.

Economic Developments in Other Continents. The important economic developments that took place in other continents, North America largely excepted, were generally closely related to the industrialization of

western Europe. Often they were the product of the outflow of European people, capital, and business methods, as well as of the rising demand for the foodstuffs and raw materials of other lands. Yet, except for these developments in other continents, no such growth as took place in the countries of western Europe would have been possible. There was an increasing interaction between the two, a result of growing interdependence based on greater specialization and a more nearly world-wide economy.

In the Western Hemisphere, Canada was closely following at a later date the general lines of development of her neighbor to the south. The rate of population growth, 1861–1901, was much slower than previously, many European emigrants being diverted to the United States. But after 1900, as good free land became scarce in the States and Canada adopted a vigorous immigration policy, the influx both from Europe and the United States was greatly increased and by 1911 the population had risen to 7.2 million. Railroad construction opened up the West; the first transcontinental, the Canadian Pacific, was completed in 1885 and two more by 1915; the total railroad mileage rose from 2,000 miles in 1860 to over 38,000 in 1917, more than half being added in the boom years after 1900. From the West, wheat poured upon the world's markets. Gold, silver, and nickel mining developed in the Yukon or northern Ontario and lumbering in Quebec. In the east, manufacturing, aided by the adoption of a protectionist policy in 1879, expanded rapidly.

In Latin America, the obstacles to progress arising from unstable governments, a sparse population, widespread ignorance among the masses, and much poverty, continued to be the retarding factors outside the more progressive countries like Argentina, Chile, Uruguay, and a portion of Brazil. Only the first three possessed fair railroad systems. The few modern factories were practically confined to these four countries, though household or craft industries were common. From all these countries, aided by foreign capital and business enterprise, came a steadily rising volume of products from the newly developed agricultural, forest, and mineral resources; in these countries the world found a slowly growing market for manufactures.

In Asia, where dwelt about half the world's population, the outstanding economic developments were largely a product of the growing impact of the Occident. The opening of the Suez Canal in 1869 augmented this influence. The transformation of Japan, following the overthrow of the Shoguns in 1868, the abolition of feudalism, and the adoption of Western methods resulted in less than half a century in the rise of this nation from a position of relative obscurity and a medieval economic order to a position among the economic and political world powers—an achievement scarcely equaled in recent times. The area of Japan was about three-quarters that of France and most of the land was mountainous and unsuited to agri-

culture. Yet such was the country's growth that a population of under 33 million in 1871 had risen to nearly 54 million by 1914, not including that in newly acquired territory. Though the extractive industries continued to occupy most of the population, great progress was made in introducing modern methods of manufacturing, notably in the iron and steel and textile industries. Raw silk became predominant among the exports, but the competition of Japanese manufactures as well as that of her rapidly developed merchant marine was increasingly felt in both Occidental and Asiatic markets.

So far as economic contacts with the rest of the world were concerned, the continent of Asia was chiefly an exporter of raw materials and a few foodstuffs and a rather limited importer of manufactures. Asia Minor sent out oil, carpet wool, tobacco, and certain fruits; India cotton, jute, tea, and some sugar; southeastern Asia rice, tin, and, after 1900, a rapidly rising amount of rubber; China tea, wool, silk products, and certain minerals. India was the only country adequately provided with railroads; in China, European capital built a few lines, and Russia completed the Trans-Siberian railroad in 1905.

In Oceania, Australia and New Zealand, developing under a purely Western civilization with a high standard of living, concentrated on agriculture along with some mining. Wool, wheat, meat, and dairy products became the great exports, and manufactures dominated among the imports. The rich Dutch East Indies added to their older export of spices, coffee, and sugar that of rubber and oils, both mineral and vegetable.

In Africa, there was considerable progress in making known its varied resources and at least a fair beginning in their development. Outside of South Africa, few railroads extended far into the interior. The backward state of the native population, which made up most of the total, provided little market for foreign manufactures. For the rest of the world, Africa remained economically significant chiefly as a source of raw materials and an opportunity for exploitation. From the southern portion came wool, hides, and lesser quantities of other agricultural products, diamonds, and, after the 1880's, a rapidly rising flood of gold, to which copper was recently added. The western coast up to about 1910 shipped out wild rubber and later increasing amounts of cocoa and vegetable oils. The Mediterranean region exported Egyptian cotton, wheat, iron, and tropical fruits.

The Growing Economic Rivalries of Nations. The foregoing summary indicates why the trend of developments tended to accentuate the economic rivalries among the great powers, revived the spirit of economic imperialism, and became an increasingly important factor in world politics and the events which culminated in the First World War. The more advanced and powerful nations were tending to specialize in the same general

line—manufacturing. Thus England, far in the lead in 1860, saw one nation after another becoming a serious rival in one or more lines of economic activity; France, Germany, the United States, Japan, to mention the most conspicuous, became competitors in manufacturing, first in their domestic markets and then in the world's markets. This industrialization in turn intensified competition in other fields: in the struggle to secure the raw materials for manufacturing, in the demand for more foodstuffs for the growing industrial population, in the rivalry to control the trade in all these products and their transport, in the scramble to secure the most promising opportunities for investment and exploitation.

Finally, it may be pointed out, that the operation of certain economic laws was of significance in this outcome. Diminishing returns on growing capital investments at home combined with improved facilities for investment abroad hastened the outflow of lendable funds; diminishing returns in the extractive industries, even when partly or entirely counteracted by improvements, combined with cheaper transportation, tended to increase the dependence on foreign sources of supply for foodstuffs and raw materials; and the prevalence of decreasing costs in manufacturing hastened the process of industrialization and intensified the competition in the sale of manufactured products.

These economic developments combined with the growing spirit of nationalism (also in part a product of economic changes) led to increased emphasis on dollar diplomacy and the vigorous revival after about 1875 of economic imperialism and the scramble for colonies, which had been relatively dormant since 1815. By this time, desirable regions that could be easily acquired were becoming scarce, Africa providing the most important. Also the consequences of the rapid industrialization of other nations besides England were becoming obvious, and the reaction toward protectionism was rapidly spreading. Finally, Italy and Germany had become unified, Japan was soon modernized, and all three joined in the general struggle.

The objectives back of this struggle were substantially those of the old Mercantile System: the development of a rich, powerful, and relatively self-sufficient empire. Except for the mercantilist emphasis on money, colonies were looked upon as contributing to this ideal in much the same variety of ways. They would supply the mother country with raw materials and foodstuffs; they would provide a market for her manufactures; their trade would yield a profit and help to develop a merchant marine; they would provide opportunities for the investment of capital and a home for emigrants where they would not be lost to the empire.

Spurred on by this rivalry little time was lost in grabbing the remaining regions that could be easily obtained. Practically all that was left of Africa

was soon divided up; the same held true of the scattered islands in the Pacific. In many of the weaker countries where actual annexation seemed impracticable such as China, Persia, or Siam, "spheres of influence" were agreed upon. In still other lands economic penetration—the investment of capital frequently combined with considerable influence upon the government in obtaining economic advantages—became an important method for furthering these ends.

More than once, this rivalry threatened to cause war and in the complex of factors that underlay the First World War it was among the most significant. That war, by aggravating national rivalries and showing the importance of economic power and self-sufficiency, only intensified the keenness of this struggle. A knowledge of the general trends in the economic development of the world during the past century is essential for an understanding of many of the leading world problems of today. Moreover, only with this can one fully appreciate the economic development of the United States during this period, grasp the important interaction between it and that in the rest of the world, and comprehend the increasingly significant international problems that now confront the country.

The United States since 1860; the Period as a Whole. Before taking up the detailed narrative of events in the United States during the years since 1860, let us characterize briefly the period as a whole in order to furnish some background for the details in different fields and to emphasize the dominant trends. At the outset, the country was plunged into a prolonged and devastating civil war—the product of the conflicting sectional interests and ideals that had long troubled the nation and the passions aroused by controversy. The victory of the North settled forever the question as to the indissoluble character of the Union. Politically, the outcome was of the utmost significance for the future of the country; economically, outside of the resulting preservation of the nation's economy, the effects, though important, were less significant and far-reaching. For this reason, the question may be raised whether it is properly chosen as separating two distinct periods in the country's economic development. If so, what are the characteristics that distinguish the period that followed from that which preceded?

Among the enduring economic changes caused by the war, the most important were the effects upon the South where, in addition to the economic devastation involved, there was the necessity of adjusting conditions to the abolition of slavery. Also the South lost in its relative influence upon national affairs; the North, and in time the West, gained in political power; and everywhere the influence of accumulated capital became increasingly prominent. Other economic changes in the country as a whole directly traceable to the war are a higher level of tariff duties, greater

Federal expenditures and taxes, some alterations in the circulating medium, and the acceleration of such movements as the growth of manufacturing, the adoption of a national banking system, the construction of transcontinental railroads, and the immediate decline of the merchant marine. These changes, however, cannot be considered as dominating factors in shaping the country's economic development during this period.

If it is possible to name any one factor that dominated, it was the same one that was distinctly more dominant in the preceding period—the influence of the West—at least until about the close of the century. Until then, the country was still absorbed in the process of settling and developing the vast areas barely touched by the hand of the white man before 1860. The construction of transcontinental railroads, which forged ahead of settlers and became pioneers in opening up the Far West, hastened its settlement. The public land laws made acquisition of this land easier and easier. Until 1890 at least, the westward surge of population proceeded with unabated force—the West was still the land of opportunity. These developments facilitated the expansion of agriculture, which was also aided by Europe's growing demand for its products. The development of the West was also a major factor in the recurrent panics and thus helped to shape much of the monetary history of the period.

The factor of second importance in shaping economic development during this period was the expansion of modern capitalistic industry, most prominent in the growth of manufacturing. By 1890, manufacturing was making a larger net contribution to the national income than agriculture. By 1900, imports of manufactures had dwindled to only a small percentage of the domestic output and exports were rapidly rising so that, in this field, the country could be considered almost self-sufficing. But the rapid spread of modern capitalistic industry created new problems that assumed a growing prominence in the economic and political life of the nation. These involved the relations of labor and capital, the regulation of railroads, trusts, and public utilities, and the control of the business cycle. Their importance was emphasized by the growing social consciousness and the demand for economic as well as political democracy. With the advent of the twentieth century, these problems had become the leading issues; the development of the West had ceased to be the dominating factor in our economic history. A new epoch had begun.

With the disappearance of the frontier and the supply of free fertile land, the preliminary work of settling the West and opening up its resources had come to an end, as far as it can be said that there is ever any end to this process. Thenceforth this process, which from the foundation of the colonies had been the most important single factor in shaping the economic development of the nation, rapidly dwindled in its influence. How funda-

mental and widespread in its effects upon the national economy this change was destined to be will appear in the detailed history that follows. The twentieth century marks the beginning of a new epoch where new conditions dominate and problems of a relatively new character come to the forefront.

From the broad point of view, the years between 1815 and the close of the century—if a specific year must be named, 1897 might be chosen—constitute a single epoch in the country's economic history that was dominated by the opening up of the West. The Civil War is an episode of this epoch; but it does not mark any distinct change in the general trend of development or in the conditions dominating that development, though it did cause minor changes. The chief difference between the periods before and after 1860 was that in the latter period the influence of the West declined while that of modern capitalistic industry rose until in the new epoch after 1900 it became dominant.[1]

Since the new epoch had scarcely got under way before the outbreak of the First World War which, together with the process of economic readjustment, incomplete even in 1939, and the advent of the Second World War, largely dominated the course of events so that special chapters are devoted to them, the narrative in the topical treatment that follows is not broken at 1900 but is carried down to date. As this does not fully stress the significance of the changes that characterized the advent of the new epoch, the more important may be noted here. The westward movement of population rapidly dwindled after 1890 and practically ceased after 1920. Immigration was then drastically restricted and the rate of population growth further reduced. In the twentieth century, manufacturing came to surpass agriculture in the number of people engaged in the pursuit as it already had in net value of output; the urban population by 1920 exceeded the rural population; the nation theretofore primarily devoted to farming became industrialized. This shift reacted upon foreign commerce, which

[1] Admittedly, most fundamental economic changes do not take place suddenly, and any attempt to set off sharply distinct periods in economic history is bound to be somewhat arbitrary. Thus something might be said in favor of choosing a date about 1850 rather than 1860 as the dividing point between these two periods. Such a choice would be based on two developments: (1) It was not until after 1850 that the reaction of railroads upon the national economy became important by providing fair facilities for intersectional transport by rail. (2) The 1850's also brought a distinctly more rapid growth of manufactures and adoption of factory methods.

The division of the epoch 1815–1900 in this book into two periods is justified primarily by its advantages in exposition. To cover the whole epoch topically and still not lose sight of the vital interaction between events in the numerous fields of economic activity is impossible without endless repetition. Considerations of exposition and space also influence the decision not to divide the narrative account of the period since 1860 into two parts at a date around 1900.

was greatly altered in character so that the nation was brought into keener competition and closer contacts with the rest of the world. Capital ceased to be relatively scarce and began to seek foreign outlets; the country became a creditor nation; and signs of economic imperialism began to appear. Among the industrialized nations, the country retained an unusual degree of self-sufficiency, but its increasing participation in the economic life of the world made a policy of isolation less and less tenable. Meantime, at home the growing pressure of the problems arising from capitalistic industry combined with the rising social consciousness compelled the state to assume a far more active part in directing the nation's economic life.

Taken as a whole, the period after 1860 was one of remarkable economic progress in both national power and the standard of living of the people. Yet it was at this time that the rate of population growth, which had fluctuated around an increase of one-third every decade for nearly two centuries, began the decline which by the 1930's had reduced it to about one-fifth of the former rate. The increase in population was less of a factor in the economic advance, and the progress in technology and organization was more of a factor than had been the case theretofore. This was basic in the unprecedentedly rapid rise in the standard of living after 1870 as measured by the per capita real income, which was especially marked up to 1910, the subsequent gain being temporarily mostly lost in the 1930's (see the chart on page 889). By 1914, the national income exceeded that of the United Kingdom, Germany, France, Austria-Hungary, and Italy combined and the per capita income was well above that in any other great nation. The effects of the subsequent world wars tended to increase this preeminence. Clearly, the twentieth century, certainly the first half, was the century of the United States.

Chapter XXVIII

THE PERIOD OF THE CIVIL WAR

Introduction. The Civil War marks another period when the course of economic events was completely dominated by the abnormal conditions arising out of war and so requires a separate chapter. The developments of these years are significant for the light they throw upon the economic problems of war and also because they had relatively enduring reactions on various phases of the country's subsequent economic history.

Fundamentally, the war originated in the conflicting attitude of different sections toward slavery which the dominant group in the South deemed essential for its economic progress and the existence of which it felt was threatened after Lincoln's election. This issue brought to the front the political principle of states' rights and the question as to the indissoluble character of the Union. The conditions of Southern life, the economic interests of the South, and its political relations to the rest of the country had led that section from an early date, in the desire to protect its interests, to adopt the states' rights point of view. Thus, when the break came, many Southerners, whatever their interest in, or attitude toward, slavery, felt that this political principle was the main issue involved and took their stand with the Confederacy accordingly. This attitude was accentuated by the position taken by most Northerners. Though many of those most opposed to slavery were quite willing to let the South secede, the great majority held that, although some compromise might be possible about slavery, there could be none on the question of secession; the Union was inviolable and must be preserved. It was primarily for this ideal that the North fought.

Threats of secession were not new nor confined to the South and had always originated over endangered economic interests as in the West around 1790, in New England in 1814, and South Carolina's nullification of 1832. How fortunate it was during this early period, when ties binding the different sections together were so weak, that no more serious conflicts of interest arose and such spirit of compromise and mutual sacrifice as existed was able to overcome these differences will never be fully appreciated. Such a spirit is a basic factor in a nation's progress, and the United States has been most fortunate in that, despite the obstacles of its vast area and divergent sectional interests, economic, political, and social conditions

have been more favorable to the development of such a spirit than in many of the older nations of Europe. Yet it was not sufficiently strong to overcome the differences that existed over the question of slavery, and this cost the country dearly, both in treasure and in blood. It would have been far cheaper for the nation to buy the slaves and free them. The foresighted might have seen that slavery was doomed; economically it was certain to become less and less profitable; the steadily rising social conscience condemned it morally. But compromise proved impossible in the heat of aroused emotions and the issue was left to a decision by force of arms.

The Resources of the Confederacy. The population of the states that joined the Confederacy was about 9 million including over 3.5 million slaves; the states remaining in the Union had 22 million inhabitants. The most serious gap in the Confederacy's economic resources was the lack of manufacturing enterprises, the value of manufactured products in those states in 1860 being less than a tenth of the country's total. Of the total value of real and personal property in the country, estimated at over $16 billion, the Confederacy had about a third, including an allowance of $2 billion for the slaves; its share of the national income was doubtless smaller. Of the improved land it had a third, a similar proportion of the railroad mileage, and a quarter of the capital of incorporated banks, but it owned practically no shipping and no navy. It also had to organize a new frame of government, but as the model of the Federal Constitution was closely followed, except for modifications chiefly to meet states' rights ideals, that problem was met with comparative ease.

The marked specialization of the South upon agriculture, especially cotton, and the resulting dependence upon trade with the rest of the world vitally affected the ability of the Confederacy to carry on war. Judged simply on the basis of quantity, its economic resources were decidedly inferior to those of the Union. The full utilization of even this limited quantity necessitated the chance to trade with other countries; if that trade were cut off, it would prove a most serious, if not fatal, handicap.

The Confederacy's hope of success, as far as it depended upon economic resources, was based chiefly on Europe's need for its cotton. In the 1850's, four-fifths of the cotton used in Great Britain and three-fourths of that used on the Continent had been supplied by the South. It was estimated that in 1860 4 million people in Great Britain were directly or indirectly dependent upon cotton; the cutting off of the supply, it was believed, would lead Great Britain to recognize the Confederacy and then extend to it the material assistance that was needed, though other motives might play a part, such as opposition to the protectionism favored by the North and the natural willingness of one nation to see another that had been rapidly rising in power split in twain. Also many Southerners believed that the

North was so dependent upon its cotton and trade that it would not fight to prevent secession. This reliance on cotton is well typified by the words of a Southern Senator, speaking in 1858, who said,

> Without firing a gun, without drawing a sword, should they make war upon us we could bring the whole world to our feet. What would happen if no cotton was furnished for three years? I will not stop to depict what everyone can imagine but this is certain; England would topple headlong and carry the whole civilized world with her. No, you dare not make war upon cotton. No power on earth dares to make war on it—cotton is king.

Yet as events turned out, the power of King Cotton, strong as it was, proved unavailing.

Economic Problems of the Confederacy; Securing War Supplies. The problem of securing adequate goods and services for carrying on the war was the most difficult one that the Confederacy faced and soon proved really insuperable. The undeveloped state of manufacturing was the first obstacle; the growing effectiveness of the blockade in cutting off foreign trade was the second; and the failure to secure recognition and intervention by other countries destroyed the final hope of securing assistance from outside.

In France, Napoleon III was prepared to recognize the Confederacy but was unwilling to act without England. In England, the upper and most of the middle class favored the South for various reasons; but a small group of liberals and a considerable group, chiefly nonconformist and antislavery, sided with the North. Great Britain's imports of American cotton had been 2,580,000 bales in 1860 and 1,841,000 bales in 1861, but fell to only 72,000 bales in 1862 and remained under 200,000 bales in 1864. An unusual surplus stock helped at the start, and by 1864 supplies obtained from other countries had so increased that total imports nearly equaled the amount customary before 1859, though the Liverpool price for that year was over 50 cents a pound.

It happened, however, that just when the cotton shortage was greatest Great Britain found herself in dire need of Northern grain owing to the serious wheat-crop shortages of 1860–1862. Great Britain had been importing about a quarter of her wheat consumption; in the years 1861–1863 the North, favored with abundant crops, supplied over two-fifths of her imports. The probable loss of this food had to be weighed in the balance against the possible increase in cotton imports that might follow a recognition of the Confederacy. King Cotton found an unexpected rival. Although these were important factors, political considerations and the moral issue of slavery, made clearer by Lincoln's Emancipation Proclamation, were probably more influential in determining England's decision not to act.

When this became evident by the summer of 1863, the Confederacy's hope of any appreciable aid from abroad rapidly waned.

Blockade-runners, generally operating from near-by ports like Nassau or Havana, soon found great difficulty in getting through, though a few succeeded up to the war's end. Until the fall of Vicksburg in 1863 gave the North full control of the Mississippi and cut off the western portion of the Confederacy, some supplies were obtained by way of Mexico. Thus the Confederacy secured a few of the most urgently needed goods such as small arms, munitions of war, salt, blankets, army cloth, shoes, tea, coffee, and medical supplies. In return, the blockade-runners carried out cotton and some tobacco and turpentine to be sold in payment for the imports. The government, the states, and private individuals all took part in this trade. In addition, a few ships secretly purchased and fitted out abroad were secured to prey upon the North's shipping. There was also considerable trade between the lines in the goods each section most needed. As it was seldom that these outside sources began to supply the South's needs, it remained for that section to do the best it could with its own resources.

The only manufactures over which the Confederate government sought control were those supplying army needs such as arms, ordnance, munitions, clothing, blankets, tents, shoes, wagons, and harness. In some cases, it established its own shops and in others made contracts with private concerns. Through its power to conscript employees for the army and its control over transportation and in some cases over raw materials, the government was in a position to secure these contracts at reasonable prices. Wool, iron, salt, and saltpeter were particularly scarce, and especial efforts were made to increase the supply—in the case of wool, at least, with little success. Another difficulty arose from the lack of both machinery and the facilities for making it, to say nothing of the scarcity of skilled labor for running it or of labor in general.

The drain upon the man power of the Confederacy by the army was the greatest in the country's history. Conscription of all male whites from eighteen to thirty-five years of age available for service began in April, 1862; the upper age limit was soon raised to forty-five; in 1864 those from seventeen to fifty were included. Those whose services were needed elsewhere were exempted, but the number exempt was probably reduced to less than 100,000. The total number of men in the Confederate army is unknown, but the most careful estimate is that the army secured the equivalent of 3 years' service from over 1,080,000 men.[1] Since the total of all white males who came within the final limits of military age was probably under

[1] This estimate of T. L. Livermore, though generally considered the most careful, may well be excessive; Southern estimates run lower.

1,150,000, this meant that "substantially the entire military population of the Confederate states not exempted by law were enrolled in the army."

The task of distributing supplies and moving troops was one which the railroads of the Confederacy were totally unprepared to perform. There were few through lines connecting the different parts of the South; most had been built to move goods between the interior and the coast, and use of the coastal waterways was ended by the blockade. Also most of the lines were financially weak, poorly constructed, inadequately equipped, and short. Often they lacked a physical connection and, even when this existed, they had difficulty in working in unity. Nearly all the equipment had been supplied from the North and, as it deteriorated or was destroyed, the South was seldom able to replace it. Breakdowns, wrecks, and congestion caused constant delays. By the middle of 1863, few lines could run more than two trains a day; on the main lines it was only at intervals that anything but government freight could be transported. The totally inadequate action taken by the government was confined largely to securing priority in the carriage of troops and supplies and the construction of a few urgently needed connecting lines. Action was constantly hampered by the railroads and by state or local authorities.

Another phase of the problem of securing goods and services was that of the general direction, control, mobilization, and conservation of the available resources—the task of the government. Numerous difficulties blocked the efficient performance of this task. The central government being new had to perfect its organization and enlist the services of competent men. Far more serious was the problem of securing the needed cooperation and unity of action, not only among the different branches of the central government but also between that government and the various states. The spirit of individualism and emphasis on states' rights ran contrary to the needed high centralization of control. In innumerable instances, especially in North Carolina and Georgia, the states and their governors hampered the central government's efforts to secure greater efficiency. Finally, the methods adopted for financing the war, as will be explained later, tended to increase the scarcity of supplies and the difficulty in obtaining them.

That under such circumstances the results of the effort to secure supplies fell far short of the needs is not surprising. As far as small arms, ordnance, and ammunition were concerned, the army was fairly well supplied, either by imports or home production, though in the latter years the ordnance was inferior to that of the North. The supply of woolen clothing and blankets, after the first year or two, was most inadequate and the same was true of shoes, medical supplies, and instruments. In the South as a whole, food was adequate, except for such imported products as coffee, tea, and salt; the chief difficulty was to get the supplies to the army at the time and

place needed. Lee's army in Virginia during the last of the war suffered most from this difficulty, though Sherman's troops marching through Georgia found supplies plentiful. Throughout the war, the inadequacy of the railroad system and its rapid deterioration seriously hampered the movement of both troops and supplies. Thus not only the lack of certain resources but the failure to make the best use of those available, owing to inadequate organization, proved very serious obstacles to success.

Financing the War in the Confederacy. The limited financial resources of the Confederacy and the heavy cost of the war made the problem of finance a most difficult one at best. Yet, admitting the difficulties, the methods adopted were very shortsighted and for the most part tended to increase rather than to minimize the obstacles in the way of a successful outcome. In many respects, they closely resembled those of the Revolution, though conditions ought to have made the mobilization of financial resources much easier.

The outstanding defects, as usual, were the unwillingness to resort to effective taxation and, in consequence, the general reliance upon borrowing and the issue of paper money. Among the indirect taxes levied, the export duty on cotton yielded practically nothing and the tariff duties barely $1 million, specie value, during the whole war. A direct tax of ½ per cent on most property yielded only $18 million, and less than a tenth of this was secured from taxation since each state was allowed to assume its quota, and most raised it by borrowing. Up to the end of 1862, less than 4 per cent of the government's receipts came from taxes and not until April, 1863, was there even an attempt at fairly heavy taxation. Then taxes were levied on various products, money and deposits, certain wholesaling profits, income, and on various occupations, trades, and lines of business, along with a tithe on agricultural products. Up to October, 1864, over $100 million in currency was obtained under this act, but the specie value was probably only $5 million. The tithe on farm products, being payable in kind instead of depreciated currency, aroused particular opposition; production was cut, crops were concealed, collection was inefficient, and much of the actual proceeds was wasted because of inadequate storage or distribution facilities. The last year of the war brought increased taxes but owing to concessions, poor collection, and depreciation of the currency the net proceeds were small.

Lacking appreciable tax receipts, the government fell back upon borrowing and the issue of notes, mainly the latter. After the first sale of $15 million of bonds, which provided over half of all its specie receipts, the government found the greatest difficulty in disposing of later issues. Bonds were offered in exchange for staple farm products, chiefly cotton, though some army supplies were so obtained. Of some 430,000 bales of cotton thus

obtained only 20,000 could be exported. This cotton was used as security for the only loan floated abroad, a loan for $15 million sold in 1863 which netted less than half that sum. From 1862 on, the growing fear of defeat made bond sales harder and was reflected in the preference for notes rather than bonds, chiefly because they could be more easily and quickly disposed of.

The failure to sell more bonds simply led to larger note issues and, when the resulting depreciation became serious, measures were adopted, first, to induce and, later, to compel people to exchange the paper notes for bonds. Under acts of October, 1862, and March, 1863, $126 million of the notes were thus funded. The relief was brief, for new notes were issued faster than the old notes were retired. In February, 1864, a more drastic law practically compelled most noteholders either to exchange their notes for bonds, or for new notes at two-thirds of par, or else to pay taxes designed to drive the notes out of existence. Though possibly $300 million of notes were funded, new issues soon raised the outstanding notes to still higher figures. It was in this way that most of the bonds issued during the last half of the war were put out, the receipts from voluntary sales being negligible.

The lack of success in selling bonds is clearly reflected in the last full statement of Confederate finances made for October, 1864. Of the total debt of $1,371 million only $362 million was represented by bonds; the rest consisted of note issues. Furthermore, as two-thirds of the bonds had been issued to refund notes, only about $125 million represented voluntary domestic purchases of bonds. Though interest was paid on the bonds fairly regularly, after the first year it was paid in the depreciated notes. The weakness of the Confederacy's credit is reflected in the sale of its 8 per cent bonds at the rate of about 10 cents in gold on the dollar before the close of 1863 and at less than half this in 1864. In 1865, in the utter hopelessness of its credit, the government called on the people for gifts.

Financing chiefly by note issues meant practically a forced loan and an indirect type of taxation. The notes or certificates put out took various forms; some bore interest, but most did not and served simply as paper money. Though never made legal tender, they were generally accepted. The changes in the outstanding issue can only be approximated. Professor Schwab estimated the amount at over $30 million at the close of 1861 and $450 million a year later. In spite of the refunding in 1863, the total had risen to over $700 million in the fall of that year. Though still more were refunded in 1864, the amount outstanding before the end must have been well over $1 billion.

The premium on gold in terms of this currency fluctuated with the quantity outstanding and the prospect of Confederate success. It reached 50 per cent in April, 1862; 300 per cent in January, 1863; and 2,300 per cent

in February, 1864, after which there was a slight decline followed by a rise to 6,100 per cent in March, 1865, just before the final collapse. The currency prices of commodities rose with the premium on gold but they went to a higher level. The price of any given commodity was of course also affected by its own conditions of demand and supply. Thus the great staples, cotton and tobacco, rose less than the gold premium and imported commodities, like coffee, much more. Meats and cereals sold at a level which, reduced to a gold basis, was not ordinarily much above the prewar level, though there were marked sectional variations. This policy of financing the war so largely by note issues only aggravated the difficulties that beset the government; it enormously increased the cost of the war, resulted in gross inequalities in the distribution of the burden involved, and accentuated the disorganization in the economic life of the South. As one writer says, even admitting the great difficulties of the situation, it is hard to see how a worse policy than that chosen was possible.

In the case of the individual states, the financial policy appears to have been very similar, though adequate information on the subject is not available. At first many states, to lessen the people's hardships, postponed the collection of even the normal state taxes. Though taxes were frequently increased, the increase failed to keep pace with the depreciation of the currency in which they were paid so that, in terms of gold, the receipts were often less than before the war. So the states also fell back upon the issue of bonds and notes, chiefly the latter, which simply augmented the mass of depreciated paper money. There seemed to be no appreciation of the fact that a country that finances its own war cannot as a whole escape or postpone the burden involved by refusing to levy taxes.

The Reaction upon the Economic Life of the Confederacy. The marked economic specialization of the South, with the resulting great dependence upon trade with the rest of the world, naturally accentuated the disorganization in the economic life of that section when practically all this trade was cut off. The loss of the market for its staples undermined the center of the foundation upon which most of the trade and the financial institutions of the South had been built up. The resources devoted to non-exportable cotton and tobacco then represented a loss and so had, if possible, to be shifted to the production of other things for which there was urgent need. Despite active governmental pressure, the planters were slow to make a shift. By 1863, the cotton crop had probably been cut to under a million bales and in each of the two following years fell to about half that, as compared with 4.5 million bales in 1860, though that was much the largest on record. The mistaken policy of the government in impressing foodstuffs at prices fixed below the market value only tended to check such a shift and, in addition, slave labor was not easily diverted to other

crops. Throughout the war, the slaves generally continued peacefully at their work with only a minimum of supervision.

The cutting off of trade also produced a scarcity of many goods needed by civilians, notably iron, coal, paper, salt, coffee, tea, sugar, drugs, soap, and candles. In part, these needs were met by blockade-running, trade across the lines, or the development of local manufactures. Food necessities were fairly abundant except where the armies were operating.

The ceaseless outpouring of paper money also had its seriously disturbing effects upon the civilian population. A new element of risk was injected into all financial transactions; speculation was encouraged, and the scarcity of goods increased. The outcry against the profiteer became general, and there were constant efforts to check speculation and regulate prices, but they met with little success. Wages rose more slowly than prices and salaries still more slowly, thus putting an unequal burden on the classes dependent upon such sources of income. Men deserted the army to save their families from destitution, since their army pay, first fixed at $11 a month for privates and increased to only $18 a month in 1864, became almost worthless. Creditors and those dependent on fixed incomes suffered correspondingly. The well-known story of the individual who said that at the beginning of the war he went to market with his money in his pocket and brought home his purchases in a basket but at the end he carried his money to market in the basket and returned with his purchases in his pocket, suggests a situation that proved only too tragic for many a Southern household.

On no occasion in our history has war caused such disorganization and change in the economic life or entailed such burdens and sacrifices as did the Civil War in the South. When it ended, the South was left prostrate; fortunes had been swept away, much of the accumulated capital had been used up or destroyed, and the ranks of Southern manhood had been decimated. The labors of a generation were required for recovery.

The North during the War; the Problem of Supplies. The varied material resources of the North combined with the substantial development of manufacturing and free access to the world's markets made the problem of securing war supplies much less difficult than in the Confederacy. With such resources available, the main problem was to secure efficient mobilization, coordination, and direction of the economic activities necessary to produce and distribute the required supplies. Speed in such action might have considerably shortened the war, but the North was extremely slow in realizing the size of the task that confronted it and lost such advantage as it might otherwise have obtained. The delay in getting a large army into the field gave more time to make the shifts in production needed to secure supplies.

The North had far more ready capital available than the South; and,

though the drain of men into the army created some shortage of labor, it was nothing like that in the Confederacy and was alleviated by immigration and the rapid introduction of laborsaving machinery. With few exceptions, the government was content to rely on private contracts for securing its supplies, and inadequate supervision of these led to much fraud and corruption. The government did establish factories to make clothing, medical supplies, and bakery products, as well as packing plants, and added to its existing arsenals and navy yards; but it exercised less control over supplies and production than the Confederacy. During the first year, considerable quantities of small arms, ammunition, and uniforms were obtained from Europe, but domestic production soon caught up with the needs. Thanks to the construction of the 1850's, the railroads were fairly well prepared for the emergency, and the troops and supplies were generally transported with efficiency. Though the government was authorized to take over the railroad and telegraph systems in 1862, its general policy was to guide rather than to assume operations, except in the zone of warfare, and there it undertook considerable construction. Under the efficient administration of Secretary Welles, the navy was built up from 42 vessels to over 670 in December, 1864. After Stanton became Secretary of War in January, 1862, this department was also vigorously managed.

The number of men in the army rose from 16,000 at the start to over 900,000 by January, 1863, and at the close was over a million. It has been estimated that, allowing for the shorter term of service, the Union army averaged about 50 per cent more men than that of the Confederacy. After the first year, the needs of the army were generally met; Rhodes concluded that "a mass of evidence warrants the statement that never had an army been so well supplied with food and clothing as was that of the North; never before were the comfort and welfare of the men so well looked after."

The Financing of the War by the North. At the start, the North, like the South, made slight provision for taxation and relied mainly upon borrowing and note issues. Later, as the seriousness of the struggle and its cost became better appreciated, a sounder and more vigorous policy was adopted, though the results were meager until near the end. As late as 1864, Secretary Chase felt by no means certain that the financial resources of the North would hold out until victory was attained.

Although the Morrill Tariff, raising duties because of the deficit, was not passed until March, 1861, there was no effort to prepare for the obvious fiscal needs of the emergency and on the outbreak of war in April the government had to borrow. When Congress met in special session in July, Secretary Chase, estimating an outlay of $320 million for the fiscal year, proposed to meet the extraordinary expenses by borrowing and to raise $80 million to cover ordinary expenses and the debt service by taxation.

Congress increased a few customs duties, levied a direct tax of $20 million and a tax of 3 per cent on incomes in excess of $800 a year, but too late to secure much revenue during that fiscal year. A loan of $250 million was authorized in the form of bonds or notes and of this $50 million might be noninterest-bearing demand notes, that is, paper money. The banks agreed to take $150 million 3-year notes bearing 7.3 per cent interest. As Chase unfortunately insisted that payment be made in specie and refused to allow the proceeds to be left on deposit with the banks to be drawn against as needed, the strain on the banks forced them to suspend specie payments in December, 1861, and the government then followed suit.

Early in 1862, Congress authorized an issue of $500 million 6 per cent bonds as well as $150 million legal-tender notes, including the previously authorized demand notes, which were made convertible into the bonds. As few of the bonds could be sold, Chase insisting that they must not be sold below par, the treasury fell back upon short-term notes or certificates of deposit and the issue of legal-tender notes, which came to be known as "greenbacks." The fact that during the fiscal year ending June 30, 1862, barely $50 million was received from taxes, practically all from customs duties, though the net borrowing was nearly nine times as great, shows the slight effort at taxation.

In July, 1862, spurred on by an unusual popular protest against such a weak financial policy, Congress acted with greater vigor and from then on there was steady improvement. Income tax rates were raised, internal revenue taxes were extended to a great variety of objects and, partly to offset the latter, a new tariff law raised the rates on dutiable goods to a general level of 37 per cent. In consequence, the fiscal year ending in 1863 showed over $100 million received from taxation (nearly two-thirds from customs duties), as against net borrowing of 5½ times that sum.

Though the need for more taxes to sustain the credit of the government was clear, the process of framing new laws, as usual, proceeded very slowly, and it was not until the middle of 1864 that considerable increases were enacted. Then, many new internal revenue taxes were imposed and old rates raised until, as it was later said, "Nothing was omitted, from the raw product to the finished commodity. Often an article received a half-dozen additions ere it reached the consumer." To offset these domestic taxes, provide more protection, and secure more revenue, another sweeping advance in customs duties was made, raising the average rate on dutiable goods to 47 per cent, or more than twice that of 1860. Finally, in 1865, income tax rates were again raised; incomes between $600 and $5,000, certain items excepted, were taxed 5 per cent and those above that 10 per cent. Though the income tax ultimately yielded a total of nearly $350 million, barely $50 million of this was received before the war ended. For

the fiscal year 1864, the receipts from taxes rose to $212 million and for 1865 to nearly $300 million. In the latter year, the net borrowing was less than three times the tax receipts, reflecting the results of the more vigorous financial policy adopted.

Meanwhile, however, the delay in enacting tax laws and in getting returns from them had forced resort to more borrowing and paper money issues. In July, 1862, another $150 million of greenbacks was authorized, a portion in denominations as low as $1, and early in 1863 a third $150 million. Though Chase never favored these issues, neither he nor Congress took the

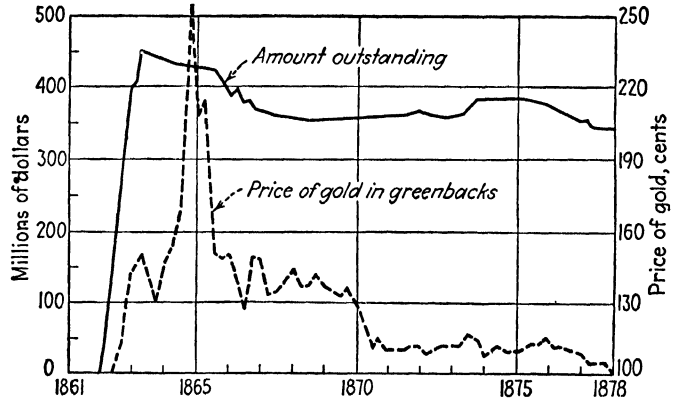


FIG. 31. Price of gold dollar in greenbacks, quarterly, and amount of greenbacks outstanding, 1861–1878.

action needed to avoid them. Fortunately this marked the end of new issues; but almost the whole amount authorized remained in circulation, since they were all reissuable on receipt by the government, and few of the first two issues were converted into bonds before this privilege was taken away in July, 1863. The resulting redundancy of the circulating medium drove all specie out of circulation, put gold at a premium, and caused a marked rise in prices.

Until June, 1862, the premium on gold was slight, but by the following January it had risen to 45 per cent, about which point it fluctuated, except for a brief drop after the July victories, until the close of the year. In 1864, there was a rapid rise to over 150 per cent in midsummer when the outcome of the war still appeared so uncertain. As the end came, the premium had fallen to around 50 per cent, but more than 13 years passed before it entirely disappeared. The movements in the general price level were very similar to those of the premium on gold, though slower and more moderate. The peak of wholesale prices was reached in January, 1865, at about double the level of 1860. The resort to paper money, according to Mitchell's careful

estimates, increased the cost of the war nearly $600 million or over one-fifth of the debt incurred, not to mention its other unfortunate effects.

The difficulties in selling bonds, largely responsible for the increased greenback issues, were partly overcome by the loan act of March, 1863, which modified the terms of sale. Under the direction of Jay Cooke, an elaborate campaign for selling bonds direct to the people, like the recent

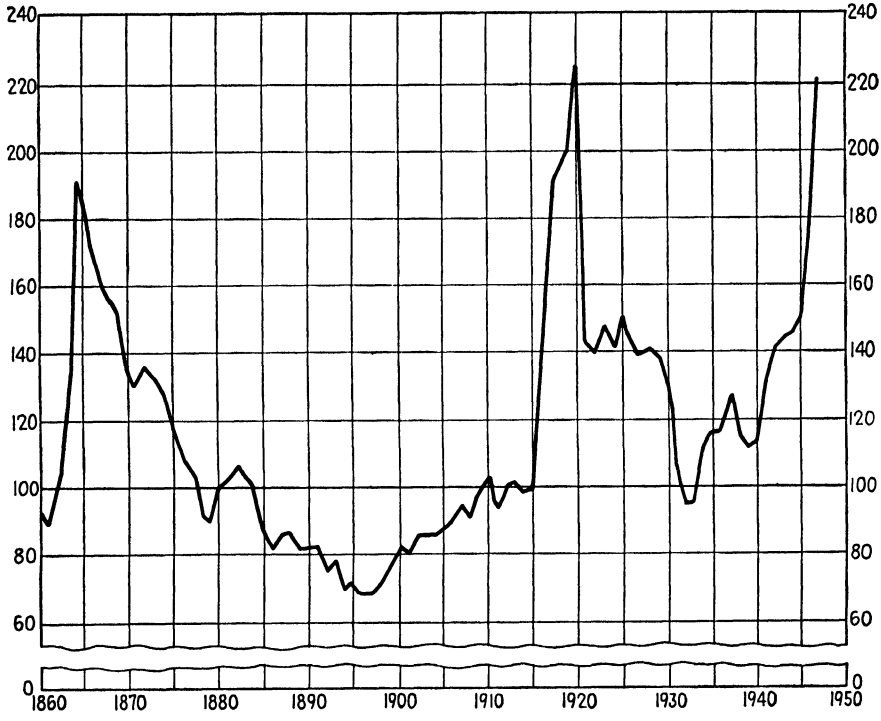


FIG. 32. Index number of wholesale prices since 1860. (*Based on Warren and Pearson and Bureau of Labor indices.* 1910–1914 = 100.)

war-loan drives, was adopted with great success, nearly $400 million being sold. The victories at Vicksburg and Gettysburg and the strengthening of the government's credit by the new tax laws also promoted sales. At the same time, the banks took a considerable quantity of short-term notes. A new market for government bonds was created by the establishment of the national banking system under the acts of February, 1863, and June, 1864. National banks were required to invest a minimum of $30,000 and not less than one-third of their paid-up capital in these bonds; also their note issues and government deposits had to be secured by these bonds. The early results proved very disappointing, the banks taking barely $16 million up to the end of 1863. After changes in the law in 1864 made the system

more attractive, the amount increased rapidly and reached $236 million in June, 1865.

In March, 1864, when new loans were authorized, Chase fixed the interest rate at only 5 per cent and, although this interest like that on other government bonds was paid in specie, it proved so hard to sell the bonds that he again fell back on short-term borrowing. By this time, the dangers in excessive short-time borrowing were being realized, for notes were maturing and it was necessary to make provision for their payment or refunding along with new borrowing. The total expenses of the government, excluding debt redemption, for the year ending in June, 1864, were $865 million; the total debt then stood at $1,800 million. At this time, Secretary Chase resigned and Senator Fessenden, an abler financier who succeeded him, adopted a more vigorous policy.

Under a new loan act with more liberal terms combined with the improved military outlook and a second resort to the services of Jay Cooke, the Treasury succeeded in borrowing over $1,450 million during the next fiscal year. The total expenses for the year were nearly $1,300 million, and at its close the total debt was almost $2,700 million. During the 4 years ending in June, 1865, the government spent over $3,300 million, but tax receipts provided only a fifth of this sum.

State and local political units also incurred war expenditures, especially for soldiers' bounties, but also to aid soldiers' families, and at the start to provide equipment. The Federal government reimbursed them over $55 million for outlays on the last item. The total war outlay of these units has been variously estimated at between $300 and $500 million, and borrowing seems to have provided the greater portion. The states, led by an unusually able group of governors, generally cooperated well with the Federal authorities. The outstanding mistakes in financing the war were the failure to tax promptly and vigorously, the use of paper money with all its attendant evils, too extensive borrowing on short time—60 per cent of the total borrowing—and a failure to arrange the methods and terms of financing so as to facilitate the securing of funds and at the same time produce the minimum of disturbance in the country's business.

War's Reaction upon the Economic Life of the North. The war involved no such general disorganization in the economic life of the North as in that of the South. The outstanding reactions were those incident to the abnormal demands of war and the related shifting of production, the scarcity of labor resulting from the army's requirements, the drain of capital by government financing, and the inflation of the currency.

When Lincoln was elected and the secession movement started, business received a setback and the financial situation became acute. In New York and Boston, resort to clearinghouse loan certificates provided some relief,

but from Philadelphia south and west to St. Louis, except in New Orleans and Kentucky, most banks suspended. Though sharp, the panic was brief, and the effect upon general business slight. The first year of the war with its uncertainties and readjustments was a poor one for business in general. The repudiation of Southern debts due the North caused many failures, and the close of 1861 brought the general suspension of specie payments. People acted with caution, and a spirit of thrift and moderation prevailed.

By the autumn of 1862, this phase had passed; the enormous demand for war supplies gave rise to great industrial activity, which was further stimulated by the general advance in prices, and full employment. From that time until the end, agriculture, manufacturing, and trade flourished, profits were high, failures almost ceased, speculation was rampant, extravagant expenditure became widespread, and fortunes were quickly made, often to be swept away in the losses that followed the return of peace. Many suffered seriously, but silently and unnoticed, from the inflation; yet the general appearance and atmosphere seemed to betoken great prosperity.

In agriculture the crops were generally excellent, often larger than ever before, and the army needs combined with the years of short crops abroad and inflation gave the farmers high prices. The scarcity of farm labor was in part overcome by the rapid introduction of farm machinery and the increased work of those remaining at home. Mining and lumbering prospered from the same causes. Manufacturing in general flourished, especially the branches turning out war supplies; others benefited by the increase in tariff duties, which often exceeded the internal revenue taxes and so provided more protection; still others gained from the current extravagance in expenditures. Trade benefited from both increased volume and the rapid advance in prices. Traffic on the railroads was greater than ever before, and railroad stocks mounted rapidly with increased dividends. Railroad construction declined, but the war gave the needed impetus to get land grants for the transcontinental lines. The telegraph system was rapidly expanded, including a line to San Francisco. To escape the danger of capture by the Confederate cruisers and get a share of the neutral carrying trade, nearly 1,000 vessels were transferred to the British flag so that by the end of the war American ships were carrying less than a third of the value of our foreign trade as compared with two-thirds in 1860.

The establishment of the national banking system during the war initiated a new period in our banking history. This action was only in part a product of wartime needs and was due chiefly to the defects in the existing state systems. Secretary Chase, vividly impressed with these evils through his own experience in Ohio, proposed such a system to Congress in December, 1861, but the National Banking Act was not passed until February,

1863. So few banks were organized under this law that another act was passed in June, 1864, designed to make the system more attractive and remedy some defects; the states also enacted legislation to facilitate the shift of their banks to the national system. A rapid increase resulted raising the number of national banks to 642 by the first of 1865. These had a note circulation of $66 million and held $176 million of government bonds. To hasten the process of conversion and to eliminate the troublesome state bank notes, Congress in March, 1865, imposed a tax of 10 per cent annually on these notes, effective from July 1, 1866. As this rate was prohibitive, the notes disappeared from circulation, much to the country's benefit. Since the national banking laws are significant chiefly for their effects upon the subsequent banking development, a consideration of their main provisions is best postponed to the chapter devoted to that subject.

Although complete figures are lacking, it appears that the general policy of the state banks during the war, though at times, as in 1862 and 1864, threatening overextension, was not reckless, in spite of the dangers opened up by the suspension of specie payments and the strain put upon the banks to meet the financial needs of the time. The increase in the quantity of money in circulation from $435 million, or $13.85 per capita, in 1860, to $714 million, or $20.57 per capita, in 1865, was due chiefly to the greenback issues; the net increase in bank notes, national and state, was probably not much over $100 million. The large volume of financing combined with fairly high interest rates made bank profits high.

The suspension of specie payments followed by the excessive issue of greenbacks drove all specie out of circulation. When even the small change disappeared in 1862, resort was had to individual issues of small notes and shinplasters till Congress prohibited them and provided a form of postage stamp for the purpose and then, in 1863, authorized the issue of fractional notes known as "scrip." Since gold was still required for certain purposes such as payment of customs duties, foreign debts, and interest on government bonds, a gold market sprang up in New York to meet the need. The popular notion that the speculative dealings were largely responsible for the high premium on gold led to a law prohibiting them in 1864. Since this deprived business of a really useful, even if not ideal, institution, it only made matters worse, and the law was quickly repealed.

Fortunately for the country, the balance of international payments was such that there was no appreciable loss of specie during the war. The loss of the large exports of cotton after 1861 might have produced serious difficulties, but it was partly offset by increased exports of foodstuffs, so the value of total exports for the 5 years ending in June, 1865, was only about a third less than for the preceding five years. Imports for the same period declined about a fifth so that the unfavorable balance of trade

totaled some $340 million. With the loss of ships, the balance of shipping charges was shifted from the credit to the debit side of the international account; but this was offset by the proceeds from the sale of ships abroad. At first many European holdings of American securities were resold to this country; however, beginning in 1836, a foreign demand for government bonds arose which increased as the premium on gold advanced and the prospects of a Northern victory improved. As a result, the net outflow of specie for the 5-year period was barely $200 million. Aided by a continued migration to the mines—said to have been 150,000 in 1864—the domestic production of gold and silver for the 5-year period was $250 million and the total coinage $185 million. Thus the country went through the war without any appreciable decrease in its supply of specie.

In general, the condition of the laboring class was adversely affected by wartime events. Though retail prices rose more slowly than wholesale prices, the median was about 75 per cent above the 1860 level in 1865; the increase in the cost of living was still less, due chiefly to the slow rise in rents, being about 65 per cent. Wage rates lagged farther behind and increased only 50 per cent, though there was fuller employment. It was not until 1863 that any advance in the general wage level occurred, though in 1864 it was fairly rapid and employment more universal. Except for 1862, immigration continued unabated and for the 5 years totaled over 700,000, thus helping to offset the drain of men into the army. The rising cost of living gave an impetus to the organization of labor, especially in 1863–1864. Numerous strikes occurred, chiefly for higher wages, and most were successful. Local trades' assemblies took an active part in this movement and by 1865 were to be found in all important industrial centers, though they met with increasing opposition from employers' organizations. Consumers' cooperation received some stimulus in the effort to cut living costs.

Though the war entailed no such disorganization of the business life, such sweeping changes in the distribution of wealth, or such heavy sacrifices in the North as it did in the South, its effects were not over with the return of peace. The painful process of economic readjustment and deflation lasted for 13 years; the vexing problems of political reconstruction took nearly as long. An enormous debt had been created; to pay the interest on it, reduce the principal, and provide pensions necessitated heavy taxes. The controversy over retirement of the greenbacks and resumption of specie payment created prolonged financial uncertainty. Since slavery had been abolished, that source of sectional discord had been eliminated, though at a frightful cost; but there remained the problems of the freedmen and the economic reconstruction of the South. Most important of all, the Union had been preserved. Although conflicts of sectional interests did not, and

could not be expected to, disappear, the serious threat of secession never again was made.

The subsequent economic development of the country, to which we now turn, played no small part in promoting this result, for the steadily increasing interdependence of the different sections and the resulting larger stake of each in the well-being of the whole tended to unite all in a bond of common interests to a greater degree than ever. At the same time, this development increased the number of national problems that could be dealt with effectively only by a power as broad as that of the Federal government. That that power was now firmly established, even though subject to the limitations of a Constitution drawn up at a time when many of these problems were undreamed of, was of no small advantage in helping to solve them. The whole trend of the world's development teaches that progress—economic, political, and social—lies in the direction of steadily increasing the varied forms of cooperation among mankind throughout the world. Secession ran contrary to such cooperation; the maintenance of the Union, assuming that it could be governed with wisdom and a spirit of mutual sacrifice for the commonweal, was in the line of social progress.

Chapter XXIX

POPULATION GROWTH AND MOVEMENTS AND THE PUBLIC LANDS

Introduction. War weary, the whole nation welcomed the end of the fratricidal strife and returned to peacetime activities with their problems of readjustment. The population continued to grow at a rapid but, most significantly, at a steadily declining rate; immigrants poured in as never before till the flow was checked; the vast areas of the West, still unsettled, continued to provide economic opportunity and to draw settlers from the East; the task of opening up and developing the nation's rich resources was again resumed.

Vast as was the expanse of fertile land, it was not unlimited. Aided by the growth of population, the free homestead law, and the building of transcontinental railroads, this land was taken up more rapidly than ever before until the time came, about the last decade of the century, when the supply of free fertile land suitable for ordinary methods of cultivation had practically come to an end. The frontier had disappeared; the preliminary task of settling the land and opening up its resources was finished. This marked the end of one great epoch in the nation's economic history, and the twentieth century ushered in another dominated by new problems. Its widespreading reactions can be understood only as the full record of the period is unfolded; here it can be noted that it was a factor in the shifts of the public land policy toward conservation of the natural resources and in the immigration policy toward drastic restriction.

The Growth of Population. The outstanding fact in the history of population growth during this period is the decline in the rate of growth, though it still remained relatively high until the First World War. Previous to 1860, the rate of increase had averaged more than a third per decade; for 1860–1890 it averaged a little more than a quarter per decade; then fell to a fifth, 1890–1910, to 15 per cent in the next two decades, and to only 7.4 per cent in 1930–1940, or little more than one-fifth of the rate prevailing for the two centuries before 1860, though the rate for the 1940's will be somewhat higher, the increase up to 1948 being over 10 per cent (see the chart on page 450). As a result, the total population of continental United States rose to 50 million in 1880 and over 131 million in 1940; the estimate for January, 1948, was over 145 million. As the chart on page 416 indicates,

the United States had surpassed France in population before 1870 and Germany before 1880. The only other countries having a greater population today, if we do not count the British Empire as a unit, are China, India, and Russia.

The basic economic and political importance of this growth in population can scarcely be too strongly emphasized. Writing about it over 60 years ago when the population was barely a third of what it is today, an Englishman, Sir Robert Giffen, remarked:

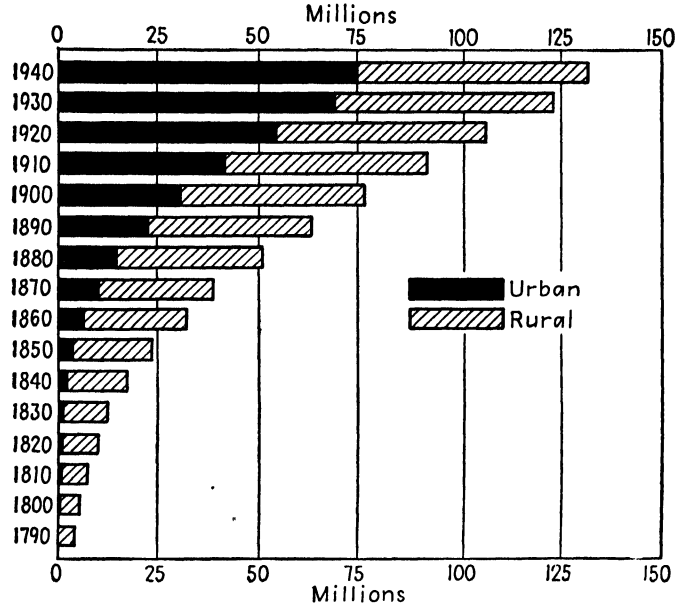


FIG. 33. Total population of the United States, urban and rural, since 1790.

The phenomenon is also without a precedent in history. There has been no such increase of population anywhere on a similar scale, and above all no such increase of a highly civilized and richly fed population. The increase is not only unprecedented in numbers, but it is an increase of the most expensively living population that has ever been in the world. . . . [It] is perhaps the greatest political and economic fact of the age. The fact has altered in the first place the whole idea of the balance of power of the European nations. . . . Now the idea of a new Europe on the other side of the Atlantic affects every speculation, however much the new people keep themselves aloof from European politics. . . . European governments can no longer have the notion that they are playing the first part on the stage of the world's political history. And this sense of being dwarfed will probably increase in time.[1]

[1] GIFFEN, ROBERT, "Economic Inquiries and Studies," II, p. 22, London, 1904.

Even though the rate of increase declined, subsequent developments well justified the great importance attributed to it by this statement.

The density of population, however, still remained far below that of the more advanced countries of western Europe. In 1940, the United States had 44 inhabitants per square mile as compared with 490 in the United Kingdom, 352 in Germany, 197 in France, and 712 in Belgium. Since the large portion of this country made up of the semiarid West is incapable of supporting a dense population, a comparison between the region to the

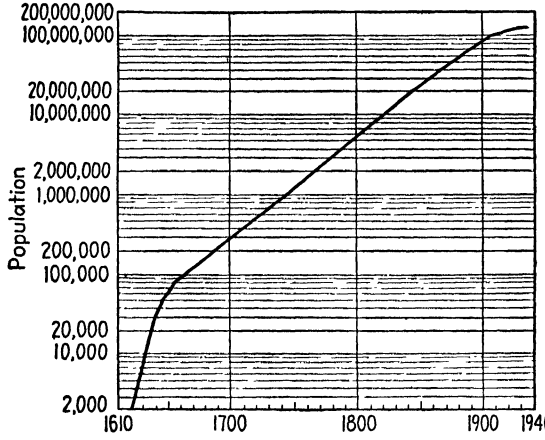


FIG. 34. The rate of population growth, 1610–1938. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

east and western European countries is sounder. In the region included in the tier of states from Louisiana north to Minnesota and eastward to the Atlantic, which includes little more than a third of the land area but four-fifths of the population, the density in 1940 was only 90 per square mile. Thus the population in this region could be more than doubled before reaching the density existing in France. The population per square mile of arable land about 1938 was estimated at 259 in the United States, 524 in France, 927 in Germany, and 2,421 in Great Britain. Among the individual states there were only ten where the density rose to over 100 per square mile of total area, all but Ohio and Illinois bordering on the Atlantic; there were only three, New Jersey, Massachusetts, and Rhode Island, where it rose to over 500, the highest figure, 667, being reached in the last named. Though other factors enter into the problem, it is obvious that the possibilities for growth of population are still very great. However, as will be explained later, the likelihood of attaining any such density as prevails in western Europe, even east of the Mississippi, seems very remote. The low ratio of population to natural resources, which is suggested, though not

accurately measured, by the low density of population, has been a basic factor in facilitating the attainment of the country's high standard of living.

This growth of population was the net product of the birth rate, the death rate, immigration, and emigration, to which we now turn.

Immigration and Emigration. The annual influx of immigrants is shown by the chart on this page. The fluctuations coincided closely with those of the business cycle, but the trend was steadily upward until, in the decade 1905–1914, the number averaged a million a year. Nearly a third

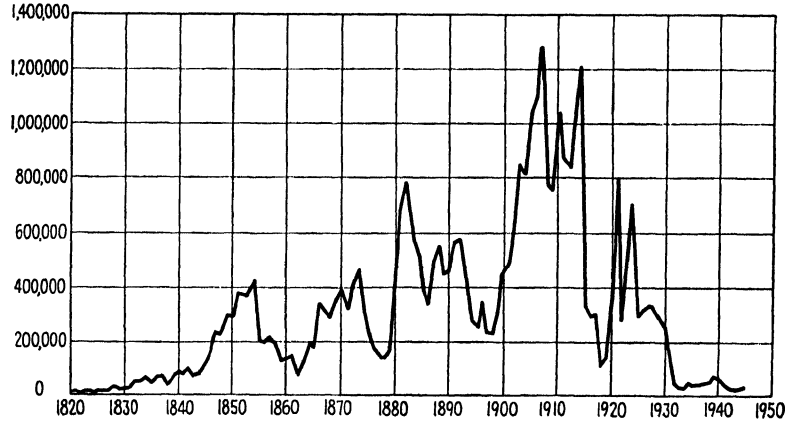


FIG. 35. Immigration into the United States since 1820.

of all the 32 million immigrants between 1820 and 1914 arrived during this decade. The war cut off this influx, and the subsequent severely restrictive legislation drastically reduced the peacetime inflow.

Returns showing the number of emigrants are not available before 1908. It is clear, however, that during this period there was a marked increase in the number of immigrants who subsequently returned to Europe. These so-called "birds of passage" increased in number with the growth of immigration from southern and eastern Europe. Statistics indicate that since 1908 the number of aliens who emigrated was about one-third of the number of immigrants. A new feature was the emigration of native Americans, chiefly from the Middle West, to take up cheaper land in western Canada, which assumed large proportions in the decade after 1900.

Despite the large influx after 1900, the Census of 1920 showed the same proportion of foreign-born in the population as in 1860, that is 13 per cent, but by 1940 it had dropped to 8.8 per cent. It has sometimes been asserted that the increase in the foreign-born population has been at the expense of the native-born; that had there been no immigration, there would have been just as great an increase in the total population. Although the influx

of immigrants may have had a *tendency* to check the growth of the native population, it seems highly improbable that, under the conditions existing during the nineteenth century, this tendency was of sufficient influence to have had an appreciable effect. An attempt to estimate the amount of the growth in the country's population that was due immediately to immigrant arrivals made by Thompson and Whelpton indicated that it was about 5 per cent from 1800 to 1830, 15 per cent from 1830 to 1840, averaged around one-third from 1840 to 1910, and in the next two decades fell to a little over one-fifth.

The "New Immigration." An outstanding feature of this period was the change in the countries from which most immigrants came. Previous to 1865, practically all had come from northwestern Europe, chiefly from the United Kingdom and Germany; they were of substantially the same origin and stock as those that had settled the colonies. From that date down to 1914, there was a steadily increasing proportion from the countries of southern and eastern Europe making up what has been called the "new immigration" and sometimes dated from 1883. Until that year, though marked fluctuations occurred, there was no decline in the absolute number coming from northwestern Europe; the largest number on record, over 560,000, came in 1882. Most came from the United Kingdom and Germany, but after 1880 there was a considerable influx from the Scandinavian countries. After 1882, however, the number steadily declined, the greatest drop being among the Germans.

Meanwhile the inflow from southern and eastern Europe was steadily rising. Only once above 1,000 in any year before 1850 and never over 4,000 until 1869, it was always above 100,000 after 1886 and reached nearly a million in 1907. Italy, Austria-Hungary, and Russia contributed by far the greater portion of this new immigration. This group, never as high as 3 per cent of all immigrants until after 1870, was regularly between two-thirds and three-quarters of the total from 1898 to 1914. The proportion coming from the countries of the "old immigration" fell to between a fifth and a quarter of the total. The chart on page 454, covering the 100 years preceding the adoption of drastic restriction in 1921, shows the total contribution of each of the leading countries to the immigrant stream during that century. The contribution of countries outside of Europe has been slight, less than a tenth of the total.

In the migration between 1860 and 1914, economic motives were even more predominant than before, though the desire for greater political freedom and the wish to avoid military service or to escape religious persecution still exercised some influence. By the period 1900–1914, the proportion of males had risen to around 70 per cent as compared with 60 per cent earlier, reflecting the growth of those who came only to accumulate some

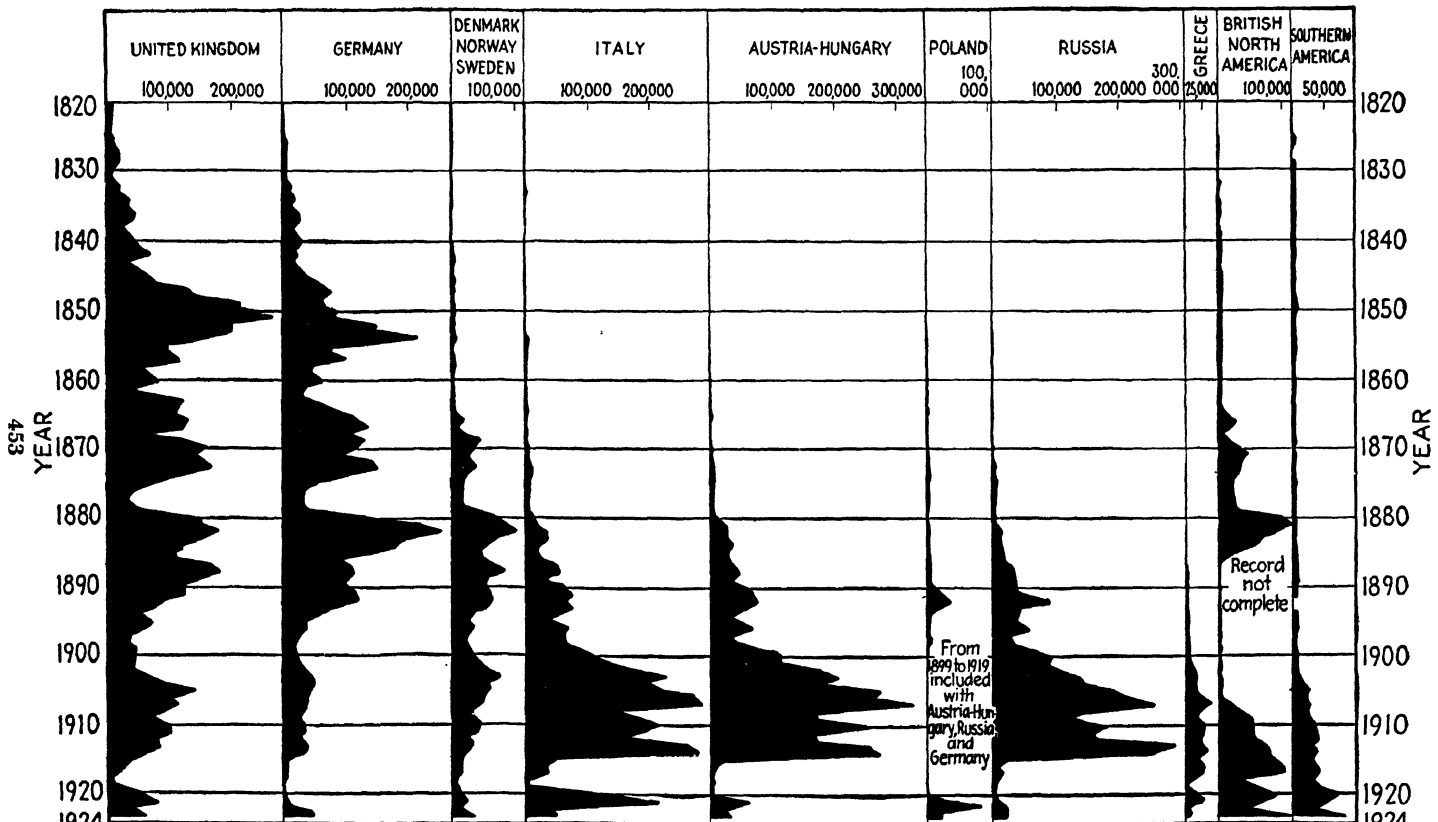


FIG. 36. Immigration into the United States from principal countries of origin, 1820–1923. (*Monthly Labor Review, U.S. Department of Labor.*)

savings and then return home. At this period nearly 40 per cent of the new immigration soon went back. This group also differed from the old in several other respects: over 35 per cent were illiterate as compared with 3 per cent among the latter; the proportion of unskilled laborers was larger and that of Protestants was much smaller; for the most part, they tended to congregate in the chief industrial or mining centers, which made the process of assimilation particularly difficult. Combined with other factors these changes in the character and volume of the immigrant stream finally resulted in a complete change in the policy underlying immigration legislation.

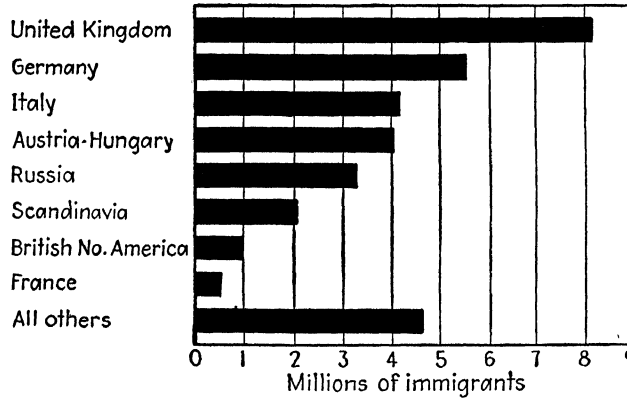


FIG. 37. Total immigration into the United States by chief countries of origin, 1820–1920.

Immigration Restriction Legislation. It was not until the 1870's that signs of a reversal of the earlier policy favoring free immigration began to appear. The Chinese started coming to California immediately after the gold discoveries, and in the 1860's much coolie labor was brought over to aid in railroad construction. Opposition developed almost from the first and riots occurred. The state laws passed to check this influx were declared unconstitutional, and an agitation was, therefore, started to secure Federal action. Following a restrictive treaty with China in 1880, a law of 1882 excluded all Chinese laborers and in one form or another this was continued till an act of 1943 put China on a quota basis. Another law of 1882 levied a head tax of 50 cents and prohibited the admission of convicts, lunatics, idiots, and persons likely to become public charges. In 1885, the importation of contract labor was forbidden.

In 1891, to secure a stricter enforcement of the laws, complete control was taken over by the Federal government. Inspection on the Canadian and Mexican borders was first provided for, and certain other classes were added to the inadmissible list. A bill to impose a literacy test was vetoed by President Cleveland in 1897. Minor additional restrictions before 1921

included an agreement with Japan in 1907 to exclude Japanese laborers owing to the rapid rise in their influx after 1899. In 1917, a law passed over the President's veto imposed a literacy test, raised the head tax to $8, and added minor restrictions.

The shift to severely restrictive laws that followed the close of the First World War was due to a variety of causes. Underlying all was the growing opposition to the influx of immigrants and the problems involved in their political, economic, and social assimilation. The disappearance of free fertile land, it was argued, decreased the need for immigrants and increased the difficulties in their assimilation. Organized labor was more awake to the need of restriction to protect its interests, and its political power was greater than ever. Immediate reactions from the war provided the impetus for restrictive legislation. The war showed the danger of having a large group of alien birth and interests; the postwar depression left many unemployed, and it was feared the difficulties in Europe would lead to a large emigration. These conditions led to the enactment of a law in 1921 that marks the beginning of a new period in our immigration history.

This act had two main objectives: (1) to reduce the total number of immigrants and (2) to cut drastically the number coming from southern and eastern Europe. To do this, it limited the number of alien immigrants to be admitted in any year from any nation to 3 per cent of those born in that nation and living in the United States as shown by the Census of 1910, but this did not apply to natives of countries in North or South America nor to those of Asiatic countries already restricted. This cut the number admissible from quota countries to under 360,000 a year, or about a third of the number that had been coming from those countries in the decade before the war. The number admissible from countries of the new immigration, because of the basis chosen, was about one-fourth of the number that had been coming from those countries just before the war; the number admissible from countries of the old immigration was substantially the same as had been coming before 1914. The law was to remain in force for about one year, but was later continued with slight changes until superseded by the stricter law of 1924. During this period, the countries of the new immigration sent over practically their full quota as did several of those of the old immigration.

The law of 1924 cut the percentage figure to 2 per cent. More significant was the shift of the basis year from the Census of 1910 to that of 1890, a date before the great body of the new immigration had arrived. This act thus reduced the total number admissible from quota countries to some 160,000 a year, of which only about 20,000 could come from the countries of the new immigration. The law also replaced the earlier restrictive agreement with Japan by a total exclusion of immigrants from that country.

Evidently the time had come when the nation no longer wished to serve as a "melting pot" or as a haven of refuge for the downtrodden of the world.

Another provision of the act of 1924, which became effective July 1, 1929, substituted as a basis for determining quotas the national origin of the whole population of the country in 1920. Each quota country was allowed the proportion of a total of 150,000 admissibles which people of that national origin in the population of 1920 bore to the total population; but the minimum quota for any country was to be 100. With this minimum allowance the total number admissible from all quota countries was fixed at 153,714. The chief result of this change in base was to shift quotas; the largest gains went to Great Britain and northern Ireland, the greatest losses fell to Germany, the Irish Free State, and the Scandinavian countries.

Following the depression after 1929, the usual drop in immigration at such a time was accentuated by a policy of not issuing visas to anyone likely to become a public charge. As a result, the average number of immigrants for the years 1932–1938 fell to less than 40,000, and in four of these years the alien outflow exceeded the inflow. During the following war, the net inflow averaged less than 30,000 a year.

The Racial Composition of the Population. By 1940, the foreign-born element in the population had fallen to 8.8 per cent of the total. Of this group 35 per cent came from countries of northwestern Europe, as compared with 77 per cent in 1890 and 90 per cent in 1860. The number of Negroes was about 12.8 million or less than 10 per cent of the total population, as compared with over 14 per cent in 1860 and nearly 20 per cent in 1790. The Indians numbered about 330,000, the Japanese 127,000, and the Chinese 77,000, the last having decreased nearly two-fifths from the high point reached in 1890.

The Declining Rate of Increase in the Population. Even more important in explaining the declining rate of population growth than the changes in net immigration was the drop in the natural rate of increase in the population. Figures for birth and death rates covering the whole country are not available, and the existing data for individual states seldom go back very far. Still it is possible to draw certain general conclusions that are reasonably safe.

Undoubtedly there was a marked decline in the death rate during the nineteenth century. Most of this occurred during the last quarter of the century; by 1900, the death rate in the registration area had fallen to 17.6 per 1,000 of population whereas in Massachusetts it had been 27.8 in 1789 and 21.4 in 1855. Since then a more rapid gain cut the rate to 10.8 per 1,000 in 1940. It is to be expected, however, that with the growing average age of the population this rate will soon start to rise, possibly reaching 14.5 by 1980. The remarkable advances in medical science and public

hygiene are chiefly responsible for the lowered death rate, the most striking results being seen in the decrease of infant mortality.

The consequent prolongation of the average length of human life is obviously of the greatest significance. Massachusetts figures suggest that the average expectation of life at birth rose from under 35 years a little before 1800 to around 45 years about 1900, most of the gain being achieved in the last quarter of the century. Since 1900, a more rapid rate of gain has prevailed, and data for the whole country indicate that at present the figure is over 65 years. This increase in the expectation of life is most marked in the lower age groups. Judged by the Massachusetts figures, the increase between 1789 and 1929 was at birth 68 per cent, at twenty years of age 36 per cent; at forty, 14 per cent; at sixty, a slight actual decrease appeared. That such a gain was important economically, to say nothing of the human element involved, is obvious, for the additional years won include what is for most the more productive period of life. Since this prolongation of life tended to increase the rate of population growth, the main factor in the actual decline of that rate must be found in a lower birth rate.

That there was a marked decline in the birth rate is also unquestioned. The best estimates indicate that the crude birth rate per 1,000 white population fell from 55 in 1800 to 41.4 in 1860, 30.1 in 1900, and 17.5 in 1940. Using as a more accurate basis the number of white women from fifteen to forty-four years of age, the rate per 1,000 fell from 278 in 1800 to 72.5 in 1940. The rate varies greatly among different groups in the population. Generally it is high among the foreign-born, somewhat lower among the native-born of foreign parents, and lowest of all among the native whites of native parents. Among Negroes, chiefly those in rural districts, it is somewhat higher than among whites. For corresponding groups, it is commonly lower in urban centers than in rural districts. Among certain small groups of the so-called "native stock," the decline has gone so far that they do not appear to be keeping up their own number; in fact, of late, this was the case with urban population as a whole, the net rate of reproduction among them being less than half that among the farm population.

The effects of the declining birth rate are reflected in the decreased proportion of children in the population and in the smaller size of the family. Thus in 1900 among the white population, the ratio of persons twenty years and over to all children under sixteen was nearly double what it had been in 1790, though immigration also contributed to this change. In 1900, the average size of the family for the whole population was 4.6 persons and, in 1940, 3.8 persons as compared with 5.7 persons for the free population in 1790. Had the families of 1900 been the same size as those of 1790, the population would have been nearly 20 million greater. It is evident that, except for the years since 1914 when changes in net immigration were

influential, the declining birth rate, more than offsetting the lower death rate, has been the main cause of the declining rate of population growth since 1860.

The causes of this declining birth rate are complex and not susceptible of accurate determination. Shifts in the age groups and racial constituents of the population in part explain the change, but the chief cause is generally believed to be the desire to raise the standard of living. Better education helped to develop greater foresight and sense of responsibility to the children; it also increased the number of economic wants and the intensity of the desire to satisfy those wants. The prolongation of the period of education or training and the wish to start married life with greater economic resources have tended to increase the age at marriage among substantial groups. Nowadays it is far easier for women to earn their own living and remain independent if they choose, though it is also true that this opportunity to increase the family earnings sometimes serves to hasten marriage. Today children do not become an economic asset to a family at so early an age as formerly, and the economic burden of their upbringing is not only borne for a longer period but it is a heavier burden. Whether, as some have suggested, the intensity and strain of modern life have actually reduced the reproductive capacity of the race is uncertain; but at best this could have been only a minor factor in the outcome. Thus the main causes for the slower rate of population growth are found among what Malthus called the "preventive checks."

Doubtless it is true that among the poorer classes, even in the United States, there are many families whose income is insufficient to maintain them in proper physical condition and where, in consequence, the death rate is increased. But this positive check is a very minor influence, and it cannot be said that in this country population has seriously pressed upon the means of subsistence. The predominating influence of the preventive checks means rather that the desire for a higher standard of living has pressed upon the increase of the population. It is unfortunate that this influence is least marked among the classes whose limited means make them less able to bring up their children in the most desirable ways and that it is commonly most in evidence among groups that could best provide for such upbringing.

The importance of the consequences in our economic and social life of this growing preference for raising the standard of living rather than for increasing the size of the family can scarcely be overemphasized. The opposite choice would tend only to reduce the people to a standard of living at a mere subsistence level, though this tendency might be modified by developments increasing the per capita productivity of the nation. The choice made promotes the attainment of that richer and fuller life, so dependent

upon economic well-being, which Western civilization appears to have set up as its ideal.

With an immigration policy that nearly eliminates an increase from this source, with a declining birth rate, and with the imminent prospect of a rising death rate, the country must look forward to a time, not far distant, when its population will cease to grow, and may decline. The numerous uncertain factors involved make exact prediction impossible, but a govern-

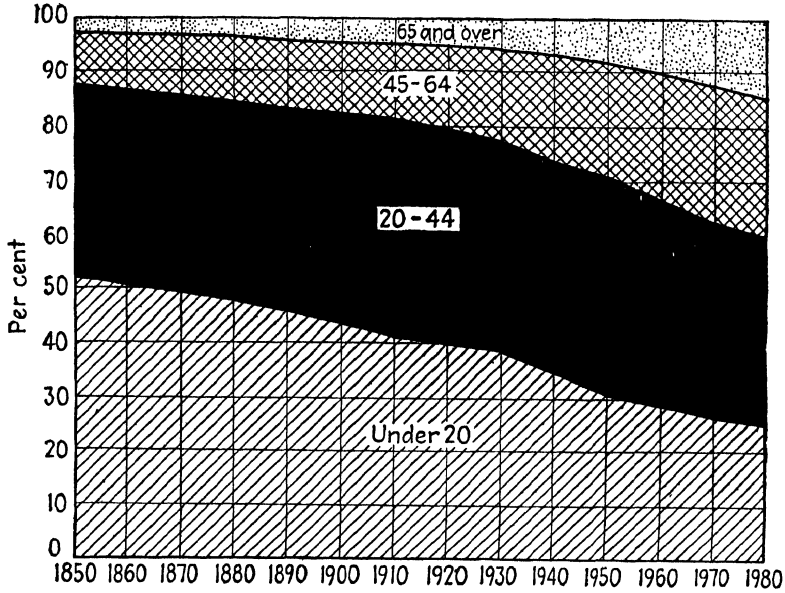


FIG. 38. Proportion of population in each age distribution of total population, 1850–1980; estimated after 1930. (*Based on Fifteenth Census of the United States and "Problems of a Changing Population," National Resources Committee.*)

ment calculation in 1946 indicated that a peak of 165 million population will be reached in 1990 after which a decline may be expected.[1] This will be accompanied by a marked change in the proportions of the constituent age groups, though chiefly in those under twenty and over sixty years of age. The latter may be doubled or tripled, and the former nearly cut in half.

The phenomenally rapid growth of population during the three centuries following the first settlements has been a factor in the economic, political, and social development of the country, the significance of which can scarcely be exaggerated. Obviously, such a complete change in the situation as appears to be in prospect must involve consequences of the most widespread and fundamental character for our future development.

[1] A 1948 revision, based on the rapid postwar rise, puts the estimate for 1990 at 180 million and suggests that a decline may be further postponed.

The Acquisition of New Territories. Before turning to internal movements of the population, we should have, as a background, a knowledge of the legislation affecting the disposition of the public lands to which so many people migrated during this period. This may well be preceded by an account of the nation's territorial expansion.

The acquisitions of new territory during this period mark a distinct break from the policy underlying previous acquisitions in that none of them was made up of contiguous territory, nor did any one reflect the carrying out of the concept of "manifest destiny," which played a part in the previous expansion to the Pacific. Alaska with nearly 600,000 square miles was acquired from Russia in 1867 for $7.2 million, a sum that today appears ridiculously small though considered excessive at the time, so slight was the appreciation of its resources and future value. Except during the gold rush after 1897, the growth of Alaska's population has been slow. In 1940 it had 173,000 inhabitants, nearly half being whites and the rest Indians or Eskimos. From the first, the fisheries have been the leading economic activity and source of wealth. The seal and whale fisheries, originally the most important, have greatly declined and the catch of salmon, halibut, and sardines has risen in their place. The mineral output, chiefly gold and copper, has ranked second in importance. The production of gold, though far below the quantity around 1906, still generally exceeds that of any state but California, but the copper mines that were worked are about exhausted. The large resources of coal and lumber are chiefly used only for local consumption.

In 1898, the Hawaiian Islands were annexed, chiefly for strategic reasons, though the action was promoted by a group of local sugar planters, many of whom were descendants of the early American missionaries. The sugar industry had benefited greatly from the free admission of its product into the United States since the treaty of 1876. To secure the labor needed for expansion, the planters first imported Chinese and then turned successively, because of restrictions or other reasons, to Portuguese, Japanese, Korean, and Filipino workers. This explains the very heterogeneous character of the population which in a total of 423,000 in 1940 had over 37 per cent of Japanese, 19 per cent of Filipino or Chinese, and only 25 per cent of Caucasian origin. After 1891, pineapples became an important product, especially when canning was introduced after 1900, and the islands came to supply 80 per cent of the world's canned output. Together with sugar, it made up about nine-tenths of the value of the islands' products, and nearly all of their trade was with the United States.

The Spanish-American War of 1898, originating in the desire to end the chaotic conditions in Cuba, led to the acquisition of Puerto Rico, the Philippines, and Guam. This action, particularly the taking over of the

distant Philippines, was considered a new departure in the policy of expansion; it was said to mean a policy of imperialism similar to that of European nations. Theretofore, nobody had dreamed of acquiring the Philippines, but once seized, the possibilities they offered for investments, for expansion of commerce, and for adding resources began to be emphasized and played some part in their retention. That Cuba, long coveted by many and of great value for its tropical products, was not taken at the same time showed much greater restraint than was then common among world powers.

In Puerto Rico, the population has doubled since acquisition and totaled 1,869,000 in 1940, 38 per cent being Negroes. The resulting density of 546 per square mile is extremely high for an essentially agricultural community and involves a relatively low standard of living. Thanks to free access to the United States market until the quota limitations of 1935, sugar became the great staple crop and the related rum manufacture arose. Coffee and tobacco were less important staples, but the output of foodstuffs left the island dependent upon substantial imports. In the Philippines also, the population more than doubled under American control reaching a total of 16 million in 1940, but the density of 139 per square mile was relatively moderate. Here, as in the other island territories, free access to the protected United States' markets largely shaped the trend of development. Sugar, coconut products, manila hemp, and tobacco became the leading agricultural products and dominated the export trade; augmented by some imports of rice, breadstuffs, and dairy products, the local output sufficed to meet the food requirements. Chromium and an increased amount of gold have been mined along with some iron, but coking coal is lacking. Though forests cover over half the islands' area, lumbering has developed slowly. The trade of the islands with the United States rose from about a tenth of the total in 1900 to nearly three-quarters in 1935.

Though the treatment of these possessions is not entirely free from exploitation, it will compare favorably with that of European nations toward their more backward colonies. Undoubtedly the inhabitants of these territories have greatly benefited under American control; greater peace and order have prevailed; education and social hygiene have been markedly advanced; many public improvements have been provided; capital has been more easily obtainable; and commerce has been stimulated to the economic advantage of the possessions as well as of the United States. Recently, however, the United States has shown signs of a disinclination to take full advantage of the semitropical resources provided by its island possessions. Since 1935, the domestic sugar producers have secured a quota limitation on the imports of sugar from these islands, and the passage of the law of 1934 creating the Philippine Commonwealth and leading to the grant of independence in 1946 was actually due largely to the protective

interests who hoped thereby to eliminate the competition of the islands' sugar, tobacco, and coconut products.

In 1904, under pressure, the Panama Canal Zone was leased in connection with the construction of the canal, which was opened in 1914, and in 1917, also primarily for strategic reasons, the Danish West Indies were purchased. During the 1930's, the country showed a tendency to restrict imperialistic activities, but the development of air transport and the war have since led to a demand for strategic airplane bases for both military and commercial purposes.

The Public Land Laws and Policy. The struggle to secure free land had attained success with the passage of the Homestead Law in 1862. Thereafter the public land problems ceased to have the prominence that they had attained during the preceding period. In part, this was due to the fact that the disposition of the public domain was no longer connected with some of the other issues with which it had been bound up theretofore. Slavery had disappeared and, as receipts from the sale of public lands were insignificant, they were no longer a factor in the fiscal condition of the treasury and so severed the connection between the lands and the tariff. Though the question of using this resource for various social purposes still remained, it received, unfortunately, far less public attention than theretofore. The East rather ignored the problems involved, and the West was given free rein to do about as it wished with the vast resources that it practically claimed as its own.

The main problems of this period arose from the entirely different character of the land that was being opened up. The previous laws had been framed largely to suit conditions in Eastern farming land; but the very different character of the region and the resources beyond the 100th meridian required new legislation adapted to those conditions. The policy underlying the new laws was governed largely by the wishes of the West, always anxious to hasten its economic development and to make private acquisition of the resources of the public domain as easy as possible.

So successful, from this point of view, were the results of this policy that by the close of the century the supply of free and fertile farming land had almost disappeared, and most of the valuable mineral and timberlands had passed into private hands. The nation then suddenly awoke to the fact that its natural resources were not inexhaustible, that much was being wasted, and that more consideration for the needs of the future was essential. Thus the movement for conservation arose and, in the twentieth century, legislation, though facing strong opposition from local Western interests, began to reflect a reaction against the free and easy methods in disposing of the public domain that had theretofore prevailed.

Among the important laws of this period that had particular application

to lands of the Far West, the first was the Mineral Land Act of 1866, soon supplemented by the Mining Act of 1872. Theretofore, much valuable mineral land had been sold as agricultural land, and this was the first general act, though there had been earlier laws regulating such sales in certain districts. Under these new laws, mineral lands were sold in limited amounts at from $2.50 to $5 an acre. In 1873, the first general act applicable to coal lands provided for the sale of quarter sections at not less than $10 an acre when over 15 miles from a railroad and at not less than $20 when

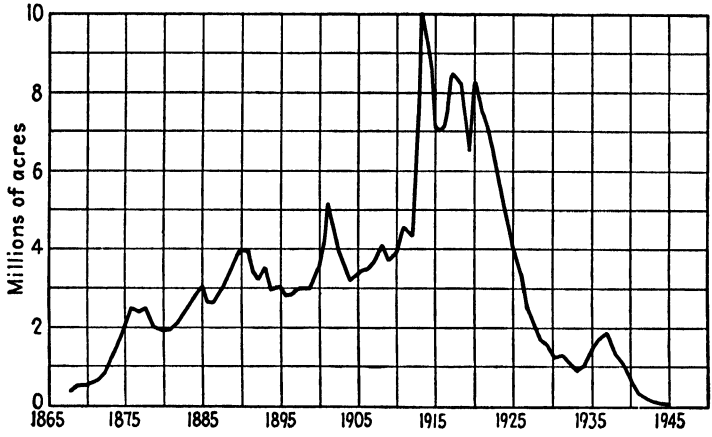


FIG. 39. Final homestead entries, 1868–1945.

nearer. Though these prices were often far below the value of the land, no effort was made to obtain more than the minimum set until 1906.

The Timber Culture Act of 1873 provided for a grant of a quarter section on condition that trees were planted on a small portion—eventually cut to 10 acres—and kept growing for a few years. Some 10 million acres were thus disposed of but, as very little timber and considerable fraud resulted, the law was repealed in 1891. The same year also brought the repeal of the old Preemption Law, whatever conditions once justified it having long before disappeared.

The Desert Land Act of 1877 permitted the acquisition of 640 acres of land, not sufficiently watered to raise a crop, provided it was irrigated within 3 years, on payment of $1.25 an acre. Since this proved too large for an irrigated farm, in 1891 the size was reduced to 320 acres and only an eighth had to be irrigated, but residence was required.

The Timber and Stone Act of 1878 allowed the purchase of 160 acres of nonmineral land, unfit for cultivation and chiefly valuable for timber or stone, at a minimum of $2.50 an acre. Until 1908, since when it has been appraised, such land was sold at the minimum price, generally far below

its real value. Originally, this law applied only to the Pacific coast states and Nevada, but in 1892 it was extended to the rest. The buyer had to swear that he purchased it for his own use and benefit and not for resale and speculation. This was seldom the result, for much was taken by dummy entrymen who soon resold it to the larger timber companies that could cut more economically. By 1945, 14 million acres had been taken up under this act.

Though the supply of free land suitable for ordinary farming had practically disappeared before 1900, vast tracts of the public domain still remained, chiefly in the semiarid West. The land in this section fell roughly into four classes: (1) that suitable for cultivation either with or without irrigation, (2) the desert land, (3) the forested area, between 10 and 20 per cent of the total, chiefly valuable for timber or protecting the water supply, and (4) that suitable only for grazing, probably over three-quarters of the total.

Only a very small portion of the arid Western land can be irrigated—substantially less than 10 per cent. Though the Mormons had made an early beginning, private irrigation projects, generally on a small scale, first became common here in the 1880's. In 1894, the Carey Act granted most states in this region 1 million acres each, the states being required to supervise the construction of irrigation projects and dispose of the land, against which the cost of the project was charged, to settlers on easy terms. To meet the need for larger enterprises, the Reclamation Act of 1902 set aside most of the proceeds from the sale of public lands in the semiarid states in a revolving fund for Federal construction of irrigation projects. The cost was charged against the land irrigated, which was open to homestead entry in tracts of from 20 to 80 acres. Down to 1942, nearly $500 million had been spent on such projects. These were capable of irrigating nearly 2.4 million acres within the projects and providing supplementary water for a slightly smaller acreage outside. From these two sources crops valued at $271 million were obtained in 1942, fruits and alfalfa taking the lead. There are also various special reclamation projects primarily designed to produce power which in 1940 had a capacity of nearly 900,000 kilowatts. In 1940, existing public and private projects in 17 Western states plus Arkansas and Louisiana were capable of irrigating 28 million acres and actually irrigated 21 million. It has been estimated that additional practical projects could raise the total to around 50 million.

To facilitate acquisition of semiarid land, the Enlarged Homestead Act of 1909 opened up such land in most Western states to homestead entries of 320 acres and in 1912 the required residence was reduced to 3 years. In 1916, the Stockraising Homestead Act permitted homestead entries of 640 acres on grazing land, but with no provision for commutation, and the

subsoil mineral rights were retained by the government. On most of this grazing land, as had long before been pointed out, several times the amount allowed by the law was necessary to provide a living. Many homesteaders of these years learned this from cruel experience. Though commutations declined, the acreage finally patented to homesteaders came to be barely half that for which entries were made. Most of the considerable increase in homestead entries at this time (see the chart on page 463) can be attributed to these laws, but much of the land so acquired had previously been used as a part of the public range.

Throughout this period, land continued to be disposed of by grant under either old or new laws. The grant for schools, increased to two sections per township in 1848, was doubled from 1894 on, except for one state. Under the Morrill Act of 1862, each state was given 30,000 acres for every Senator and Representative in Congress, the proceeds to be used for colleges where agriculture and the mechanic arts were taught. Many of the state universities and agricultural colleges owe their inception to this act, the benefits of which were later extended to new states. The education grants have totaled some 116 million acres. States continued to take up land under the swampland grant, and by 1945 had thus acquired nearly 65 million acres. Often land so obtained was not properly swampland, and until recently few states took active measures to drain it.

The Civil War accentuated the demand for the construction of a transcontinental railroad and, by eliminating Southern opposition, made agreement on the central route possible. This led to the second period of railroad land grants starting in 1862. Nearly all these grants were for railroads in the Far West and, except for the fact that most were given directly to the railroads, they were similar in character to the earlier grants. However, owing to the lower value of most of the land, the grants per mile were much larger. The first grant to the Union Pacific and Central Pacific railroads was 10 square miles per mile of railroad; in 1864 this was doubled for the portion of the roads in the territories. The grants to the Northern Pacific in 1864 and to the Atlantic and Pacific and the Southern Pacific in 1866 raised the amount to 20 square miles in the states and 40 in the territories. Other grants followed up to 1872 when the growing hostility toward the railroads put an end to them.

Thereafter various individual grants were canceled to the extent that the railroads had not been constructed, and in 1890 this forfeiture was made general so that eventually 35 million acres were forfeited; but it was not until after 1940 that the grants were finally cleared up, the total acquired under all direct Federal grants being over 131 million acres plus 49 million received from the states. Much the largest acquisition—39 million acres—went to the Northern Pacific. In Minnesota and Washington, the original

grants covered about a quarter of the total land area; in Wisconsin, Iowa, Kansas, North Dakota, and Montana about a fifth. Though much of the land in the Far West thus given the railroads was worth little, the timberland secured by the Northern Pacific and the Southern Pacific has proved most valuable and formed the basis of the three great private holdings of the country. The Southern Pacific also secured land that proved to be rich in oil. The average net receipt per acre sold by the railroads has been variously estimated at around $3. Besides hastening construction and getting a higher price for its own land, the government in return for these grants received about 50 per cent lower rates for transporting troops, supplies, and the mails, and competing nonland-grant railroads usually offered a like cut. In 1940 when railroads abandoned certain land claims, the lower rate was limited to military supplies and personnel, but with the heavy movement of this traffic during the Second World War the government probably saved around $1 billion on these items. This was partly responsible for the law abandoning this right, effective October, 1946.

Reservations and Conservation. After about 1890 when it was realized that the output of many important natural resources such as coal, iron, copper, oil, and lumber was generally doubling every decade—in other words that each new decade saw more of these resources extracted than had been extracted in all previous time—it finally dawned on the country that this could not go on forever, that in certain cases exhaustion of the remaining supply, at least that of high quality, was dangerously near, and that a policy of conservation was called for.

Yet it was not until Theodore Roosevelt's administration that much was accomplished, chiefly under the leadership of Gifford Pinchot. The revision of the land laws in 1891 had authorized the establishment of forest reserves; under this and an act of 1897, about 50 million acres had been set aside by 1901, but under Roosevelt the reserves were nearly tripled. In 1907, under pressure from private and local interests, Congress deprived the President of the right to establish forest reserves in six of the chief timber-producing states of the Northwest, but by then the supply of good timberland remaining in the public domain outside the reserves was small. Only slight additions have been made since; these were chiefly in the older states to the east and were acquired by purchase under a new policy initiated by the Weeks Act of 1911. With the growth of reservations came a marked development of the government's forest service, better fire protection, and wiser provision for control of the reservations so that their resources were not simply locked up but made available under conditions that would safeguard the public interests.

The movement to establish reservations was soon extended to other resources. Much the most extensive covered coal lands, but others included

those for oil, gas, phosphate, potash, nitrate, water power, reclamation, watering places, and wild game. Also the area of the national parks was considerably increased, and many so-called "national monument" and other small tracts were set aside.

With the growing scarcity of good free land, increased pressure arose to open up the Indian reservations to the whites. The most valuable, those in Indian Territory, began to be opened in 1889. Under the Dawes Act of 1887, much of the land in the reservations was divided up among the individual Indians, but they seldom proved able to protect their interests against the wiles of the white man, and by 1936 they had lost two-thirds of the 139 million acres that had belonged to the tribes in 1887. In consequence, an act of 1936 prohibited the sale of Indian land except to the tribes and provided a process to enable the Indians voluntarily to return their individual holdings to a tribal status which most accepted. This law also included provision for aid and guidance of the Indian in the conduct of his social and economic affairs.

Commencing in 1920, there was a more active movement to facilitate the use of the various resources remaining in the public domain, under careful provisions designed not only to foster conservation but to protect and further the public interests generally. Under the Mineral Leasing Act of that year, through a system of permits and leases on a royalty basis, the government controls the development of mineral resources and also secures a fair return, over one-half of which goes into the revolving reclamation fund and over one-third to the states where the minerals are found. Under the Federal Power Act of 1920, the Federal Power Commission carefully controls the leasing of water-power sites.

Similar objectives underlay the Taylor Grazing Land Act of 1934 and later amendments which gave the Secretary of the Interior wide powers to establish grazing districts up to a total of 142 million acres out of the vacant, unreserved, and unappropriated lands, and to regulate their use and provide for their improvement. The previous reckless and uncontrolled use of the public grazing lands, chiefly through excessive stocking, is said to have depleted their capacity at least one-half, not to mention the effects upon water conservation and related problems. It is estimated that it will require 50 to 100 years to restore the former grazing capacity. It was in line with this same general policy that a series of orders by the President, 1934–1935, temporarily withdrew from entry all public lands except those under the mineral laws. It was expected that they would only be reopened under conditions ensuring the best land use. It is to be hoped that this will mark the end of the sorry record of neglect, waste, and exploitation that has characterized so much of the history of the public domain.

The problem of conservation is by no means a simple one. There are

many instances where resources are undoubtedly wasted even under present-day conditions and where the waste should be checked. But when it comes to the type of conservation that favors limiting the use of resources that can be economically employed by the present generation so that future generations may have a larger supply, problems are raised which are very difficult to answer with assurance. They involve weighing the economic or other advantages that may accrue to the future generation against the losses to the present generation. The difficulty in doing this arises from the uncertainty as to how important the resources saved will be to the future generation in view of the unknown possibilities in the progress of science and invention. Though such progress seldom makes any resource useless, it has wrought vast changes in the relative importance of various resources to different generations. A failure adequately to consider and balance those possible losses and gains is probably the most serious criticism to be brought against the conservationists. But those who have generally opposed them are open to the more serious charge of ignoring the needs of the future and too frequently of being concerned only with immediate private gain.

The Results of the Public Land Laws. As a result of the rapid disposal of the public domain, there remained in 1945 unreserved and unappropriated, excluding 230 million acres in Alaska, only 170 million acres or about one-eighth of the original domain. Nearly four-fifths of this was in grazing districts. Of the land disposed of, the largest item, over 247 million acres down to 1945, was patented under noncommuted homestead entries, two-thirds of it after 1900. In practice, the worst feature of the homestead law was the commutation clause granting title after a few months' residence on payment of $1.25 an acre. This was used by speculators who never intended to develop their land and commuted their entry only to secure title and resell at a profit. The Public Lands Commission of 1903 found counties where 90 per cent of the commuted homesteads were sold within 3 months after acquisition of title and declared that "a great part of all commuted homesteads remain uninhabited."

Until its repeal in 1891, the Preemption Law was also taken advantage of for similar purposes. In connection with the rush to secure the remaining prairie lands, it was said,

> Of all the motley crowd that helped themselves to public land during the boom of the eighties not one in three had the slightest intention of remaining upon it; not one in five remained more than long enough to prove up and sell out, or "mortgage out"; and not one in ten has left a permanent mark upon the landscape of Kansas, Nebraska, or Dakota.

Too frequently, even where a homestead entry was not commuted, lax administration made it possible to evade the intention of the law.

Commenting upon the land laws in general, the Commission of 1903 said that they were antiquated and did not fit the conditions of the remaining public land; often they prevented or retarded settlement, and the number of patents issued was increasing "out of all proportion to the number of new homes."

The provisions of the Desert Land Act, under which final patents for 10 million acres—less than a third of the original entries—have been granted, were also widely evaded. Often the control of water supply so gained gave the holder a practical monopoly of large tracts of public grazing land. The complete failure to control the use of the public grazing lands was responsible for their rapid deterioration. Because of this, the stock raisers after about 1890 rapidly acquired title to the best of this land to ensure themselves of adequate pasturage. Even under private control, though less wasteful, deterioration was common, nor was it unknown on sections of the forest reserve open to grazing in the earlier years. As the foregoing suggests, one of the most serious defects in the methods of disposing of the public lands has been the laxity in the administration of the law. Even where the provisions of the law were adequate—too frequently they were far from adequate—evasion has been easy and the real purpose of the law has been defeated. Until recent decades, the administration was largely in the hands of men sympathetic with Western interests, and corruption was far too frequent. Through most of our history the public domain has been regarded as public spoils. When the older sections ceased to have much interest in the spoils, Western ideals became increasingly dominant in both the formulation and the administration of the public land laws until the rise of the conservation movement led to a broader national point of view.

Another defect was that the laws were often drawn up without adequate consideration of the economic conditions affecting the efficient use of the land, chiefly seen in those applicable to land not suited for ordinary farming. An outstanding illustration is found in the method of disposing of timberland in 160-acre tracts, far too small for economical cutting by the owner. It is not surprising that, despite the law, such tracts were apt to be promptly sold to large timberland holders. The unwillingness to grant large homestead entries on grazing land had similar results. The uniform charge on all land in an irrigation project regardless of its varying quality left the poorest land on the hands of the government. Also it may be noted that in practice the methods used in the disposition of the land not suitable for ordinary farming, much more frequently than in the case of farm land, resulted in very large gains to individuals. Lumbering, livestock raising, mining, and oil-well drilling were the bases of a relatively large number of big fortunes, though in the case of the last two many prospectors reaped only losses.

The government could easily have secured a much larger revenue from these resources without appreciably retarding their development.

A final criticism of the public land laws rests on the fact that, from the beginning down to about 1900, the whole trend was to make the public domain more and more easily accessible. If anything, the trend should have been in the reverse direction; certainly the reversal of this trend should have started much earlier. In the early period when the difficulties and dangers of developing the frontier were great, there was more reason for making access to the land easy. But, as these obstacles decreased and the nation grew in strength while its natural resources diminished, there was need for greater caution in disposing of the public domain. As usual, the country was slow to awake to the changing conditions and legislation fell far behind the needs of the time.

The Westward Movement of Population. The line of frontier settlement in the Middle West in 1860 is shown on the map on page 259. The Civil War checked the westward migration, though many went to the mining region, but on the return of peace it was resumed with vigor. The passage of the Homestead Law and a later amendment allowing Union soldiers to count their term of service toward the law's residence requirement attracted many to the West. At this period, too, the railroads were becoming the pioneers, pushing ahead of the line of settlement. The completion of the Union and the Central Pacific railroads in 1869 provided the first transcontinental line, and in the early 1880's the completion of other roads provided easy access to the states along the northern and southern frontiers of the West. This invasion of their hunting grounds aroused the Indians and led to a series of brief Indian wars, but after 1876 the outbreaks were only sporadic and had little effect in checking settlement.

Little scattered mining settlements continued to spring up as new discoveries were made. To the output of gold, which still remained over $30 million a year, there was now added the rapidly rising output of silver, which from 1873 on to 1900 always exceeded $30 million a year, despite the sharp decline in its price. Around 1880, the Western copper mines began to be opened up and later the lead and zinc mines. The earlier gold- and silver-mining settlements had a life that was unique in the history of the frontier; often they vanished almost as rapidly as they arose and left scarcely a permanent trace of their existence. But as the placer deposits were exhausted and deep shafts to work quartz ores along with elaborate machinery and large-scale methods of production were introduced, the effects of mining development upon the growth of the region became more enduring.

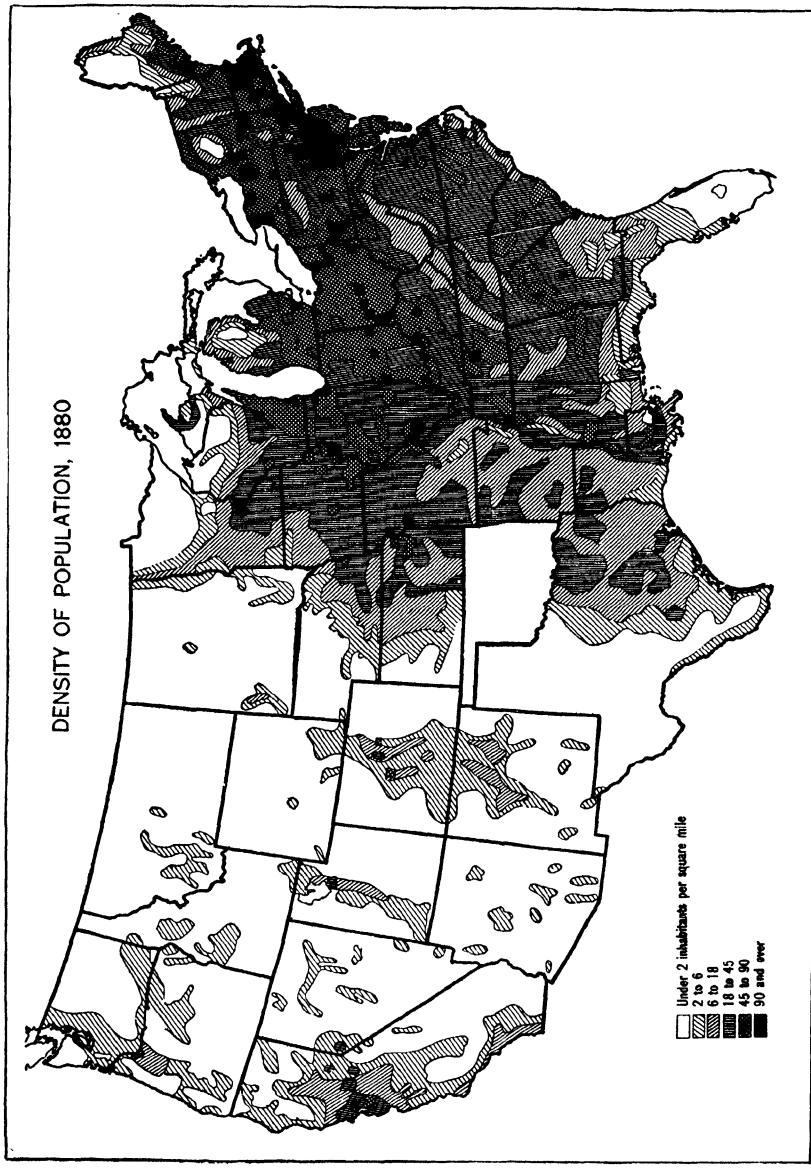
Though the line of frontier settlement in the Middle West in 1870 showed no great advance over that of 1860, the next two decades witnessed rapid

shifts. During the 1870's, the fertile valley of the Red River of the North was occupied and the discovery of gold in the Black Hills of South Dakota brought a rush to that section. In Nebraska, Kansas, and Texas prairie settlers entered the semiarid regions. There was a marked growth of the settled area in the mining region of Colorado and along the eastern foothills of the Rockies from Wyoming southward to Santa Fe, as well as near the upper waters of the Missouri in Montana. This decade also saw the first rapid growth of the regions about Puget Sound, north-central Oregon, and southeastern Washington, and in California the expansion of the settled areas along the coast and in the valleys of the Sacramento and San Joaquin rivers (see the map on page 472).

The decade of the 1880's witnessed a continuation of the rapid westward movement as times were more prosperous, railroads opened up new areas, and the realization spread that the supply of desirable free land was nearly gone. In fact the close of this decade is generally considered as marking the disappearance of the frontier and the beginning of a great decline in the westward movement. It was then that the homestead entries in Dakota, Nebraska, Kansas, and Colorado reached their high point. In Dakota, the settled area reached the Missouri River; in Kansas and Nebraska, it was pushed westward until it reached the settlements in Colorado thus covering sections of what is now known as the "dust bowl," which happened to enjoy a series of unusually wet seasons up to 1887. There was also a marked growth in the settled area between eastern Montana and the coast and a less rapid expansion in California.

The growing scarcity of desirable land was strikingly illustrated by the events attending the opening up of some Indian reservations at the close of the decade. When a portion of a Dakota reservation was opened in 1890, though it was midwinter, troops were required to hold back the homeseekers till the time of entry. When a section of Oklahoma was opened in April, 1889, thousands were waiting for the signal and a wild rush ensued. Some went in by rail, some on horseback, some in the old pioneer wagons; whole town outfits, portable houses and all, were shipped in and by nightfall Guthrie had become a city of 7,000. To avoid the chaos attending such openings, the government later adopted lottery drawings.

Such scenes indicated that the frontier had disappeared, and the westward movement was coming to an end. The great subsequent decline in that movement is reflected in the fact that, though the rate of increase in the population to the west of the Mississippi River in the period 1860–1890 had been nearly four times that to the east, it was only about 50 per cent greater in the period 1890–1920. Finally, in the two following decades, the rate of growth in the two sections was almost the same. The westward movement, rapidly dwindling since 1890, had almost ceased.


DENSITY OF POPULATION, 1880
Under 2 inhabitants per square mile
2 to 6
6 to 18
18 to 45
45 to 90
90 and over

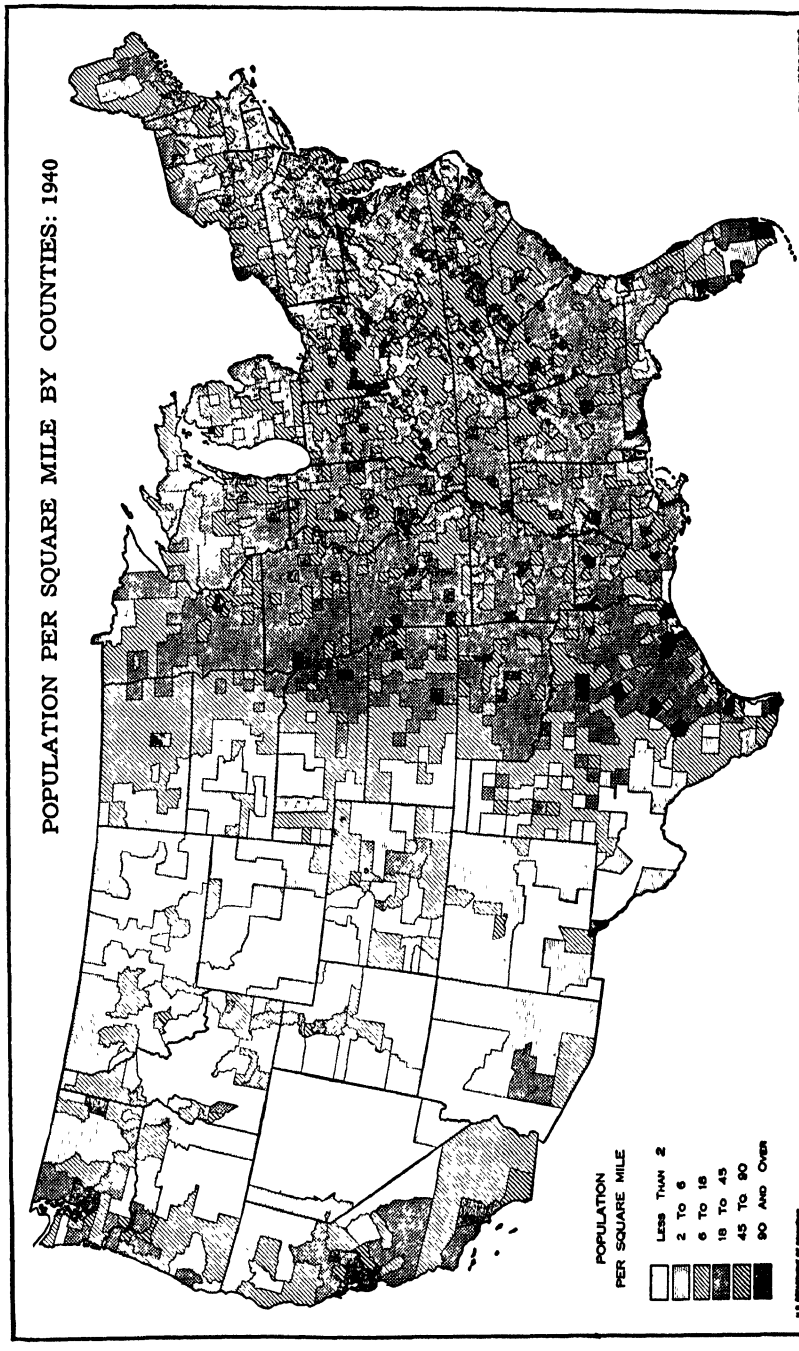


FIG. 40. Density of population, 1880 and 1940. (*The 1880 map reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," by permission of the American Geographical Society of New York.*)

The decade of the 1890's proved a particularly trying one for the West. The prices of farm products, continuing the long decline started in 1865, reached the lowest level since 1842. There was also an unusual series of droughts which proved especially disastrous to those who had settled on the semiarid lands with little knowledge of the methods required for cultivating them. This led to a marked exodus of settlers from western Kansas or Nebraska and eastern Colorado at this time, and the growth of population in the West North Central group of states since 1890 has been slower than in any other group in the country. The emigration to the Canadian Northwest, which came chiefly from this group, first became appreciable then. Oklahoma, aided by the opening up of the reservations and the development of the oil fields, grew faster than any other state in the Union between 1890 and 1910, but the group of states that enjoyed the fastest growth was that on the Pacific coast. There Washington led in rate of growth up to 1910, but the rapid development of fruit-growing and the rising popularity as a resort placed California first in subsequent decades. The same factors explain the rapid growth of Florida in the East; with an increase of 28 per cent it led all others in the decade 1930–1940.

In 1860, 14 per cent of all the people lived in the states west of the Mississippi River. By 1890, this had risen to nearly 27 per cent but thereafter advanced more slowly to 37 per cent in 1940. During the decade 1930–1940 the most rapid rate of growth as a group occurred in the Far Southwest, while there was a loss of population in the tier of five states from Oklahoma north—due chiefly to severe droughts in the dust bowl.

Those who took part in this westward movement were mostly of native white stock. Relatively few Negroes have gone west of Texas. The Scandinavians who settled in Minnesota and neighboring states in large numbers constituted the largest group of immigrants going to the West, but there were many small groups from central and eastern Europe, often secured by railroad activities, scattered through other states. More recently, the Pacific coast region has received numerous immigrants, chiefly from southern Europe; but those from eastern Asia, though mainly located there, have been relatively few in number. Of late, the states bordering on Mexico have had some immigration from that country.

The Second World War brought unprecedented shifts in the civilian population, but how enduring remains to be seen. Immediately, the greatest gains were in the Atlantic, Gulf, and Pacific coastal states engaged in the manufacture of war supplies and shipbuilding; the heaviest losses were in the region between the Mississippi and the Rockies. Ultimately the Far West seemed likely to gain most.

The Urban Movement of Population. Though the urban movement of population has been marked from the first, its effects have been in part

counteracted by the migration to the rural regions of the West. As the latter lost most of its force after 1890, the migration to the cities has since become the dominant feature in population movements.

In 1860, about a sixth of the population lived in places of 8,000 or more inhabitants but by 1940 about one-half. Taking the census basis of places of 2,500 or more inhabitants as the dividing line between urban and rural population, 56.5 per cent was urban in 1940 and the estimate for 1947 was 59 per cent. In 1940, almost an eighth of the people lived in the five cities of a million or more inhabitants each; nearly 30 per cent lived in cities of 100,000 or more. Between 1890 and 1940, the urban population grew at a rate 3½ times greater than that of the rural population. The growth was most rapid in the decades between 1900 and 1930 but negligible in the following decade owing to the return to the farms during the long depression (see the chart on page 449).

The proportion of urban dwellers varies greatly in different regions, but three fairly distinct sections can be distinguished. The urban population is highest, about 72 per cent of the total, in the industrial section east of the Mississippi and north of the Ohio River and Maryland; it is lowest, about 37 per cent, in the South. In the Far West in the Rocky Mountain states, in spite of the sparse population, nearly 43 per cent of the total is urban; in the Pacific coast states 65 per cent. These figures suggest the variations in economic and social conditions under which the bulk of the people in these regions must live.

The Growth of the Large Cities. The chart on page 476 shows the growth in population since 1860 of the largest cities of today. In many cases, this growth is in part a product of the expansion of the city's area. New York is still far ahead, thanks to annexations and its position as the leading commercial, manufacturing, and financial center. The growth of cities located along the shores of the Great Lakes, largely because of manufacturing developments, has been striking. The case of Chicago, which quickly outstripped its Middle Western rivals and by 1890 had become the second largest city of the country, is the most prominent, though commercial and financial activities played a more important part in its growth. The recent sudden advance of Detroit and many smaller cities near by is due mainly to the automobile industry. Philadelphia, though dropping to third place, enjoyed a steady growth primarily based on manufacturing. The slow expansion of Boston and Baltimore, founded on both manufacturing and commerce and less augmented by annexations, continued, their lack of waterways to the interior being less of a check than before 1850, thanks to the development of railroads. New Orleans and Cincinnati, the two largest cities of the West in 1860, suffered from the declining importance of inland river traffic, together with the slower growth of population and

the rise of rivals in their tributary territory. St. Louis, though also suffering from the decline of river traffic, benefited from the growth of population to the West and a considerable development of manufacturing.

The growth of the larger cities beyond the Mississippi River has been chiefly shaped by the opportunities for the expansion of trade. With a few exceptions, notably Minneapolis and very recently some others, manufacturing has played a rather minor role and, except for those lines working

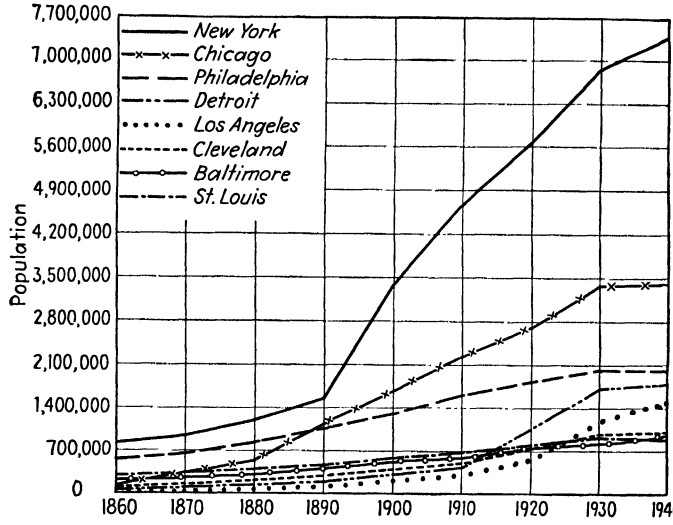


FIG. 41. Growth of population since 1860 of the eight largest cities of 1940.

up local raw materials, has tended to follow commercial growth. Mining development was basic only in the case of a few of the smaller cities. The recent rapid rise of Los Angeles, now the largest city west of Chicago, though partly owing to extensive annexations, was chiefly based on the attractions of its climate as a resort and also for the production of movies, but this growth is providing a basis for an expansion of trade and manufacturing. The general shift of workers to the cities during the war was particularly marked along the whole Pacific coast.

The persistence of the urban movement and its dominance in recent decades are largely based on the economic advantages offered by cities and the prevalence of a higher birth rate in rural regions. The great growth of manufacturing, opening opportunities to the offspring of the rural districts, has been the main factor in city growth. But the city also affords numerous advantages arising from the specialization and division of labor based upon large-scale production and a large market. Like other instances of specialization, this was made possible only by the development of transport facilities, both local and national, without which the city could scarcely exist.

The really outstanding advantages of the great city rest on its enormous purchasing power and the resulting vast local market. This is particularly important in the case of those goods and services that have to be used in the locality where they are produced. A big factory does not have to be located in a large city if its product is readily transportable, and in such a case both the large city dweller and the small town dweller can obtain the advantage of lowered price because of mass production. But many of the advantages of the big city consist in goods or services that are not transportable and can be supplied only where there is a large local market, such as opera, the best concerts and theatrical performances, or great art museums. Similarly with the goods and services provided by local government, the large concentration of wealth that can be drawn upon by taxation and the lower unit cost of providing these on a large scale make it possible for the big city to supply more and better things than can the smaller places. The attractions of the city thus have a sound economic foundation.

Yet the additional gains to be obtained from greater size tend to diminish at some point, just as certain disadvantages may increase. Thus the rate of growth in the very largest cities tends to become less rapid than in those of moderate size. We must recognize, however, that the developments that have made possible the great modern city, despite certain accompanying evils, have substantially added to the standard of living.

CHAPTER XXX

TRANSPORTATION AND COMMUNICATION SINCE 1860

Introduction. The outstanding feature in the history of transportation after 1860 was the dominant position attained by the railroads. The period during which the more widespread among the revolutionary effects following the introduction of railroads in this country were most felt, roughly fell between the years 1850 and 1885. Until about 1850, or perhaps as late as 1860, the railroads were mainly feeders to the waterways. It was not until the 1850's that anything like a real railroad system linked the trans-Appalachian region with the Atlantic coast states. Between 1860 and 1885, the transcontinental lines were pushed through to the Pacific coast, the main outlines of the country's railroad net were completed, the introduction of many technological improvements facilitated through traffic and lowered costs, short roads were consolidated into great systems, and a rapid reduction in rates took place. Though progress continued thereafter, the effects were less revolutionary in character. With this advance in rail transport came a decline in the importance of most of the inland waterways. The twentieth century brought the rapid spread of motor vehicles along with extensive construction or improvement of roads to facilitate their use. Though primarily employed for local or regional transport, this new vehicle was able to compete in many services with the railroad. Since the First World War the airplane has provided the speediest transport known.

The period after 1860 also brought marked improvements in communication facilities; the most notable, such as the telephone, the wireless, and the radio, coming in the latter portion of the period. Together, the improvements in transport and communication served to widen markets, promote specialization, stimulate trade, and build up a national economy. At the same time, as they were introduced in other nations, the resulting gains were spread around the earth and promoted a more nearly world-wide economy. By 1938, man had encircled the globe by airplane in less than 4 days, a telegram had been sent around the world in less than 5 minutes, and a radio broadcast covering most of the world was possible.

Technological Advance in Railroads. The introduction of cheap steel brought many improvements, notably the substitution of steel for iron rails, the construction of steel bridges spanning broad rivers, and eventually

the general use of steel in the rolling stock, all of which made heavier locomotives and trains possible. The first steel rails were laid in 1863, but it was not until after the rapid drop in their price during the 1870's that they were extensively used; probably not over a third of the mileage was of steel by 1880. Coal-burning locomotives were first extensively used after the Civil War; more recently those using oil or electricity have been introduced. Another gain came with the general adoption of the standard-gauge track by about 1886. By 1875 passenger trains were equipped with the air brake and better signaling devices installed. Through sleeping-car service was common by 1869; the refrigerator car was then introduced along with fast freight lines. Improvement has continued down to date, notably during the decade of the 1920's when the efficiency of the railroads is said to have increased 25 per cent. The 1930's witnessed the introduction of the streamlined air-conditioned passenger train. By 1940, increased efficiency combined with some decline in traffic had enabled the railroads to cut the number of their employees from the all-time peak of over 2 million in 1920 by nearly one-half. During the Second World War, with little increase in equipment and a rise in employees to over 1.4 million, the quantity of traffic handled far surpassed all previous records.

The Financing of Railroad Construction. The huge cost of the transcontinental roads and the meager traffic at first obtainable in unsettled regions made the financial risks greater than private enterprise was prepared to assume without assistance. The aid given by the land grants, previously described, was supplemented in the case of the Union and the Central Pacific railroads and certain branches by a government loan. varying from $16,000 to $48,000 per mile of track according to the character of the region traversed, and totaling some $65 million. The contracts for building these two roads were given to private construction companies under terms that proved extremely profitable to the builders. When some members of Congress were found to be interested in the Crédit Mobilier, which built the Union Pacific, it created a national scandal. The two roads were joined near Ogden, Utah, in 1869, accompanied by a national celebration to mark the passing of another milestone in the country's development. But the reaction against railroads which was then setting in put a stop to all grants after 1872. In 1914, the need for a railroad from the coast of Alaska into the interior led the government itself to build a line, which was completed in 1923 but which has not proved a financial success.

Despite previous sad experiences, many states and local communities extended financial aid to the railroads. This was common among the Southern states during the reconstruction period and among the local units in the prairie states where not prohibited by law. After about 1890, as more states took action to stop this practice, it became unimportant. Some

states that had acquired public land made grants to the railroads; notably Texas where most of the 32 million acres given for internal improvements were so used.

As the country grew in population and wealth and the risks of pioneering railroad construction diminished, financing from private sources became easier. Also much of the renewed inflow of foreign capital after the war went into railroad securities. The first transcontinental to be built with practically no land grant, the Great Northern under the leadership of James J. Hill, was completed in 1893.

The financial policy of many railroads at this period reflected a growing tendency to rely on the sale of bonds rather than stock to secure the necessary cash. Often the stock was disposed of for a small sum or given as a bonus with the bonds. The heavy fixed interest charge thus incurred often led to financial disaster. Not a few of the roads fell under the control of speculators through whose unscrupulous manipulation they were saddled with financial burdens from which some suffer to this day. Such scandalous actions as attended the fight over the Erie around 1868, to mention but one of the most notorious cases, made the necessity for stricter public control only too clear. The domination of many state legislatures by railway influence was a common obstructing force, and it was not until after 1900 that much was accomplished along this line.

Railroad Construction. The annual additions to the railroad mileage of the country are shown by the chart on page 481. Until about 1914, construction fluctuated roughly with the business cycle. The spurt in building after the war, including the completion of the first transcontinental in 1869, had doubled the total mileage by 1873. At this time construction was particularly active in the grain-growing states just west of the Mississippi, but many gaps were filled in in the South and the East. After the panic of 1873, there was little building until 1878 at which date there were nearly 82,000 miles in operation. There then followed a period of construction lasting up to 1893 which is unequaled in the history of this or any other country. Even in 1920, no country in the world had half the mileage that was built in the United States during these years when the total mileage was again doubled. The most important construction was in the Far West where this period saw the completion of the Northern Pacific in 1883, the junction of the Southern Pacific with the Texas and Pacific and the Santa Fe in 1881, the extension of the latter to San Diego in 1885, the connection of Ogden and Portland in 1884, and the completion of the Great Northern in 1893. Other roads were pushed westward between the Mississippi and the Rockies and the process of filling in gaps to the east and the south still went on.

The mileage built in the states east of the Mississippi, 1860–1890—some

62,000—almost equaled that built to the west. This for the first time provided the South with a fairly adequate system of through lines. In the North it meant filling in less populous areas, or paralleling existing systems. By 1890, the country's railroad mileage was over five times that in 1860, and it could be said that the main outlines of its railroad system had been completed.

The prolonged depression after 1893 checked construction, but with better times after 1897 it was actively renewed and by 1916 another 100,000

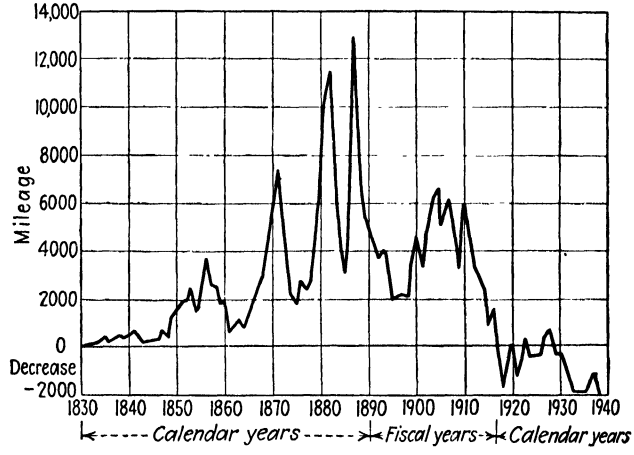


FIG. 42. Annual increase of railroad mileage in operation in the United States, 1831–1938.

miles had been built bringing the country's total to the all-time peak of 254,000 or more than a third of the mileage in the world. During this period the extension of the Chicago, Milwaukee, and St. Paul to Seattle in 1909 and the completion of the Western Pacific in 1911 added two more transcontinental roads, and a line from Salt Lake City to Los Angeles filled in a large gap. Since 1916, there has been almost no new construction and the difficulties faced by the railroads have led to the abandonment of about 25,000 miles of trackage, mostly small local or branch lines.

The Trend toward Consolidation. The railroad industry possesses in a marked degree the characteristics of modern capitalistic industry: notably decreasing costs leading to large-scale production, keen competition, and a resulting tendency toward monopoly. It was in this industry that the country was first brought face to face with the problems that arise under such conditions, as the developments during this period will show. Among them was the trend toward consolidation and the growth of great railroad systems.

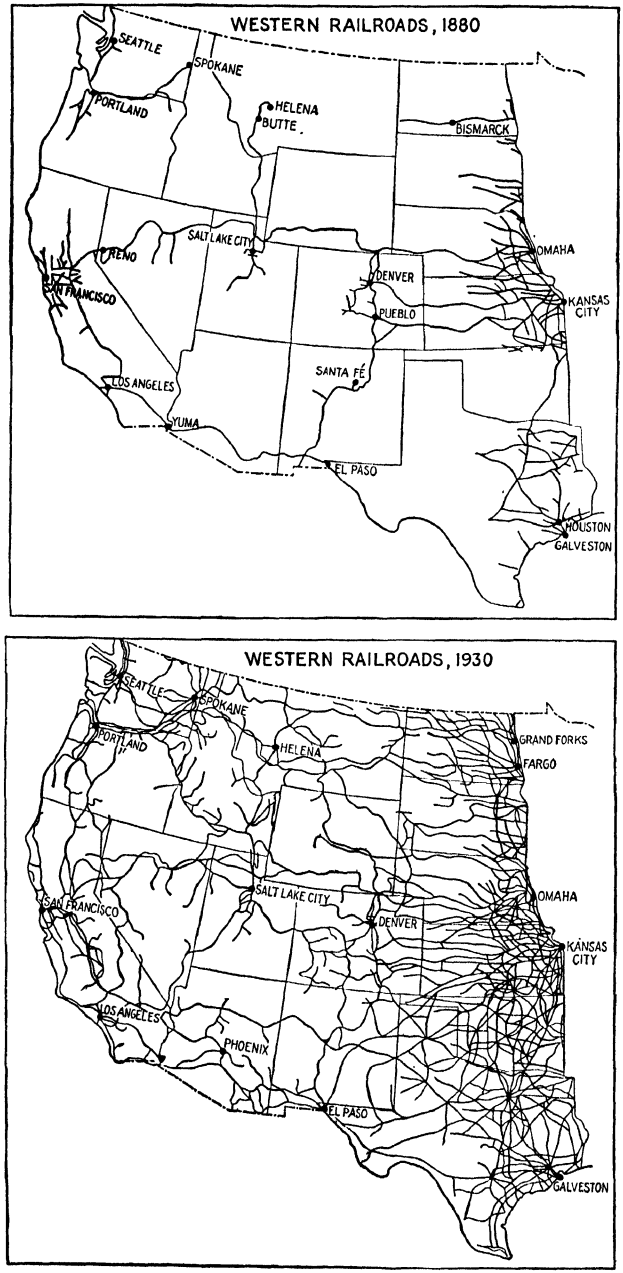


FIG. 43. The western railroads in 1880 and 1930. (*Reproduced from C. O. Paullin, "Atlas of the Historical Geography of the United States," by permission of the American Geographical Society of New York.*)

The obvious advantages in uniting under one control the many short lines over which any considerable volume of long-distance traffic was moving had started the trend toward consolidation in the 1850's. After 1860, many more of the roads being built were planned as trunk lines for long-distance traffic. Also, much more of the construction of both short and long lines was controlled by existing lines, even where a separate company was formed to operate the road. Furthermore, the older and stronger roads were actively reaching out to get control of others that would be branch feeders to the main line, or connect with important traffic centers, or check either existing or potential competition of rival roads. In the case of short roads, a lease or the purchase of a controlling interest in the stock was commonly used. Often the establishment of closely connected financial interests secured the desired results.

The first important systems developed were the trunk lines between the North Atlantic ports and Chicago or St. Louis, the former city having five such lines by 1873. This led to keen competition among these lines and a long series of rate wars. To check this, which threatened ruin—in an extreme case one railroad actually paid to carry oil—the roads resorted to pooling agreements to control rates. But these agreements were constantly breaking down and in 1887 were prohibited by Congress. The efforts to enforce competition only increased the incentives to consolidate rival lines. Most of the mileage in New England came under the control of two companies; in the South numerous short roads were consolidated into a few great systems. In the Far West under the aggressive action of E. H. Harriman, the Union Pacific was resuscitated and got control of the Central Pacific and the Southern Pacific along with substantial interests in other lines; under James J. Hill the Great Northern, the Northern Pacific, and the Burlington were united under common control; the Gould system had almost secured connections from coast to coast before it broke apart. By 1906, the greater portion of the country's mileage had been brought into one or another large system.

By 1920, however, a distinct modification of the government's hostility toward consolidation had taken place and was reflected in a provision of the Transportation Act of that year which directed the Interstate Commerce Commission to draw up a plan for regional consolidation of systems. Though primarily designed to protect the public by a carefully coordinated scheme which would preserve competition "as fully as possible," it also sought to provide support for the weak roads to be combined with the stronger ones. The final plan announced in 1929, but since modified, involved the creation of some seventeen major systems. As it was voluntary, and the Commission had only the power to disapprove acquisition of control by certain methods whereas others were left open until 1933, not much

progress has been made in carrying it out. That large systems can provide economies and improvements in service is undoubted, but the power they acquired necessitated more effective public control to ensure these gains to the people.

Railroad Regulation and Control. Until about 1870, it was commonly held that there could not be too many railroads and that anything that could be done to hasten their construction was desirable. Consequently, there had been little effort at effective regulation. The movement toward the first substantial control, starting about 1870, had various causes. Intensified competition led to the general practice of giving rebates or other favors to large shippers to the injury of small shippers. Also, localities that had competing railroads or water routes were granted low rates whereas those that did not found their rates maintained at a relatively high level. Such conditions naturally aroused much opposition.

The difficulties of the Western farmer at this period were particularly influential in creating the growing hostility toward the railroads, once they had been built. Many Western communities had gone heavily into debt to aid railroads, and after 1865 the prices of Western products declined rapidly. As the freight rates paid to get his products to the consuming markets, which were commonly very distant, substantially reduced the price that the farmer obtained for those products, he demanded lower rates and was particularly incensed where lack of competition resulted in rates that seemed discriminatory. The abuses that crept into railroad management also played a part in the demand for regulation; but a reduction in rates has been one of the various remedies for their troubles in time of depression to which Western farmers have repeatedly turned for relief, without much reference either to the fundamental causes of their difficulties or the fairness of the railroads' returns.

The first action was taken by the states. In 1869, Massachusetts created a railroad commission, whose powers were largely limited to gathering information and advising the legislature as to needed action. Much more vigorous measures were adopted by a group of Middle Western states in what is commonly known as the Granger Laws. Illinois led the way in 1871 by creating a railroad and warehouse commission with power to fix maximum rates and charges and to prohibit discriminations. Other states, including some in the South, took similar action; in a few cases, the resulting regulations proved so severe as to stop railroad building and cause a repeal of the laws. An important decision of the Supreme Court in 1877 upheld the right of the states to fix reasonable intrastate rates, though subsequent decisions limited this power to rates that did not affect interstate commerce.

The long struggle to secure Federal action in the interstate field, which started then, finally culminated in the passage of the Interstate Commerce

Act of 1887 which is the foundation upon which Federal control has been built up. This law, which of course applied only to interstate commerce, prohibited pooling agreements, unreasonable rates, and discriminations as between individuals or different kinds of commodities, or different places. The "long-and-short-haul clause" prohibited lower rates for like commodities carried a long distance than for a short distance over the same line, in the same direction, and under similar circumstances; however, under certain conditions this prohibition could be suspended. All rates had to be published and required prior notice. To help administer the law, the Interstate Commerce Commission was created with powers of investigation and the right to issue orders, but these orders were enforceable only through appeal to the courts. For a decade or more, the effectiveness of this law was considerably lessened by court decisions limiting the powers of the Commission.

Partly because of this and partly to broaden the control, a long series of amendments followed. The Elkins Act of 1903 was designed chiefly to facilitate enforcement of the law. The Hepburn Act of 1906 made the interstate business of express companies, sleeping-car companies, private car lines, and pipe lines, together with various subsidiary services of the railroads, subject to the Commission; it allowed the Commission, where existing rates were found unlawful, to determine and prescribe just and reasonable maximum rates; it stopped most free passes; it prohibited roads from carrying commodities other than lumber which they owned but did not intend to use, a provision known as the "commodities clause" and aimed primarily at the control exercised by the anthracite railroads. Also, the Commission's orders were made binding without court action unless set aside by a court. In 1910 under the Mann-Elkins Act, telegraph, telephone, and cable companies were brought under the Commission's control; the long-and-short-haul clause, rendered ineffective by a court decision in 1897, was strengthened, and a commerce court created. When this court rendered certain decisions disliked by Congress, it was shortly abolished. The Panama Canal Act of 1912 granted the Commission certain powers designed to prevent the railroads from stifling competition by water carriers.

Thus strengthened in power, the work of the Commission was made more effective. The evil of personal favoritism was practically eliminated; obviously unfair cases of discrimination were remedied, and an unreasonably high general level of rates was prevented, though adjustments both down and up were too slow. Many of the problems raised in the Commission's work are extremely difficult and, although that work has not been free from criticism, it has amply justified the Commission's existence.

The First World War created problems that led the government to take over the railroads, and a little before this the Adamson Eight Hour Act of 1916 established Federal control over the hours of railroad labor. When

the railroads were turned back to private control under the Transportation Act of 1920, that law introduced marked changes in general policy. The clause, which now permitted pooling agreements approved by the Commission, recognized the inconsistency in the old policy of trying to compel competition by prohibiting such agreements and also prohibiting discriminations which were chiefly a product of competition. Another change was reflected in the provision for the voluntary consolidation of roads into groups of competing systems under plans to be worked out and approved by the Commission. The power of the Commission over rates was increased by giving it control of the division of joint rates and the right to fix specific as well as minimum or maximum rates in place of those found unlawful. Another provision required the general level of rates to be adjusted so as to allow the railroads as a whole to earn a fair return on the value of their property, the rate for the first 2 years to be between 5½ and 6 per cent as fixed by the Commission. A clause for the "recapture" of earnings of roads exceeding 6 per cent was repealed in 1933.

Control over the issue of railroad securities was now vested in the Commission, with the idea of preventing overcapitalization and other abuses, and also powers to require the joint use of terminals and to curb the acquisition of control over other lines, [illegible]terlocking directorates were prohibited. To prevent unnecessary new construction, new trackage had to be approved by the Commission as well as the abandonment of old track. To aid in settling labor disputes two boards were set up, but they were abolished in 1926 when the Railway Labor Act provided more varied means for this purpose.

The Commission's preliminary estimate of the value of railroad property used for transportation purposes was put at $19 billion in 1920 and at nearly $24 billion in 1930—somewhat above the net capitalization of the roads—but it was found that, except in 2 years, the roads never earned the 5¾ per cent return which the Commission held was fair. With the onset of the subsequent depression augmenting the loss of traffic to motor vehicles, the financial situation of many lines became desperate. In 1932, roads controlling nearly three-quarters of the country's mileage failed to earn their fixed charges, and many were saved from bankruptcy only by the lenience of their creditors or by loans, mostly advanced by the government. To meet this emergency and to remedy defects in existing legislation, new laws were passed in 1933–1934.

The Relief of Debtors Act, amending the bankruptcy law of 1898, included provisions applicable to railroads designed to secure a fairer adjustment of the different interests in reorganization and also to give the Commission some influence in the formulation of the plan. In 1934, a new plan for settling labor disputes by a National Railroad Adjustment Board was

adopted, company unions and yellow-dog contracts were prohibited, and a pension system introduced.

More important and comprehensive in scope was the Emergency Transportation Act of 1933. Its temporary clauses created the Coordinator of Transportation with the function of broadly planning the development of different types of transport. The permanent clauses extended the powers of the Commission to cover all methods of combining railroads to ensure action in line with the Commission's plans and established a more flexible rule for rate making, omitting reference to the fair return and valuation required by the act of 1920. Also, the recapture clause of that act was retroactively repealed.

Railroad Rates and Traffic. Though no general figures are available, it appears fairly clear that much the most rapid drop in freight rates in the country's history took place between 1870 and 1885. Immediately, intense competition leading to rate wars was the chief cause, though growing technological and organizational efficiency was also a factor. Between 1873 and 1884, the all-rail rate on wheat from Chicago to New York fell from 33 to 13 cents a bushel; the lowest point ever reached thereafter was about 9 cents around 1914. As this was one of the most highly competitive rates, the decline in the general level of rates up to 1885 was undoubtedly much less proportionately, but there is every reason to believe that it was very marked.

In 1890, when general figures became available, the average rate received by railroads for carrying 1 ton of goods 1 mile was a little over 0.9 cent. Thereafter, there was a slow decline to an all-time low of a trifle over 0.7 cent in 1916, despite the rise in wages and other costs after 1896. A further rise in operating costs during the war forced an increase in rates to an average of 1.3 cents in 1921. By 1940, the average rate had been reduced to almost 0.9 cent, thanks to marked gains in efficiency which enabled the roads to carry almost as much freight as in 1920 with half the number of employees, though wage rates were higher. Passenger rates which had averaged about 2 cents a mile after 1890 rose to over 3 cents in 1921 but fell to 1.75 cents in 1940. However, by 1947, they had risen to 2.8 cents and the ton-mile freight rate to 1.08 cents, with further increases to follow.

The enormous growth of railroad traffic during this period was primarily a product of the extension of the railroads and the general development of the country. Lower rates brought more traffic, and this greater volume made still lower rates possible so that the effects were cumulative. The first complete figures available are for 1890 when the railroads carried over 77 billion ton-miles of freight and nearly 12 billion passenger-miles. By 1920, the freight traffic had more than quintupled, and the passenger traffic had

nearly quadrupled. Though passenger traffic subsequently declined, the freight traffic rose to a new peak of 450 billion in 1929. The continued severe competition of motor-vehicle transport combined with the depression drastically cut both forms of traffic in the 1930's, and it was not until 1941–1942 under the war stimulus that the previous peaks were surpassed. Yet in 1944, through the remarkable wartime effort to be described later, the previous passenger traffic peak had been more than doubled and the freight traffic peak exceeded by two-thirds.

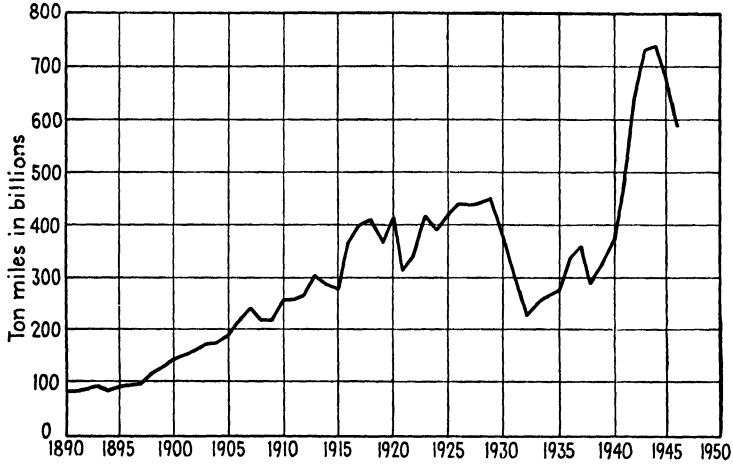


FIG. 44. Ton-miles of revenue freight carried by railroads since 1890.

In more normal times before the depression of 1929, freight traffic commonly yielded about three-fourths of a railroad's operating revenue, and passenger traffic about one-sixth. Of the freight tonnage over one-half was made up of mineral products, chiefly coal, and around one-fifth of manufactures and miscellaneous products; agricultural commodities contributed about one-eighth.

Though too little study has been given to the effects of the complicated rate system upon the economic development of different sections of the country, a few of these deserve notice. Despite long-continued efforts of the railroads to check competition their actual rate-making policy was usually essentially competitive in character. Every railroad sought to develop new traffic along its own lines and to divert to its lines traffic carried by others by lowering rates when necessary. The resulting practice of charging what the traffic would bear, although it might lead to high rates where there was little potential or active competition, more often led to cutting rates, frequently almost to direct costs or even below that, in the struggle to get more business. This meant that producers all over the country and even

abroad had their market area expanded and hence faced keener competition from a larger number of producers. This promoted specialization and, in industries where decreasing costs prevailed, it also led to a larger scale of production and greater concentration of control. In a similar way, localities enjoying unusual competition in rail or water transport obtained especially low rates which tended to increase the concentration of production and trade in those localities—the great seaports and lake ports are conspicuous examples but any railroad center will illustrate the point. The effects of this competitive policy were also extended to the foreign trade, both export and import.

On the other hand, certain rate-making policies tended to further the dispersion of production or trade. Thus the system of differentials on eastbound traffic from the Middle West, by allowing the less favorably situated trunk lines somewhat lower rates, enabled them and the ports that they served to secure more traffic than they would have otherwise. The system of blanket rates—charging the same rate to any point in a large section of the country—had a dispersing effect in the receiving section. Generally, however, the dominant rate-making policies, by tending to modify the effects of intensified competition, lowered the average of rates and increased territorial division of labor and the concentration of control of industry.

As it is seldom fully appreciated, it is worth noting what this modern mechanism for transport actually accomplishes in aiding the nation to satisfy its economic wants. One method of measuring the railroads' achievement is the quantity of pure labor that would be required to do the same work. If we assume that a man can carry 100 pounds 20 miles a day, it would have taken every man in the country between twenty and sixty-four years of age, working 300 days a year, over 46 years to carry the revenue-paying freight, to say nothing of the passengers, that the railroads carried in the year 1920; the corresponding figure for 1944 would have been about 60 years.

Another comparison suggests the increased efficiency in supplying our economic wants made possible by the railroad. The day's task assumed above is the equivalent of transporting 1 ton of goods 1 mile. In 1920, the railroads performed that task for an average of about 1 cent; to do it by pure labor would have cost 200 to 300 times as much. This suggests what a laborsaving device modern society possesses in the railroad. In performing this task in 1920, the railroads employed around 2 million people and some $20 billion of capital or $10,000 per employee. This labor saving was made possible by the mechanism of the road designed to use the resources and free forces of nature under man's organization and control. This is only one of the innumerable illustrations of the more effective methods of cooperation between man and his environment and between man and man

that brought such great progress in the material well-being of mankind during the nineteenth century.

Inland Waterways and Their Traffic. The outstanding feature in the history of canal and river traffic during this period was the great decline in its relative importance. One striking exception was the growth of traffic through the Soo Canal. By enlarging the canal so as to provide a deep-water channel through the lakes, it was possible to carry freight at about 1 mill per ton-mile. With the development of the Northwest, but especially the opening up of the Lake Superior iron-ore mines, the traffic through this canal mounted rapidly after 1890 and became several times that of the Suez Canal. The great bulk of the traffic is eastbound iron ore along with some wheat and flour. The westbound traffic is much smaller, coal being the chief item. The traffic passing through the Soo was responsible for the greater portion of the increase in the traffic on the Great Lakes.

A few other short ship canals also enjoyed a growth in traffic, but the great majority of canals built before 1850 experienced a heavy loss. The Erie system, much the most successful of the early canals, reached a peak in its traffic in the early 1870's; by 1917, its traffic had fallen to one-fifth of this despite the abolition of tolls in 1883, though the enlargement of the canal has since enabled it to recover some of this loss. Most of the other state-owned canals have suffered a far heavier loss, and many have been abandoned. The movement to abandon canals had started in the 1850's, and by 1880 nearly 2,000 miles had been given up; by 1916, the figure had risen to 3,500 miles or about three-quarters of the country's total (see the map on page 275).

The great riverways also lost traffic, though less rapidly. That on the upper Mississippi became insignificant; even on the section below the junction with the Ohio, the railroads, particularly after 1880, were increasingly successful in diverting freight away from the river. Recently, coal coming down from about Pittsburgh in barges has provided the main item of traffic. It has been estimated that in 1932 the total traffic carried on inland waterways was less than 14 per cent of that carried by rail; excluding the Great Lakes traffic, it was only 3.36 per cent. This loss in the traffic of most waterways occurred despite the fact that the cost of constructing and maintaining them has been borne almost entirely by the public, thus providing a subsidy to this mode of transport.

The reasons for the decline of most inland waterways are various, but in the main they are due to the increasing competitive power of the railroads. After 1850, the railroads constantly increased their efficiency, but there was little improvement in the canals, except where a few short canals were substantially deepened and enlarged. The operation of the canals was irregular and slow; their terminal facilities were less satisfactory. The

railroads were better able to adjust their rates to attract traffic; also they sometimes stifled water competition by getting control of terminal facilities or the chief water-carrier lines and by refusing to arrange favorable joint rail and water rates. Recent legislation has checked the last-named practices, and in 1940 more effective coordination in the regulation of transport facilities was assured when inland, coastal, and intercoastal water carriers were put under control of the Interstate Commerce Commission.

The decline of most waterway traffic has naturally reacted upon the trade of various cities that once benefited from that traffic. Atlantic coast ports such as Boston, Philadelphia, Baltimore, and those in Virginia have been better able to secure more of the export trade in Western products in competition with New York. With the westward shift of the wheat belt and the construction of railroads to ports on the Gulf, as Galveston, or to Duluth on Lake Superior, traffic that went to Mississippi River points or to Chicago and then followed a water route has been diverted elsewhere. The conditions that once made New Orleans and the outlet of the Mississippi so important as to lead to the acquisition of Louisiana Territory have been greatly modified. All this illustrates how technological progress can entirely alter the economic influence of physiographic features.

Waterway Improvements. During the half century after state canal building ceased, practically all important waterway improvements made were undertaken by the Federal government. The former opposition to such action practically disappeared, and the advent of a large annual surplus in the Treasury, especially in the 1880's, easily tempted Congress to increase expenditures. Most improvements were provided for in the River and Harbor Appropriation bills; the fact that these became known as the "pork-barrel" bills well suggests their character. Every Congressman sought to get something for his district and, to secure sufficient votes, appropriations were made for many improvements that had no adequate justification and at times proved utterly worthless. Of late years, this abuse has been lessened by the creation of the Board of Engineers for Rivers and Harbors to investigate and make recommendations as to projects and by the more recent policy of making lump-sum appropriations to be allocated to projects by the Chief of Engineers.

The largest appropriations were for maintenance and improvement of the Mississippi and its tributaries. These were followed in importance by those for the larger ports, which generally proved the most useful, even though they were often inadequate and needed to be supplemented by local improvements of harbors and terminal facilities. During the decades just before 1930, after which there was an increase, the river and harbor appropriations were commonly between $20 and $40 million a year. From the beginning up to 1940, they probably totaled about $2 billion.

Around 1900, a more general demand for improvement of the waterways arose, fostered chiefly by localities that expected to profit thereby and wanted the government to foot the bill. Occasional congestion of traffic on the railroads in boom times helped to strengthen this demand. In 1903, New York state, hoping to recover the loss of traffic on the Erie Canal, voted to spend $100 million to reconstruct it into a barge canal with a depth of 10 feet. This was finally completed in 1918, but at almost double the estimated cost. Though the traffic on the state canal system increased substantially, due chiefly to the growth in petroleum shipments, it failed to attain the former peak, and it is a question whether the expenditure of an equal sum on the railroads might not have accomplished more. Recently, the government undertook to deepen the channel from Oswego to the Hudson River to 14 feet.

The Cape Cod Ship Canal, opened in 1914, was unusual in being undertaken as a private enterprise. It proved a financial failure and in 1928 was bought by the Federal government—there being no protest under these circumstances against government in business—which enlarged it to a depth of 32 feet. Similarly, under an act of 1919, the government bought the old Chesapeake and Delaware Canal to convert it into a ship canal with a depth of 27 feet. This was one link in an intracoastal waterway system with a minimum depth of 12 feet designed for barge or light-draft vessels and extending from New Jersey to Florida which the government had practically completed by 1935. A similar system along the Gulf coast is under construction.

On the interior rivers, a deeper Lakes-to-the-Gulf waterway was completed in 1933 through joint action by Federal and local authorities which provided a 9-foot channel from Chicago across Illinois and down the Mississippi to the Ohio below which point at least this depth (during half the year, nearly 14 feet) is maintained to the Gulf. Improvements providing an equal depth from Pittsburgh to the mouth of the Ohio were completed in 1929, and later a like channel on the upper Mississippi to the Twin Cities. On the Missouri, a 6-foot channel to Council Bluffs is under construction, having been completed to Kansas City. How far traffic development will justify much of this outlay is doubtful, but there are also benefits from power development and better flood control. It is upon this latter type of benefits and its numerous other undertakings, rather than upon the water transport gains, that the great series of improvements undertaken by the Tennessee Valley Authority at a cost, up to 1944, of $700 million must largely depend for their justification, though they are to provide a 9-foot channel from Knoxville to the Ohio. The proposed deepening of the St. Lawrence River to permit ocean-going ships to reach the Great Lakes

is combined with extensive power development projects, but treaty complications as well as other obstacles have held it up.

It is always easy to arouse a demand for projects of this sort to be undertaken at public expense and risk. They create business and, even if little other benefit results, nobody suffers except as he shares in the general social loss. In view of the recent history of inland water transport, it is obvious that costly projects should be undertaken only after a detailed analysis of the economic problems involved if the waste of the past is to be avoided. Where transport projects are bound up with power development, flood control, and other objectives, the problem becomes extremely complicated. Even if not justified on transport grounds, it is clear that a Federal agency with such broad powers and objectives as the TVA can accomplish things in the planned development of a large river valley extending over several states that would be very difficult to secure otherwise.

The greatest waterway undertaking in history up to its time—the Panama Canal—remains to be described. The construction of a canal to connect the Atlantic and the Pacific had long been agitated and a French company had started one across the Isthmus only to become wrecked financially by the great cost. When the United States government took over the enterprise in 1904, it was chiefly motivated by the military importance of the canal; it was not expected that, at first at any rate, it would pay its way, though its competition with other routes would yield some gains not reflected in toll receipts. The canal was completed in 1914 at a cost of $365 million. Its main traffic is between the east and west coasts of the United States; it also secures most of the traffic between the west coast of South America and the United States or Europe as well as a smaller amount of traffic with the Far East. The growth of the California oil output after 1922 increased the canal's traffic till it came to exceed that of the Suez Canal. From 1924 to 1930, the receipts covered a fair return on the cost as well as operating expenses. Thereafter the decline in oil traffic, combined with the effects of the depression, reversed this situation. The Second World War proved its great military value.

Other Improvements in Transport Facilities. Urban electric railroads first became fairly common in the 1890's, and the rapid transit provided by the electric surface, elevated, or subway lines was a vital factor in promoting the growth of the larger cities. Later interurban lines provided both freight and passenger service for many districts that could not sustain a railroad; in other districts they supplemented the railroad service. Since 1922, however, rising costs of operation and the competition of motor vehicles have led to the abandonment of about half the trackage, chiefly in the less populous districts, so that by 1937 the total trackage was under 24,000 miles.

Probably no innovation of the last half century has wrought greater changes in the daily life of the people than the automobile. In 1900, there were only 8,000 motor vehicles registered in the country; the greatest increase took place between 1913 and 1930 when the number rose from over 1 million to over 26 million and a peak of nearly 35 million was reached in 1941, equal to one motor vehicle for every 3.8 people and making up over two-thirds of the world's total. The decline during the war was not made up until 1947. Though used more for passenger traffic, both business and pleasure, than for transporting goods, the latter use has been greatly expanded. The extent of the use for travel is suggested by the fact that the estimated private motor-vehicle travel in the country in 1940 was 476 billion passenger-miles or over 3,600 miles per capita. Intercity busses operating over 300,000 miles of highways carried 11 billion passenger-miles.

Up to about 1891, the construction and maintenance of highways had been left almost entirely to the counties or smaller local units of government. But the highways thus provided failed to meet the wants of motor-vehicle users who required not only much better and far more expensive roads but a well-coordinated system for long-distance traffic. To obtain the financial aid as well as the centralized planning that this called for, both state and Federal support were enlisted. By 1917, every state had created a highway department to plan and develop state systems, and in 1916 the Federal government first authorized extensive grants-in-aid to further the construction of important interstate routes. Assisted by the rapid rise in receipts from gasoline taxes and motor-vehicle registration fees, construction of better roads was rapidly pushed after 1920 so that by 1930 there were 3 million miles of rural roads, of which nearly a quarter were surfaced. Since then, the gains have been slight.

As the improved highway system expanded, it developed an increasing volume of both passenger and freight traffic. Motorbus lines soon connected all sections of the country, and motor trucks provided an equally extended service, though chiefly used for short distances. The need for uniform Federal control of the truck business led to the Motor Carrier Act of 1935. This placed interstate and foreign carriers under the authority of the Interstate Commerce Commission which was given the power to establish standards for hours of work, safety, and equipment for all classes. In addition, common carriers were made subject to regulations similar to those applicable to railroads; for those that carry only on contract, the control was made less extensive. The control of rates is limited to fixing a minimum.

The most spectacular of modern transport achievements has been the airplane. Though the first successful flight of the Wright brothers occurred in 1903, it was not until the First World War that the new device came into extensive use. It was first tried out for the transport of mail in 1918;

the next year a transcontinental service was established which, on conversion into a day and night service in 1924, made the trip in less than a day and a half. Since then, the provision of airway facilities, chiefly by the government under the Air Commerce Act of 1926, the construction of airports, chiefly by municipalities or as private ventures, and the improvement of the airplane itself, have brought a rapid development of its varied services. By 1946, 67,000 miles of domestic airway service were authorized and American companies were also providing a regular service across both the Atlantic and the Pacific as well as to South America. The total airplane

APPROXIMATE DISTRIBUTION OF TRAFFIC BY CHIEF CARRIERS

	Short tons, millions	Per cent	Ton-miles, millions	Per cent
Steam railroads	678.8	53.9	235,308	73.9
Great Lakes	39.5	3.1	24,733	7.8
Pipe lines (petroleum)	80.0	6.3	19,600	6.2
Intercity trucks	299.7	23.8	29,976	9.4
Inland waterways	151.2	12.0	7,904	2.5
Electric railways and airplanes	11.6	0.9	583	0.2
		100.0		100.0

miles flown in that year was almost 150 million. In the domestic service, over 4 million passengers were carried at an average rate of 5 cents a mile and nearly 20 million pounds of express or freight. The carriage of mail was the chief source of revenue until exceeded by receipts from the passenger traffic shortly after 1934, and down to 1938 the mail contracts included an element of subsidy. By 1946, some 41,000 passengers and 240,000 ton-miles of mail and cargo were carried daily, and passengers provided nearly nine-tenths of the revenue.

As with other striking innovations in transport, the advent of the airplane necessitated government control—primarily Federal since the service was largely interstate in character. At first, when the mail service predominated, control was given to the Post Office Department, but in 1926, under the Air Commerce Act, most phases of control were turned over to the Department of Commerce which received jurisdiction over airways, the power to establish and operate new airways or promote their development, and the right to fix regulations concerning safety, traffic, rules, etc. In 1938, the Civil Aeronautics Act set up the independent Civil Aeronautics Authority with powers over air transport in such matters as rates, pooling,

consolidation, safety, accounting, and adequate service similar to those of the Interstate Commerce Commission over railroads.

A general idea of the relative importance of the different means for the transport of goods in the United States and the amount of work done by each as a result of the developments previously described is provided by the table on page 495, prepared by the Interstate Commerce Commission for 1932. The figures for intercity trucks are only a crude estimate. Omitted in the table, since ton-mile figures were not available, are the coastwise and intercoastal (Atlantic-Pacific) traffic, which amounted to 94 million tons and 6 million tons, respectively.

The fundamental problem in connection with these different means of transportation is how to secure a coordination such (1) that each shall, by itself or jointly with others, undertake the service for which it is best fitted, (2) that this service shall be adequately performed, at reasonable rates, without discrimination, (3) that unnecessary duplication and waste of effort shall be eliminated, and (4) that further progress be stimulated.

The Development of Facilities for Communication; the Post Office. Since 1860, the post office has experienced a very rapid expansion both in volume of business and in the extent of the services performed. Local free deliveries and collections became more common after 1865. Rural free delivery service, begun in 1896, covered 1,420,000 miles of routes in 1942 and served some 30 million people. This made possible a reduction of over a third in the number of post offices, which had risen from 28,000 in 1860 to the peak of 77,000 in 1901. A domestic money-order service was started in 1864 and a foreign service in 1867; by 1942, 316 million money orders were issued for over $3 billion. The special delivery service was inaugurated in 1885, the postal savings system in 1911, and the domestic parcel post, long opposed by various special interests, in 1913.

At the same time, lower rates have been adopted. The domestic letter rate of 3 cents per half ounce under 3,000 miles fixed in 1855 was accepted in 1863, irrespective of distance, and reduced to 2 cents in 1883. In 1885, the weight accepted at this rate was made 1 ounce, at which point it remained until a temporary advance to 3 cents during the First World War and another advance to the same rate in the 1930's. By 1944, the number of pieces of mail handled yearly was 35 billion and the post-office revenue per capita was $8.05 as compared with $0.27 in 1860.

The Telegraph, Telephone, and Radio. The extension of the telegraph system over the country continued at a rapid rate up to about 1890, since when the main growth has been along intensive lines. The trend toward concentration of control culminated in 1944 when Congress authorized the consolidation of the two companies owning most of the telegraph mileage. The transatlantic cable was successfully reopened in 1866; since

then cable service has been extended over the seven seas. The telephone was first exhibited in 1876 and, aided by constant improvements, notably that of long-distance service, has undergone a phenomenal growth. By 1945, the country had 108 million miles of telephone wire and in 1947 nearly 32 million telephones carrying 42 billion calls a year. Wireless telegraphy, invented in 1895, was introduced about 1900, being chiefly used at first for communication between ships or ships and the land. Improvements made a transoceanic service possible by 1913; since then it has become a keen rival of the cable and forced a reduction in rates, besides providing a new service in telephoto transmission.

After 1920, broadcasting by radio spread with great rapidity until in 1944 the country had some 900 broadcasting stations. By 1948, there were supposed to be 66 million receiving sets in use, one or more being owned by 94 per cent of all "families." For speedy and world-wide communication, radio provides unparalleled facilities, but both technological and social considerations necessitated Federal control. The first law, passed in 1927, was replaced in 1935 by one creating the Federal Communications Commission, to which control over telephones and telegraphs was also transferred. To this list of important communicating devices of the period should be added the typewriter, first put upon the market in 1876.

Printing, Publishing, and Advertising. Continued technological improvements in printing methods and the manufacture of paper, notably the development of presses, the linotype, and the use of wood pulp for making cheap paper, have greatly reduced the cost of publishing and stimulated the use of this communicating device. The growth in the number of newspapers and periodicals was continuous up to about 1893 when the total of 20,000 was nearly five times that of 1860. Though the number of newspapers has since substantially declined, there has been a great growth in the number of copies issued till in 1946 the circulation of all daily newspapers averaged 50 million copies a day.

For the vast majority of people, the newspaper and the periodical provide most of their reading; consequently, the influence of these publications has become very great. The type of influences exerted by newspapers has altered with the changes in their character during this period. The general tendency has been to make a wider and more popular appeal. The newspapers present more of crime and scandal, sports, business, and more of educational or general utilitarian value; outside of strictly news items there has been a marked growth in special departments of interest to different groups. The spirit of political partisanship has been modified, and the power of the editorial has waned. In the periodical press, the conspicuous developments included a tendency toward popularization of the magazine, a marked improvement in the quality of the illustrations, and an increase

of highly specialized periodicals accompanied by a growth in their quality and usefulness.

In both newspaper and periodical press, there has been a great increase in advertising matter and, since this has come to provide the greater portion of the revenue of most publications, it can be called the main product and the news or articles a by-product. This has the advantage of enabling people to buy these publications at a much lower price than would otherwise be possible; it presents the danger that advertisers may have an influence over the publication of the news and the general policy of the paper.

In the period since 1860, especially since about 1900, the expansion of advertising of all forms has been remarkable, and by 1943 over $2 billion a year was probably spent for this purpose. An estimate for 1937 indicated that about a third of the outlay was for newspaper advertising, about a sixth each was for premiums and direct mail advertising, after which came the outlays for the use of magazines and the radio.

This development is a product of various causes. The widening of the market area with greater separation between producer, wholesaler, or retailer and their customers has necessitated the use of this communicating device to keep purchasers informed of what is offered for sale. The increase in the number of different commodities or in the varieties of similar commodities seeking purchasers has given the purchaser a vastly greater field of choice, which has been further expanded by the growth in the proportion of purchases that were not necessities. The buyer's decreased dependence on any one commodity or brand has compelled the seller to compete more vigorously for his trade, and experience has shown that the mass of buyers are naïvely susceptible to the wiles of advertising. The growing chances to reduce costs through large-scale production gave an added impetus to advertising to enlarge sales, and a more scientific study of advertising methods increased their efficiency.

The primary function of advertising is to inform possible purchasers of the existence, the character, and the price of goods or services, thus enabling them to satisfy their economic wants more completely and efficiently. Since it is clear that advertising has become an important factor in determining the kinds of goods consumed, it is unfortunate that it fails to function properly where it is misleading or impels thoughtless purchases. Some progress has been made, despite the opposition of powerful special interests, in checking false or clearly misleading advertising, chiefly through the powers granted the Federal Trade Commission and the action of various voluntary trade associations, but the chief safeguard still depended upon is such intelligence as consumers possess and choose to exercise.

It is often charged that the growth of advertising has led to much social waste. In a certain sense—the same sense in which all competition involves

some waste—this is doubtless true. Its justification must be found in the reasons that are presumed to justify competition in general, that is, the incentives to efficiency and progress which are supposed to more than offset the wastes involved. Most advertising is but one phase of modern competitive individualism. Here, as elsewhere, the real problem is where to draw the line setting limits to this competitive individualism such that the losses shall not exceed the gains.

Chapter XXXI

AGRICULTURE SINCE 1860

Introduction. In 1860, agriculture was by far the most important economic activity of the country. The opportunities for further expansion in the West enabled it to retain this position for nearly a generation longer, but thereafter, with little good new land available for expansion, growth was checked. What growth there was depended largely upon the adoption of more intensive and scientific methods of cultivation. Meanwhile, manufacturing was developing with great rapidity. By 1890, the net value of manufactured products exceeded the value of agricultural products and by 1920 the number of people engaged in manufacturing exceeded the number engaged in agriculture. Thus the second half of this period saw the shift from an agricultural to an industrialized country.

The period was also marked by important developments affecting both technological methods and the economic organization of agriculture. During its first half, the chief changes arose from the expansion and increased efficiency of the railroads or other means of transport and the greater use of better agricultural machinery. Though the resulting changes in the economic organization of agriculture had begun before 1860, they were particularly marked thereafter and are seen in the greater tendency toward commercial farming and, mainly in the trans-Mississippi region, the growth of one-crop large-scale farming. After about 1890, the most significant developments were connected with the stress on more scientific methods, which accompanied the trend toward intensive farming, and with efforts to improve the economic position of the farmer, in both of which far greater activity on the part of the government was involved.

Among the other extractive industries, this period is marked by a rapid expansion of mining and lumbering, particularly favored by the opening up of the Far West. In mining, more scientific methods helped to lessen some of the speculative risks, made lower grade ores usable, and reduced costs; in both fields there was a decided trend toward large-scale operations. These industries, however, still held only a minor position among the economic activities of the country.

Improvements in Agricultural Machinery. Though much of the most revolutionary of the farm machinery tending to eliminate the use of hand implements had been invented before 1860, it was not until the Civil

War and afterward that rapid progress was made in bringing this machinery into general use. Among the machines since devised, the chilled-iron plow, the spring-tooth harrow, the seed drill, the corn sheller, the twine binder, the combine, and those using automotive or electric power are among the most important, but all the earlier machines were greatly improved. In many forms of farm work, the motor drove out the horse or the mule and tasks were performed with less labor, greater speed, and at lower costs. The gain in both speed and labor saving was particularly marked in harvesting operations, thus substantially increasing the staple grain crops that could be raised, since this process created the seasonal peak need for labor and speed might save the crop. As the larger and more expensive machines could be used economically only on relatively large farms and on relatively level ground, they proved most advantageous in the West and the scarcity of labor there hastened their adoption. Arrangements for their hire or cooperative use often enabled smaller farms to employ them. More recently, automotive machinery designed for the smaller farms has been made available. In some lines of farm work, such as dairying and slaughtering, the most efficient use of machinery has required the shifting of certain processes from the farm to the factory.

Throughout this period, the United States led the world in the development and use of farm machinery. The total value of implements and machinery on the farms rose from almost $250 million in 1860 to nearly $3,600 million in 1920 and over $5,100 million in 1945; the value per farm from $120 to $557 and then to $878. The farm worker of today is said to care for about three times the crop acreage that he did around 1850, and he commonly obtains a larger yield per acre, though the gain varies greatly as among different crops. The most careful recent estimate covering most farm products concludes that between 1870 and 1940 the total output almost quadrupled while the labor force (disregarding changes in its composition) increased only about one-third, so that the output per worker nearly tripled. Imposing as this gain is, however, it might have been much greater if many more farmers had actually adopted the improved methods that science and technology had made known.

Science and Agriculture. The increased attention given to more scientific methods in farming, especially after about 1890, was due chiefly to directing far more scientific research to agricultural problems and then trying to educate the farmers to adopt the results. Despite the great opportunities for the application of science in agriculture, farmers have been slow to adopt them owing to conservatism, ignorance, inertia, the small scale of operations, the cheapness of land, and the lack of capital. Only a few of the numerous ways in which the progress of science in such fields as botany, chemistry, bacteriology, zoology, and entomology, have been

of use to agriculture can be even mentioned; they include such things as soil analysis, the chemistry of fertilizers, breeding and selection of seed and livestock, the control of pests and livestock diseases, and methods for handling and preserving farm products.

Though private initiative has played some part in this progress, the great advance in recent decades has been largely a product of governmental activities. There are various reasons why the state has been far more generous in supplementing private initiative in this than in most fields of science applicable to economic activities. The large manufacturing corporation can easily finance such experimentation, is apt to recognize its importance, and is likely to secure great gains thereby. The individual farmer can seldom pay the costs; he is less likely to have the initiative needed or to secure the cooperation of others; and the gain to any single farmer is relatively small, though for the aggregate of farmers it may be enormous. Add to these conditions the general importance of agriculture and the fact that the farmers until 1920 were the most numerous economic group in the country and in most states are still predominant while in both state and Federal governments they wield a disproportionally great political power, and the chief reasons for governmental action will be clear.

Although signs of a growing recognition of the importance of agriculture were seen in the land grants for agricultural colleges in 1862 and in the creation of a separate Department of Agriculture the same year, it was not until 1889 that the head of this department was given a position in the Cabinet. The department was not very active in scientific work during its earlier history, but the farmers' institutes, started in New England just before 1870 and later adopted elsewhere, helped to spread a knowledge of better practices. The first separate state agricultural experiment station was established in Connecticut in 1875; within a few years several other states took similar action. A far more rapid extension of this work followed the passage of the Hatch Act of 1887, which provided a Federal appropriation for experiment stations in connection with agricultural colleges. In 1890, Congress started an appropriation of $15,000 a year with an annual increase up to a total of $25,000 by 1900 for each of the agricultural colleges and since then has greatly increased the amount. About this time, the agricultural colleges began to expand their work very rapidly; there was a marked growth in their attendance, short courses and extension courses were offered, and the study of agriculture was extended into the high schools in rural districts. The government Weather Bureau, started in 1870, was transferred to the Department of Agriculture in 1891 and, with the rapid extension of its service since then, has been of great aid in helping the farmer to protect his crops. The department has also introduced many thousands of varieties of foreign plants, some of which have proved valuable addi-

tions to our agricultural products. State activities on behalf of agriculture were greatly stimulated by the Smith-Lever Extension Act of 1914 making generous Federal grants to states that made similar appropriations to carry on these activities. In 1917, Congress granted funds for agricultural instruction in high schools and in 1945–1946 grants for research were greatly increased. But the problem of getting most of the farmers to use all the new knowledge has proved most difficult and is far from being solved.

Besides the promotion of science and education, various regulatory activities beneficial to agriculture or the public were gradually assumed by both state and Federal authorities. These activities were particularly concerned with preventing the spread of animal or plant diseases and the sale of adulterated, fraudulent, or injurious foods. It was with similar matters that the various state departments of agriculture were chiefly concerned at first, but more recently their activities have been considerably broadened. Though the first of these departments was established in Georgia in 1874, there were only ten in 1900; since then they have been set up in most states. Meanwhile the work of the Federal authority in this field has been greatly expanded.

Changes in the Economic Organization of Agriculture; the Economic Position of the Farmer. In recent years, especially following the agricultural depression after 1920, while continuing to promote better agricultural practices, greater recognition has been given to the need for studying the farmer's other problems and trying to improve his economic position. To understand what was done along these lines and to comprehend the reasons for the reforms demanded by the farmer or his reactions on political issues, a brief analysis of the economic position of the typical farmer is necessary, especially because, until recently, this has received relatively little attention.

How certain changes affected the economic position of the farmer in the preceding period, notably the trend toward commercial agriculture, was noted in Chap. XX; here the changes wrought by subsequent developments require notice. Among these, the continued improvement in transport and communication facilities promoted the trend toward commercial agriculture with all the reactions upon the economic position of the farmer which that involved. By 1930, over four-fifths of most farm products were sold or traded. This also intensified the competition between the farm products of different sections within the country as well as that with the products of foreign countries, some of which were being newly developed. It also promoted greater specialization either in one main product or in a correlated group of products, which meant that the farmer not only sold more of what he raised but also bought more of what he consumed. More than ever

before, he became dependent economically upon the rest of the business world.

Another reaction upon the farmer's economic position was due to the various changes tending to make farming, along with other economic activities, more capitalistic in character. It is seldom realized that the farmer's investment in what may be called "fixed plant" bears a considerably higher ratio to the value of his production than is to be found in most lines of industry. Though this investment also includes a home, its value is but a small part of the total. The increased use of machinery, the introduction of more scientific methods, and the steady rise in the value of land up to 1920, particularly rapid after 1900, all necessitated a much larger investment by the farmer. At the peak in 1920, the value of agricultural capital including land, buildings, machinery, and livestock was over $12,000 per farm; by 1940, it had fallen to less than $7,000, but by 1947 had practically recovered the loss. This has made the conditions under which the farmer can obtain capital more important, and the growing use of machinery has added to his burden of overhead costs but reduced his labor problem.

The relatively rapid rise in the price of farm land has tended, in accordance with the law of proportionality, to make farmers economize in the use of land and so has led to more intensive methods of farming. Today, to be successful, the farmer must be more expert in managing his farm; he must keep accounts and study costs; he must watch the market and his competitors; he must organize and keep in touch with the world; he must be both more scientific and more businesslike in his methods.

One outstanding result of all these developments is that in a world marked by a strong trend toward large-scale enterprise the farmer remains a small-scale producer. In 1939, the average value per farm of the farm produce sold, traded, or used in the farmer's household was barely $1,300; on nearly half the farms the total value of such produce was under $600; on nearly a third of them the farm produce used by the household constituted the major source of income so they were classified as subsistence farms. On the other hand, less than 3 per cent of the farms produced over $6,000 each, though their output constituted about one-quarter of the total, but two-thirds of the total came from farms producing between $600 and $6,000 each. With half the farms raising relatively little for sale and all but a small fraction of the rest raising less than $6,000 each, including the amount consumed in the household, it is clear why nearly every farmer can be considered a small-scale producer.

Closely related to this characteristic are the very limited resources, the comparative poverty, and the backward conditions of a large proportion of the farming class. It has recently been stated that at a conservative

estimate "one-third of the farm families of the nation are living on a standard of living so low as to make them slum families." A survey of twenty typical farming areas in 1935–1936 led to the conclusion that the average farm family spent $669 a year for commodities and services used for consumption purposes and obtained the worth of $462 more from the farm. The total thus secured obviously could provide only a meager standard of living, though there was a great improvement during and after the Second World War. In 1946, after taxes and production expenses, the farmer averaged over $2,500 a year from farming and government payments or 3½ times the level in 1935–1939. That the income of the agricultural class as a whole has been relatively low is also suggested by the fact that, for many decades previous to 1929, it is estimated to have been around one-half the percentage of the total national income that the farm population constituted in the total population.

This low income is commonly thought to be more or less offset by the greater independence and economic security, as well as by other features of farm life. These are certainly real. Few can be more independent than the farmer, and the greater economic security offered by the farm was well indicated in the late depression by the surge back to the country on the part of urban workers who had such a refuge available. Ownership of a farm at least provides shelter, an opportunity to produce most necessary foods, and always a chance to work. Yet during that depression, though partly a product of the severe droughts, at least one out of every four rural families received public assistance at some time. Also, with nearly a third (1945) of the farms operated by tenants and many hired farm workers in addition, there is a large group that lacks the security of ownership, to say nothing of such owners as face the danger of mortgage foreclosure.

Another weakness in the farmer's economic position arises from the difficulty in securing such an adjustment of demand and supply in the markets for farm produce as will fix a price that affords a reasonable return. For most farm products, there is a fairly stable but relatively inelastic demand; hence relatively small changes in the output, other things remaining equal, will cause marked fluctuations in price. This is accentuated by the fact that many farm products are relatively perishable and cannot easily be held off the market even if the farmer has the means to do so, which is seldom the case. Also the conditions under which farm products are raised make rapid changes in output far from easy. Output is governed by the seasons, and the processes of production may require several months or even years. The uncertainties of weather, pests, or diseases may affect output in wholly unforeseen ways. The opportunities to shift from one product to another are decidedly limited; conservatism, inertia, and ignorance present another obstacle.

Finally, there is the difficulty arising from the lack of effective organization among farmers such as might enable them to control the total output, as may be done in industries where highly centralized production prevails. Most farm products are sold in highly competitive markets, usually national or international in scope, into which thousands if not millions of producers are pouring their output. Short of governmental intervention, it has seldom proved possible to get the individualistic farmers to unite in sufficient numbers to control output. Moreover, each one knows that his own output is so small in relation to the total that it will have no effect upon the market price. If he is hard up for money, he may try to increase his output even if prices are low, or possibly because of that fact; he always hopes that the burden of reducing the output will be assumed by others and that he may benefit thereby. The result is that, since nearly everybody waits for somebody else to assume this burden, there is apt to be little if any reduction in output; there may even be an increase, as was the case after 1920, and the process of adjusting output to demand is greatly prolonged. It was to overcome this obstacle that the government intervened to limit output on such an extensive scale after 1932.

As a small-scale producer, the farmer, like the laborer, finds himself in a weak position in his economic dealings with many groups. In his transactions with the banks or other lenders, the railroads, and most of those who purchase his staple products, as well as with those from whom he buys, he is commonly dealing with larger, more powerful, better informed interests which are in an advantageous position to bargain with him. His own resources are likely to be very limited, and he is often overburdened with debt. This results in a feeling of helplessness in his dealings with such groups; he often believes, whether right or wrong, that they take an unfair advantage of him. This explains his widespread hostility toward the railroads, the moneylenders, the commission men, the grain elevators, the packers, the produce exchanges, and the manufacturers of, or dealers in, farm supplies. It is against such groups that farmers direct their crusades when sufficiently aroused by unfavorable economic conditions. The reforms demanded are typically such as they believe will help to lessen or eliminate the weaknesses in their economic position.

Farmers' Organizations. Despite the conditions that have always made it extremely difficult to secure united action by the farmers on anything broader than a local basis, this group, facing a decline in their proportion of the population and witnessing the marked trend toward organization of other economic groups, was increasingly impressed with the necessity for greater unity of action, both locally and nationally, to safeguard and promote their varied interests. Here only the most important of the larger organizations with various objectives can be noted.

Such organizations as existed before 1860 were generally confined to a single state and stressed improvement in farming methods along with some educational and social purposes. After 1865, though these same objectives were still prominent, much more attention was given to other measures for improving the farmer's economic condition and a sectional or nation-wide organization was sought. The first organization to attain a position of prominence was the Patrons of Husbandry, commonly known as the "Grange." Started in 1867 by a group in government service led by O. H. Kelley, it grew slowly until the drop in farm prices after 1873; then the membership jumped to over 850,000 in 1875. Its chief strength was in the Central Northwest. The local granges carried on various educational and social activities besides giving special attention to cooperative enterprises. The state and national organizations sought legislation to control the railroads and to increase the quantity of money in the hope of raising prices, an increase in the greenbacks being the popular measure for this purpose. After 1876, the Grange declined, chiefly because of overrapid growth and the failure of many of its cooperatives, though it had been influential in securing the Granger laws and some concessions in favor of cheap money. By 1890, its membership had fallen to some 100,000.

After the decline of the Grange, the Farmers' Alliance rose to become the leading organization in the 1880's. It was the outgrowth of local clubs in the Southern and Middle Western states mainly concerned with social and educational activities or the protection of some particular economic interest. These grew into state or sectional organizations such as the Texas Alliance, the Louisiana Farmer Cooperation Union, and the Arkansas Agricultural Wheel. About 1887, these were united in what became the National Farmers' Alliance and Industrial Union of America. Because of conflicting interests, an attempt to include the so-called Northwestern Alliance, which had developed rapidly in the 1880's, failed. At the height of its power in the early 1890's, the Alliance and its associated organizations claimed around 3 million members. It then got drawn into the movement to form the Populist party, was absorbed in this during the depression of the 1890's, and soon disintegrated.

After this depression, which had hit the farmers harder than any since 1840, there followed more than two decades of rapidly rising farm prices and marked prosperity culminating in the war boom and ending with the severe reaction starting in 1920. With greater contentment prevailing, organizational activities declined and for the most part were on a small scale with limited and very specific objectives, such as livestock breeding associations, those for marketing some particular product, or the Non-Partisan League which centered in North Dakota and involved that state in enterprises which were in serious trouble after 1920.

With the return of difficult times for the farmer in the 1920's and the still more serious depression in the 1930's, there was a renewed impetus to organize, and far more attention was given to securing legislation to help cure the farmers' ills. The Grange, which had been stressing educational and social activities, still survived and, enjoying a more normal and sounder growth with its strength shifted to the North Atlantic states, had 800,000 paying members by 1940. The Farmers' Union, started in Texas in 1902 but since attaining its chief strength in the Central Western states, included some 100,000 families at the same date. It was particularly active in developing cooperative enterprises and enjoyed liberal, broad-minded leadership.

The most recent important organization to arise is the American Farm Bureau Federation. Starting in an effort to improve farming methods under the guidance of county agents, a plan that became widespread under the cooperation of state and local authorities with Federal assistance, the county farm bureaus formed state federations which in 1920 set up the Federation. In 1921, federations existed in all but two states and the total membership was nearly 1 million. As time went on, the bureau became the most aggressive advocate of economic reforms which it tried to secure both through legislation and through its own activities. Cooperative buying or marketing associations organized on state or national lines were among the undertakings most vigorously pushed. The difficulties in which some of these became involved combined with the effects of the depression later resulted in a heavy loss of members, though this was more than recovered by 1946. The bureau's chief strength is in the Middle West and parts of the South, but it still has an organization in nearly every state.

Another step toward a more effective, though informal, organization of the farm interests seeking favorable Federal legislation was the appearance of the farm bloc in Congress in 1921. The bloc broke away from party lines and supported laws designed to promote the varied interests of different agricultural sections. Though conflicts cropped out, when it came to measures that had the backing of the varied interests of the big farm organizations plus that of such specialized associations as those of the cattle raisers, the woolgrowers, or the powerful dairymen, the farm bloc was able to command a power in Congress which exceeded that of any other economic group. The results obtained will appear in the subsequent account of agricultural legislation during the depression and the Second World War.

As the preceding account suggests, it has generally taken a period of severe depression to arouse many farmers to organize; the rapid growth of their associations at such times proved an insecure foundation; the reforms demanded often could not be carried through or failed to provide permanent relief. Frequently, the real causes of their difficulties were inadequately

analyzed or else proved so deep-seated and complex as to be beyond rapid alteration; internal dissension and political wrangles weakened the organizations; and discouragement from failure to secure greater results, combined with the return of more prosperous times—seldom in any appreciable measure due to the organizations' activities—put an end to the movement. Nonetheless, these movements and the discussion connected with them were influential in shaping much legislation, particularly that dealing with monetary or banking matters, farm credits, control of railroads, regulation of produce exchanges and the packers, the tariff, agricultural education, and cooperative marketing. The organizations' own activities promoted better methods of farming and improved the social life of rural communities. Through their mistakes as well as their successes, they have helped to show the farmer the underlying causes of his difficulties, the measures really required to better his condition, and the value of wisely guided organization.

The Farmers' Marketing Problems and Organizations. The developments in the marketing of farm products previously noted meant that in selling these products the small-scale farmer found himself confronting powerful business units before which he seemed helpless. He shipped his products over railroads that might monopolize transportation; he often became dependent on large warehouses and systems of line elevators or cotton gins; the prices of his staples were fixed in distant markets, commonly in the new produce exchanges, the operations of which he seldom understood and always mistrusted. He saw the buyers of tobacco, cotton seed, livestock, and dairy products combining to lower the prices paid him; he saw consumers paying from two to four times as much as he had received for produce which had undergone little or no physical alteration since it left his farm and, without analyzing the situation, became convinced that he was being robbed.

To overcome the weaknesses in their position, the farmers began to undertake various marketing functions themselves, chiefly by organizing marketing associations, commonly on a cooperative or semicooperative basis. Most of this movement has occurred in the last three decades, and the more successful associations have been those handling a specialized crop where production for the available market has been centralized in some one locality. The California Fruit Growers' Exchange handling citrus fruits is an outstanding example. Its success, supplemented by active state support, led to the formation of many others, particularly those dealing in the specialized crops of the Pacific coast region such as prunes, apricots, apples, raisins, walnuts, rice, berries, and dairy products. In other regions, associations for handling tobacco and dairy products became fairly common, and a great variety of minor products were in part handled by such organizations.

In the case of the great staples sold in an international market, however, little success was attained until government support was afforded. Various attempts to organize the cotton growers failed; the wheat growers and livestock raisers fared little better, though there were numerous local organizations for the cooperative marketing of these products. By 1929, there were 6,000 agricultural cooperative marketing associations with nearly 700,000 members and over $1 billion of sales, of which one-half was from grain; livestock, fruits, and vegetables provided most of the remainder. From 1933 on, new governmental activities gave a further impetus to cooperative enterprises and by 1939 over 800,000 farm operators were selling through a cooperative, nearly as many bought through a cooperative, and over 700,000 bought some service supplied by a cooperative. Thus 22 per cent of all farm operators had business with one or more types of such associations, and the group interests were supported by the organization of the influential National Council of Farmer Cooperatives.

The extent to which these associations engaged in marketing activities and the results secured varied greatly. Some, like the local livestock associations, simply handle shipments and sales; others, such as the fruit growers, store, grade, and pack the produce, advertise it under a brand name, finance the movement, carefully control the selling, and in numerous other ways seek to enlarge and to protect the market. Lack of adequate financial resources together with inefficient management have been the most common causes of failures, except in cases where a monopoly of a given market was sought, when the chief obstacle was to get enough producers to join to control the supply. Until the generous legislative and financial support obtained from Federal or state authorities since 1930, such control proved very difficult to secure, even where the producers were largely concentrated in one locality; yet it was not unknown. Thus, when the growers of Black Patch and Burley tobacco in Kentucky tried to pool their crops and limit supply to obtain a better price about 1907, it required resort to arson and murder on the part of their Night Riders to bring in enough members to achieve success. Although these pools soon disintegrated in a period of better prices, a similar movement among tobacco growers with much greater scope developed after 1920, only to experience a like fate till the government came to the rescue. Numerous efforts to organize the producers in the milk sheds supplying different city markets so that they could bargain more effectively with the distributors' associations commonly had the same experience. Yet the California Raisin Growers' Association, aided by highly localized production, secured such complete control of supply that it came under the condemnation of the antitrust laws in 1918 and was forced to change its organization and practices to secure

the purely cooperative character that was granted a limited exemption from these laws in 1922.

Although such marketing organizations have rarely been able to exert any appreciable and enduring influence on prices until recently when government support was made available, they have markedly strengthened the farmer's position as a seller and helped to remove some of the causes for his discontent. Also they have taught the farmer that the middlemen were not altogether responsible for many things for which they had been blamed and that the advantages to be obtained in assuming their functions himself, though well worth the effort, were seldom so great as was often claimed.

Another gain for the farmers has been derived from the establishment of standard grades for many of his products and the more general provision for grading them. Often this has been done by the marketing associations, each establishing its own grades; but in the case of many great staples a further step in advance has come through Federal action fixing grades that were national in their application, as in the case of wheat, cotton, wool, and other products. Once the products are graded, the cost of subsequent handling is reduced, and the market for the products is widened; also the farmer is thus better assured of obtaining a fair price and has a greater incentive to improve the quality of his product. The spread of the warehouse system for handling farm produce together with improved refrigeration methods provided better storage facilities and made possible a more orderly marketing of seasonal or perishable products, and state and Federal laws have better protected those using these facilities.

The development of highly organized produce exchanges has been of advantage in marketing the farmer's products, though he is typically distrustful of them and their operations were subject to some abuses. They provide the freest and most highly competitive markets as well as constant markets. The prices fixed there are known to all. They also afford opportunities for shifting the risks arising from price fluctuations to groups that specialize in that activity; on the whole, they tend to lessen price fluctuations and to stabilize the market. Federal laws such as the Cotton Futures acts of 1914 and 1916, the Grain Future Trading acts of 1921 and 1923, and the Commodities Exchange Act of 1936 have remedied certain abuses. The Packers and Stockyards Act of 1921 gave better protection to the farmer in the less highly organized livestock markets.

The Financing of Agriculture. Because farming has remained a pursuit carried on by small-scale units, it is not ranked among capitalistic industries. This has led many to overlook the very important fact that the ratio of the farmer's investment (including land) to the value of his annual production is relatively very high—much higher than in manufacturing as a whole and probably not far below that in most public utilities. Thus

the conditions under which he was able to borrow were very important for the farmer, and this has been increased by the upward trend in the value of farm land and the growing outlay required for supplies and equipment.

The farmer possesses in his land an asset that has long been regarded as one of the safest types of security for a loan—a fact that tends to lower the rate of interest on farm mortgages. On the other hand, various conditions tend to limit the supply of lendable funds available for the farmer. Before a loan is granted, an investigation of the farm and its owner must be made on the spot; preferably by someone familiar with the locality. This tends to limit the sources from which loans can be secured to those that are local, unless agencies are developed to make this investigation for lenders living at a distance. In the older, wealthier regions, where the local supply of lendable funds is relatively large, this may not be serious; but, together with the greater risks common to Western farming, it is one of the chief reasons for the high cost of farm loans which long prevailed in the newer sections of the West, where the rate of interest was often from 7 to 10 per cent or more as compared with 5 or 6 per cent in the North Atlantic states, to say nothing of the higher commission charges.

Another limitation arose from the fact that national banks were prohibited from making loans on real-estate security until 1913, and even then the amount was limited. Thus, as far as banks were concerned, the farmer seeking a farm mortgage loan was dependent chiefly upon state banks, trust companies, or savings banks; even among these not a few were disinclined to invest heavily in farm mortgages, and in the older states laws often discriminated against such loans outside of the state.

However, this period witnessed numerous developments that gave the farmer better facilities for borrowing and enlarged the market for farm mortgages. There was a rapid growth of concerns dealing in such mortgages, especially in the 1880's, and typically serving as an intermediary between Western borrowers and Eastern lenders. The rapid growth of life-insurance companies and their increasing investment in such mortgages down to 1920 tended to reduce interest rates and other charges wherever they made extensive purchases, notably in the Central West. An estimate of the farm mortgage indebtedness of the country about 1915 placed the total at nearly $3,600 million, of which life-insurance companies and banks each held about one-fifth; but the greatest portion was held by private individuals. During the speculative activities engendered by the prosperous war years, this debt rose to nearly $8 billion in 1921 and finally attained the peak of almost $11 billion in 1923. Since then, liquidation during the depression and reductions made possible by wartime prosperity reduced the figure to less than $5 billion at the opening of 1948. By then the pro-

portion of all farms subject to a mortgage had been cut to less than 30 per cent.

The survey of the banking system preliminary to the adoption of the Federal Reserve System in 1913 helped to call attention to the inadequate farm credit facilities, and the farmer's difficulties after 1920 emphasized the need for further action. This initiated the first period of marked Federal activity in this field. Under the Federal Reserve Act national banks were allowed, under certain restrictions, to hold farm mortgages and also short-term paper used in financing the marketing of farm products. The Federal Farm Loan Act of 1916 provided a wider market for long-term farm loans, thus reducing the cost of borrowing and tending to lessen the disparity between interest rates in different sections of the country. It authorized a system of Federal land banks and joint-stock land banks under the supervision of a Federal Farm Loan Board. These banks were to buy farm mortgages to be used as security for tax-exempt bonds to be sold to the public. During the First World War, the government extended aid by subscribing to stock in the Federal land banks and making large purchases of bonds. In the postwar agricultural depression many of the joint-stock land banks found themselves in financial difficulties, and in 1933 measures were taken to liquidate them. The Federal system, aided by additional government funds, came through these trying years in somewhat better shape and in 1944 had over $1 billion of loans outstanding. To meet the farmers' need for loans from 6 months to 3 years, an act of 1923 established the Federal Intermediate Credit Banks and the National Agricultural Credit Associations.

When the prices of farm products experienced a further drastic decline after 1929 and the value of farm land fell to less than half the level prevailing in 1920, the distress was such as to lead to governmental provision for agricultural credit on a far more generous scale than ever before. More details will be given later; here it may be noted that in 1933 the Farm Credit Administration was set up as a supervising agency to coordinate and control all the then existing Federal units engaged in extending agricultural credits. The great bulk of Federal farm loans is made through four of its divisions, those in control of the land banks, intermediate credit, production credit, and cooperative loans. Together with other minor types of Federal loans since developed, some under and some outside the Credit Administration, it can fairly be claimed that the farmer's legitimate needs for credit are as well, if not better, provided for than those of any other producing group.

Interest rates on Federal loans, thanks to the low rate at which the government could borrow, have been most moderate—on land bank loans not over 6 per cent and after 1935 only 4 per cent; the differences in rates

between sections have been almost eliminated; commission charges have been reduced; the terms for repayment have been better adapted to suit the farmer's needs; and certain obstacles to obtaining loans embodied in the earlier laws have been modified. The results have led to statements that the farmer has really been able to obtain credit too easily. Certainly a great many farmers would have been better off in the long run if loans that they obtained in the years following 1916 had been denied them—much the same could also be said of individuals in other pursuits—but this weakness should be charged to defects of detail in the administration of the laws rather than to the general character of the laws which sought to overcome conditions that placed farmers at a disadvantage in borrowing as compared with other groups. Whether, as some assert, the government went beyond this to discriminate in favor of the farmers by subsidizing their credits at the expense of the public is not easily determinable when all the factors involved are taken into consideration, though this is quite possible. Justification of such action would depend on broad questions of social policy and the relation of the farming class to that policy.

Agricultural Laborers. On the vast majority of American farms—about four-fifths of those reporting in 1940—no labor is hired and all the work is done by members of the family. In recent decades, the number of hired workers has been slightly less than one-third of the number of family workers, the figures for 1940 being 2.5 and 8 million, respectively. The sources from which the farmer can draw hired labor are limited; in the main the supply comes from those who have been brought up in rural districts, usually on the farm. This supply is constantly being depleted as the rural population is drawn off into other pursuits, chiefly in the cities, and work on a farm as hired help appeals to few brought up in urban districts. Until immigration was drastically restricted, it provided some farm labor, though the number was small relative to those who had been engaged in agriculture in their home country. Many of the natives who accept such work look upon it as a means for accumulating enough money to start farming on their own account, perhaps first as a tenant and then as an owner.

The marked seasonal fluctuation in the demand for farm labor complicates this problem of supply. In some regions, the additional help required in harvesting is obtained from those in the immediate locality who are not regularly employed, especially women and children where the work is not heavy, and the higher wages offered at this season may attract workers from other pursuits. In the Middle and Far West there developed a group that migrated from south to north as the seasons for harvesting the main crops succeeded one another. As better machine methods for harvesting certain crops, notably wheat, were introduced, this group became much smaller. A recent estimate places the number of such workers at between

200,000 and 300,000 who are chiefly employed in the cotton, fruit, and vegetable sections of the South, the fruit and vegetable sections of the Pacific coast, and the beet-sugar regions. Pay is apt to be relatively low, and the workers lead a precarious existence.

Financial Risks of the Farmer. Numerous developments have benefited the farmer by helping to reduce his risks or providing, through insurance or otherwise, for distributing his losses. All the advances in the use of more scientific methods, such as soil analysis, seed selection, better control over plant and animal diseases, greatly reduced possible losses by giving the farmer a better knowledge of how to cooperate with nature. The weather bureau and radio aided in cutting losses. Better information as to market conditions, present and prospective, enabled him to decide more intelligently what to raise and when to sell to the best advantage. The facilities for hedging provided by the produce exchanges gave him a chance to shift the risks incident to price fluctuations. The growth of new forms of insurance for crops and livestock and the spread of farmers' mutual fire-insurance companies afforded safeguards against crushing losses from other causes. Finally, better business methods in general, such as more common efforts to keep records or accounts and determine costs, have provided a more accurate basis for guidance in reducing possible losses.

Tenancy. The marked growth in the proportion of farms operated by tenants after 1860 has given rise to much discussion and some alarm as marking a departure from the time when most farmers owned the land that they worked—a situation in marked contrast with that in most European countries and considered one of the most desirable features of American agriculture. Though no figures are available before 1880, when the census reported that 25 per cent of the farms were run by tenants, it is certain that this was much above the percentage for 1860, since the abolition of slavery was followed by a great growth of tenancy in the South. From 1880 to 1890, when the figure rose to 35 per cent, the shift was rapid; thereafter there was a slow rise to the peak of 42.4 per cent in 1930 followed by a decline to less than 39 per cent in 1940, due chiefly to government aid, and to 32 per cent in 1945. The acreage thus operated in 1945 made up 22 per cent of the total farm acreage.

That the causes for this growth of tenancy are varied is suggested by the marked differences in the extent of tenancy in different sections. In 1940, in the South, about 48 per cent of the farms were operated by tenants, some two-fifths of these being sharecroppers; in the West North Central states, over 42 per cent; in the East North Central states, 28 per cent; in the Middle Atlantic states, 15 per cent; in New England, 7 per cent; in the Mountain states, 25 per cent; and in the Pacific coast states, 18 per cent. Certain types of products appear better adapted for the forms of tenancy

that prevail in this country than others. Thus the highest percentage is among farms whose chief products are cash crops involving a small investment in working capital and providing a relatively rapid turnover, such as cotton, tobacco, rice, grain, and vegetables. Tenancy is much less common on farms devoted to fruits, livestock, and dairy products, where the investment is larger and it takes longer to realize upon it.

In the South it has also seemed to afford the best means for securing the labor of the colored population. When the large plantations were split up after the abolition of slavery, the freedmen, generally lacking the capital to buy a farm, became tenants. Only a fifth of the colored farmers of the South fully own their farms. Tenancy is highest in the more fertile sections of the cotton belt, where the typical farm of about 40 acres can be worked by a single family. The prevalent sharecropper system, which in 1940 included 300,000 Negroes and four-fifths as many whites, with its close supervision makes the tenants' position very similar to that of a hired man, except as it offers an incentive to better work through a share in the crops produced. The combination of conditions surrounding the Southern tenant class has resulted in one of the most backward and depressed groups in the country.

In the North Central states, where tenancy increased markedly after 1900, a different combination of conditions explains the phenomenon. As in the South, the dominance of annual cash crops is one factor; another is found in the rapid rise in the price of farm land between 1900 and 1920. The high cost of land made it harder to buy a farm; the long-continued rise tended to inflate the price in anticipation of a further rise. Rents, being based on the present productivity of the land, did not rise proportionately so that immediately it was cheaper to rent than to buy. In all sections of the country, the high price of land suitable for market gardening near the large cities has tended to increase tenancy. In California, the law prohibiting the ownership of land by aliens has forced such cultivators to become tenants.

The fears aroused over the growth of tenancy are based on various reasons. It is claimed that a tenant is interested only in getting as much as possible out of the farm in a short time. He is not concerned with the long-run development of the land and has no adequate incentive to make permanent improvements, since these ultimately inure to the benefit of his landlord and seldom pay for themselves during his tenancy. Also, he has less interest in furthering all phases of social development in the community since his stay there may be brief; the same may be true of his landlord if he lives elsewhere as an absentee. Finally, ownership of land instead of tenancy is said to give the sense of security such as all desire; by increasing an interest in the existing social order, it promotes stability.

On the other hand, it is pointed out that not all these evils are an inevitable result of tenancy, but rather of the particular form that it may take. By providing for a longer term of tenancy, compensation to the tenant for improvements, and ensuring the general upkeep of the property, the likelihood of undesirable results can be greatly decreased. It must be admitted, however, that the actual practice has fallen far short of such an ideal. Another claim is that where the tenant's operations are supervised by the landlord, better methods and greater productivity will result, the assumption being that the owner is more experienced and intelligent.

Finally, it is pointed out that in most of the country, though far less frequently in the South, tenancy may be only temporary and is often but one step in the so-called "agricultural ladder" leading to farm ownership. Certainly where existing conditions are such that for many such a step is a necessary aid in attaining that goal, it should be available under adequately safeguarded terms. It is possible, as some believe, that the conditions are now somewhat stabilized so there will be little pressure for its increase in the future; in fact, a continuation of the governmental program to reduce it launched in the 1930's may well bring a further decline. Yet it is regrettable that the time has passed when quick and easy advance to the ownership of a farm provided a position of freedom and independence. This long constituted one of the most desirable features of American agriculture.

Changes Affecting Rural Life. Other developments during this period, although not without economic significance, were especially important for their effect upon rural life, notably its attendant isolation. The spread of rural free delivery and the parcel post system gave the farmer easier and quicker connections with the outside world, as did the growth of rural telephone lines; 42 per cent of all farms had telephone connections in 1948. More recently, the radio established another link providing news, education, music, and entertainment along with its advertising. In a few sections, the rural or interurban electric road furnished a valuable connection. Of far greater significance was the advent of the automobile which made trips to the neighboring town or the more distant city a simple matter; 58 per cent of all farms had one or more cars in 1940. Aided by the Rural Electrification Administration, the farms having access to electric power lines increased to 61 per cent of the total by 1947. By 1940, a third of the farm dwellings were lighted by electricity and nearly one-half by 1945. Marked progress has been made in improving rural schools, and busses often transport the farmer's children to urban schools. Some states provide the rural districts with a library service; over half of all counties have a full-time public health service. Relatively few farms find the entertainment offered by the movie difficult of access.

These developments, though less generally available in the South than

elsewhere, are only among the most important that might be mentioned, but they have greatly modified the isolation that had always been an outstanding characteristic of American rural life. By establishing closer contacts with the rest of civilization, they promote progress, create greater cultural unity, help to overcome one of the chief disadvantages of rural life, and make living on the farm more attractive.

With this background of the more general developments affecting the economic and social organization of agriculture in mind, we can now turn to the history of agriculture in the shaping of which these developments were so important, taking up first the general course of events and subsequently the particular developments among the main crops and in different sections of the country.

CHAPTER XXXII

AGRICULTURE SINCE 1860 (*Continued*). OTHER EXTRACTIVE INDUSTRIES

The Progress of Agriculture in General. The progress of agriculture from decade to decade was considerably affected by conditions determining the general prosperity of the farmer. After 1865, despite declining prices, expansion proceeded at a rapid pace stimulated by the construction of railroads opening up Western land. Even during the long depression after 1873, which entailed widespread suffering among the farmers of the West only partly mitigated by lower freight rates, the growth of the farm area and output continued. Starting about 1878, conditions improved and the 1880's were fairly prosperous. Stimulated by unprecedented railroad building and the prospective disappearance of good free land, the acreage in farms by 1890 rose to a figure 50 per cent above that in 1860. Yet the downward trend in prices, only briefly interrupted, 1878–1882, continued, and after the panic of 1893 the level dropped to the lowest point in half a century leaving farmers in the worst condition they had faced since the early 1840's. An abnormal series of dry years aggravated the difficulties in the West. As a result, the 1890's witnessed the smallest growth in farm output since the 1860's. Yet this same decade also saw the largest absolute addition to the area in farms—215 million acres—of any decade in history, raising the total to 839 million acres or more than double the figure for 1860. The percentage gain was next to the highest for any decade since the census figures were gathered in 1840, being only surpassed in the decade of the 1850's. Over one-third of this addition was in the single state of Texas and nearly three quarters in the two tiers of West Central states just beyond the Mississippi. Probably most of this addition constituted land previously used as public range, which then passed to private ownership and reflected practically no increase in output. The addition to the improved land was relatively much smaller (see the chart on page 529).

Commencing about 1897, the improvement in the situation became marked, and from then until 1920 the agriculture of the country enjoyed a prolonged period of general prosperity probably unequaled theretofore, though the periods between 1793 and 1817 or 1845 and 1865 might approach it in this respect. The general price level steadily rose, but farm products advanced still more rapidly. The supply of good free land being practically

exhausted, the depressing effects of its competition ceased to be appreciable except as other countries were opened up. The additions to the farm acreage during the following decades were relatively slight and the total addition, 1900–1940, of 222 million acres barely surpassed that of the decade of the 1890's. The First World War created an abnormal demand for nearly all the great agricultural staples of the country and caused a sudden advance in the general price level. In the peak year, 1919, the gross income from farm products was nearly $17 billion or 150 per cent above the 1910–1914 average. The exports of 1919 were about a fifth of this value and some 45 per cent above the prewar level in volume.

The prosperity of these years was reflected in the remarkable rise in farm values. In 1850, the average value of land and buildings per acre of farm land was some $11; but more than 50 years were to pass before this figure was doubled, the figure for 1900 being under $20. Then within a single decade, this value was doubled and between 1910 and 1920 there was another increase of about 75 per cent, raising the figure to nearly $70 in 1920. The average value of the land alone (not shown for earlier years) rose from $15.57 per acre in 1900 to $57.36 in 1920. This reflected the peak of the speculative boom engendered by the war. Farmers, unmindful of the experience after the Civil War, had recklessly bid up the price of land to expand their holdings and often borrowed heavily to do so, aided by the new credit facilities. As a result, the farm mortgage debt rose from $3.3 billion before the war to $7.8 billion in 1921. The effects of the scarcity of good free land are reflected in the fact that, despite the farmer's prosperity, there was only a relatively small increase in the land in farms, the total gain of 117 million acres, 1900–1920, representing a growth of only 14 per cent, though the rate of growth of the improved acreage was higher.

The Depression Years, 1920–1940. The agricultural difficulties of the 1920's were greatly aggravated during the long depression after 1929, and the efforts to help the farmer under the New Deal resulted in what seems likely to mark the beginning of a new era in our agricultural history. The abnormal prosperity of agriculture, 1900–1920, had been founded on (1) the disappearance of free fertile land combined with an expanding domestic market, (2) the rapid world-wide rise in the general price level, especially marked in the case of farm products, and (3) the wartime inflation and abnormal demand for American products. A postwar reaction was to be expected, but the continued foreign demand staved this off until the precipitate drop in prices of 1920–1921. The decline in the price of farm products was more marked than that of most other commodities and, despite some recovery, these prices remained at a level relatively lower than that for commodities that the farmer had bought as compared with prewar years. This was chiefly because the farm output quickly recovered its first

losses and, aided by technological advance, soon exceeded the wartime level. This increase was obtained through more intensive farming as this decade witnessed a decline in the improved acreage.

· Another factor, chiefly affecting the great staples cotton, wheat, corn, beef, and pork, was the greater competition faced in the export market, though the volume of exports remained above the prewar level till about the close of the decade. There was also some decline in the domestic consumption of meat and grain. The fall in prices was made the more serious for the farmer by his greatly increased burden of debt and mounting taxes.

The farmer's difficulties led to demands for relief in various forms backed by the organization of the agricultural bloc in Congress. There was a wholesale advance in duties on farm products to an unprecedented level under the tariff acts of 1921, 1922, and 1930. As this was of no benefit to the export staples, Congress passed bills to subsidize their sale abroad at prices below those in the domestic market, but vetoes by the President in 1927 and 1928 blocked such action. Instead, the Agricultural Marketing Act of 1929 created the Federal Farm Board with a revolving fund of $500 million to be used to stabilize prices. In a futile effort to do this during the next 3 years, most of the fund was used to buy up cotton or wheat, which finally had to be sold at a loss or given away, nearly three-quarters of the fund being lost thereby. This decade also saw both Federal and state aid extended to farmers' cooperative marketing associations, which were practically exempted from the antitrust laws in 1922, and an addition to the agricultural credit facilities in 1923.

When, after this trying decade for agriculture, the depression of 1929 broke and the prices of farm products took another headlong dive till, in 1932, they were at a level less than half that of 1923–1929 and a third below the prewar level, the plight of the farmers became desperate indeed. In that year, the gross income from farm production fell to $5.3 billion as compared with an average of $11 billion for 1923–1929. A drop of a quarter in the volume of agricultural exports by 1939 as compared with 1929 only aggravated the difficulties. To the renewed and more insistent demands for relief that then arose, the new administration of 1933 responded to an extent unparalleled in our history. It inaugurated a veritable New Deal for the farmer and a new era for agriculture.

Aid for Agriculture in the Depression. The first need was an immediate increase in the farmer's cash income, both to relieve real distress and to stave off impending bankruptcies and loss of farms. At the start, producers of the great staples were helped; but the relief program was soon extended to include minor products so that nearly every commercial farmer benefited in one way or another. Even after conditions showed a marked improvement—by 1937 the serious drought years had passed and

prices nearly reached the desired 1910–1914 purchasing-power parity—an immediate increase in their cash income continued to be the main and almost the only demand of the lobbyists of the different farm groups that swarmed to Washington. The Senate which, because of its state basis of representation, had now become the political stronghold of the agricultural interests, provided in its farm bloc a vigorous support.

As soon as the acute distress had passed, Secretary of Agriculture Wallace and his department sought to secure measures designed to promote a broader, long-run program for the improvement of agriculture. Thus in the mass of laws that emerged by 1938, which also embodied much learned from the sad experiences of the intervening years, there were to be found, besides the dominant purpose to raise the farmer's cash income, provisions to promote soil conservation, better methods of farming, ever-normal granaries, and particularly care for the inarticulate, more depressed farm groups previously largely ignored.

The first comprehensive measure of relief was the law of May, 1933, which created the Agricultural Adjustment Administration (the AAA). This law and later supplements provided immediate help to the debt-burdened farmer by offering loans on easy terms; it also advanced credit to help carry over the large surplus of various products that threatened to break the market. The government aided in this by buying large quantities of certain products. One clause of the law authorized the resort to various measures for inflating the currency, including a cut in the gold content of the dollar, with the objective of raising the general price level, and in 1934 the President used this authority to reduce the gold in the dollar. The chief means to increase the farmer's cash income were supplied by another elaborate group of provisions. To reduce the output of certain basic commodities, benefit payments were offered to farmers who agreed to cut their production. To provide money for this, a tax was levied on those who processed these products. The original list of basic commodities included wheat, cotton, corn, rice, tobacco, hogs, and milk and its products; but the demands of other producers led to additions including beet and cane sugar, cattle, and potatoes.

To secure a more orderly marketing of existing and prospective supplies, the Secretary of Agriculture was authorized to arrange marketing agreements which could be used to limit sales, fix prices, and promote fair-trade practices under a licensing system. These agreements were exempted from the prohibitions of the antitrust laws. The price level for basic commodities which this act sought to establish was that which would give them the same purchasing power over commodities that the farmer bought as had existed in 1910–1914 (for tobacco, 1919–1929). The choice of this prewar purchasing-power parity base was highly favorable to the farmer, for those

years fell in a period during which the prices of agricultural products had been rising more rapidly than the general level of prices.

When, in January, 1936, a Supreme Court decision invalidated the crop-restriction and processing tax provisions of the law, the agricultural situation had greatly improved. Thanks to a disastrous drought in 1934, said to be the worst since before 1860, and a poor crop year in 1935, the great surplus stocks had mostly been removed, except in the case of cotton and some grades of tobacco. In 1935, the price of farm products averaged 66 per cent above that in 1932 and 8 per cent above the prewar level; in purchasing-power parity they were 15 per cent below that level. The farmers' gross income from production was $8 billion, as against $5.3 billion in 1932, and was supplemented by half a billion in rental and benefit payments from the government. The total of such payments during 3 years had been over $1.7 billion of which less than half had been obtained from the processing taxes. Meanwhile the burden of farm debt had been substantially reduced, and much of the debt still outstanding had been refunded on easier terms. Thus, when it came to framing new legislation to replace the AAA, the problem of immediate farm relief was less urgent, and more consideration of a long-run agricultural policy was possible.

This was reflected in the Soil Conservation and Domestic Allotment Act of February, 1936. The farmer's interest in this law was based on its possibilities for restricting output and yielding large benefit payments rather than in the stated conservation objectives, which were looked upon more as a protective disguise to enable the act to pass the scrutiny of the courts. The government, however, saw in this a device for paying the farmer to do what it had long been rather vainly trying to educate him to do. The act granted farmers benefit payments for decreasing their planting of soil-depleting crops and increasing that of soil-building crops, such as the legumes and grasses or trees, or for using methods of cultivation that checked soil erosion. As this program was not confined to the basic staples, it could be applied on most farms and so made a wide appeal. Appropriations up to $500 million a year were authorized for benefit payments. During 1937, some 3 million farms, including 65 per cent of the total crop acreage, were operated under this program, receiving $300 million in benefit payments.

In 1936, another drought, nearly as bad as in 1934, checked the increase in output threatened by the invalidation of the AAA and helped to raise the prices of farm products to within 8 per cent of the prewar parity and to increase the farmers' gross cash income. Favorable weather in 1937 brought unusually high crop yields and output, despite some reduction in acreage. The cotton crop of almost 19 million bales was the largest on record and 40 per cent above that planned for; the wheat, corn, tobacco,

and sugar crops were all above normal. On top of this prospect of new surplus stocks came a general business reaction; prices dropped and farm income declined. The difficulties met with in the effort to secure the desired adjustment of production and prices during these years were an important factor in shaping the legislation of 1938. Another factor was a shift in the personnel of the Supreme Court giving hope of a more tolerant attitude toward this type of legislation.

The Agricultural Adjustment Act of 1938 was a comprehensive measure for a long-run agricultural program involving considerable expansion in the scope, and a better coordination, of the Federal activities in this field. (1) It continued and strengthened the main provisions of the Soil Conservation Act of 1936, increased their flexibility, and sought to secure an equitable division of the funds granted among the landlords, tenants, and croppers, besides limiting payments to individuals to $10,000. (2) The commercial producers of wheat, corn, cotton, tobacco, and rice who kept within an allotment calculated to provide a normal supply for domestic use or export and who observed approved soil-conservation practices were, as appropriations were made, to receive additional benefit payments to help restore the prewar parity prices of these crops. (3) Since unforeseen or uncontrollable factors might still result in maladjusted supplies, there was included an elaborate set of provisions designed, in case of need, to regulate the flow of products to the market to secure the maintenance of normal supplies—the so-called "ever-normal granary." This was to be secured by loans from the Commodity Credit Corporation whenever the supply of wheat, corn, or cotton exceeded a certain norm or the price fell below a certain percentage of parity and the producers had voted to adopt market quotas, thus providing the means for holding surplus stock off the market and practically guaranteeing a minimum price. Loans on any other farm product on approved terms were also authorized. Supplementing this was the authority given the Secretary of Agriculture to fix individual marketing quotas for any of the five staples, which, if accepted by a two-thirds vote of the producers affected, was to become operative on the issue of an order applicable to all producers. All sales in excess of the quotas were made subject to a heavy penalty tax. In the case of wheat growers, additional protection was provided by creating the Federal Crop Insurance Corporation to insure them against most of the unavoidable losses from drought, flood, insects, or plant diseases.

Meanwhile the rather sketchy marketing provisions of the law of 1933 had been replaced in 1935 and 1937 by special marketing acts with more detailed provisions rather similar to those adopted for the five staples in the act of 1938. These were particularly designed for, and chiefly used in, controlling the marketing of fruits, vegetables, and milk and their products

(with minor exceptions), mostly very perishable commodities, often shipped a considerable distance, and having a highly localized and specialized production. The initiative in securing such agreements was left largely to producers' marketing organizations. The duration and success of these agreements varied considerably, the greatest difficulties arising in the case of milk; in 1938, 300,000 fruit and vegetable growers and 1,200,000 milk producers were operating under them.

In the case of sugar, where beet and cane growers faced the competition of large imports from the insular possessions and Cuba, a new restrictive device was added in the form of the quota system which set definite limits to the imports from each of these sources. The doubling of the effective duty on sugar between 1921 and 1930 to over 2 cents a pound had greatly stimulated production in the insular possessions, whose sugar was admitted free; the imports from these sources had mounted rapidly till, by 1932, they provided nearly half the domestic consumption. Although this increase had been entirely at the expense of the Cuban product, it had prevented the domestic producers, who provided a fifth of the consumption, 1923–1932, from gaining as much as had been hoped from the higher duties. Consequently the Sugar Act of 1934, along with other restrictive provisions, adopted a quota system which ensured the domestic growers a substantial increase in their share of the domestic consumption and reduced that of the insular possessions.

As slightly altered by the Sugar Act of 1937, the quota of domestic producers was fixed at almost 30 per cent, or about 50 per cent more than they had supplied in the decade before 1933. The quota of the possessions was limited to 41.5 per cent, but, except for the Philippines, they got some compensation by being included in the benefit payments of this law. The foreign quota, which practically meant only Cuba, was fixed at 29 per cent, or barely half the proportion obtained from this source before 1929. Meanwhile, however, a trade agreement of 1934 had cut the duty on Cuban sugar about one-half. Subsequent laws have extended the quota system, though permitting some alteration in the quotas, through 1952.

Obviously this quota system was the purest sort of protectionist measure and certainly not one calculated to promote soil conservation. Nonetheless, the act of 1937 also took over the program of the Soil Conservation Act for sugar and in addition provided for conditional payments to growers, for which up to $55 million a year could be appropriated, and an excise tax of about ½ cent a pound on raw sugar was imposed on refiners to help cover this outlay. To qualify for payments, the producer must practice soil conservation, limit the crop he marketed to his quota, and, since it was felt that the benefits of earlier measures had largely accrued to a small group chiefly made up of processors, he must also eliminate specified child

labor, pay fair wages, and, if also a processor, pay a fair price for the sugar cane or beets that he bought. When one realizes that the burden imposed on the American consumer by this combination of protection and benefits far exceeded the $65 million, which was about the average farm value of the total domestic beet and cane crops used for sugar, 1923–1929, he may well marvel at the cost of sustaining this remarkably powerful producing group.

In addition to the laws designed to raise prices, the farm relief program included at least two other groups of measures requiring notice: one providing aid for debtor farmers and the other assistance to certain particularly depressed classes. To meet the demand for debtor relief, an act of 1934 limited the foreclosure rights of mortgage holders but, as this was declared unconstitutional, it was replaced in 1935 by a law establishing a 3-year moratorium. Also extensive provision was made for extending Federal loans to farmers on easy terms, chiefly through the Federal Farm Mortgage Corporation set up in 1934. This not only enabled many farmers to carry on till the return of better times and pay off their debts but also substantially reduced the annual payments of those still remaining in debt. By January, 1938, the farm mortgage debt had been cut to $7 billion and by 1945, aided by wartime prosperity, almost to $5 billion or half that of the peak in 1923.

Among the group of measures to aid the most depressed class of farmers were the elaborate, but none too carefully considered, plans to shift submarginal farmers to sections where subsistence homesteads or semirural villages could be developed. These projects, most of which failed to succeed, eventually came under the control of the Farm Security Administration, established in 1937, which also took over the extension of rehabilitation loans and technical guidance to a far larger number of individual families where no community organization was involved. In addition, it was given the administration of the Farm Tenant Act of 1937 designed to help tenants acquire ownership of farms. In 1936, the Rural Electrification Administration was created to make loans to extend electric service to the farms. By 1945, over $400 million had been advanced, mostly to cooperatives, and the number of farms receiving service was 2.7 million as compared with around 750,000 in 1935, two-thirds of the increase being aided by these loans. Construction of new lines continued to be pushed by both cooperatives and private companies so that it is predicted that by 1951 there will only be about 400,000 isolated farms lacking easy access to some line.

General comment on the agricultural program of the depression years can be postponed to the chapter dealing with that period as a whole. It will suffice here to suggest the significance of the period in the general history of our agricultural development.

1. This program was designed to help agriculture meet the final and most difficult readjustments after a quarter century of marked prosperity culminated in the wartime speculative boom. Hit by one of the most severe depressions, if not the worst, in history under conditions that made the effects far more serious than ever before, because of the heavy volume of debt, the more specialized form and larger quantity of farm equipment, and the greater commercialization of agriculture, it was certain that such a reaction would cause more widespread distress than farmers had ever experienced before.

This reaction happened to come just about the period when the prospect for a long-time steady rise in the value of farm land was greatly diminished, if not obliterated, except as it might originate from monetary inflation. From colonial times, American farmers as a whole, but chiefly those in the new or more fertile regions, since the trend was by no means universal, had counted upon an increase in the value of their land to provide a substantial element in their long-run returns. After about 1920, this prospect seemed likely to vanish as the continued expansion of the domestic market was severely checked by the declining rate of population growth (despite possibilities for greater consumption of certain products among undernourished groups) and the foreign markets, so basic a factor in the expansion of American agriculture down to about 1900, were increasingly reduced by the competition of newly opened land in less developed countries and the efforts of older countries to attain greater self-sufficiency combined with the slower rate of population growth in western Europe. Facing such an outlook, American farmers could no longer count on the rapid expansion of markets and rising land values that had prevailed theretofore, even if wars brought temporary gains.

The severe depression coming just at the period when these other basic changes necessitated readjustments in agricultural policies only added to the farmers' difficulties. Whatever the reaction of the agricultural program on the rest of the national economy and despite various obvious mistakes, it did greatly mitigate the farmers' distress during this period of readjustment.

2. On the other hand, the long-run features of the agricultural program stressed the maintenance by various governmental subsidies and aids of the prewar status of agriculture instead of trying to assist readjustment to the changed world conditions. This left agriculture on a far more artificial and precarious basis of legislative support; judged solely on the grounds of national economy, it was an unsound basis. Also, it is one of greater dependence on the domestic market and one reflecting a shift toward a self-sufficing autarchy with great reliance for success on wise administration.

3. There were, however, some measures promoting various long-time reforms in the economic position of the farmer which emerged from the legislation of these years. Here also, success will depend much on wise administration.

Following the outbreak of the Second World War, another abnormal demand for American farm products developed, even greater than in the preceding war, and, aided by an extremely favorable policy of price control, the prosperity of the farmer soon reached an unprecedented peak, as will be explained in the chapter devoted to the war effort. It is to be hoped that in the endeavor to meet the inevitable postwar readjustment problem the lessons to be learned from the experiences of 1920–1940 will be recognized.

Indices of Agriculture's Growth. Though no one index provides a satisfactory measure of the growth of agriculture in general, there are various indices suggesting the general trend. The census returns covering the number of farms and the farm acreage are shown by the graph on page 529. Though the figures for different years are not always strictly comparable, the error is slight, except for 1870, when the returns, especially in the South, were incomplete. Judged by rate of growth of the farm acreage, the period since 1860 falls into two parts: by 1900, the acreage of 1860 had been doubled, but in the next 40 years the increase barely exceeded one-quarter, and the total addition during this latter period was little above that in the single decade 1890–1900. In 1860, about one-fifth of the total land area of the country was in farms; in 1900, 44 per cent; and in 1940, 56 per cent. Of the increase between 1860 and 1920 less than one-twelfth was in states east of the Mississippi River. Thus the opening up of the West was the great factor making possible the expansion of this period.

The area of improved farm land showed a more rapid rate of growth rising from 163 million acres in 1860 to 503 million in 1920 since when, though comparable figures are lacking, any change has been small. However, population grew still more rapidly and the 1860 figure of 5.12 acres of improved land per capita was reduced about one-fifth. The proportion of the total farm land that was improved rose from 40 per cent in 1860 to over 57 per cent in 1890 but then declined to around one-half, chiefly because of the large subsequent additions of grazing land to the area in farms.

The total number of persons ten years of age and over engaged in agriculture rose from 5.9 million in 1870 to a peak of 11.6 million in 1910 and then fell nearly to 9.2 million in 1940. The decline was particularly marked in the case of child labor. Throughout the period, however, there was a steady decline in the proportion of the total gainfully employed population

that was found in agriculture; in 1860 it was about two-fifths of the total; in 1900, 37 per cent; and in 1940, under 18 per cent. The total physical output of agricultural products cannot be accurately measured, but undoubtedly the growth was very great and the general trend was steadily upward even after 1920. Dr. King estimates that between 1860 and 1890 the output was more than doubled and that this achievement was repeated

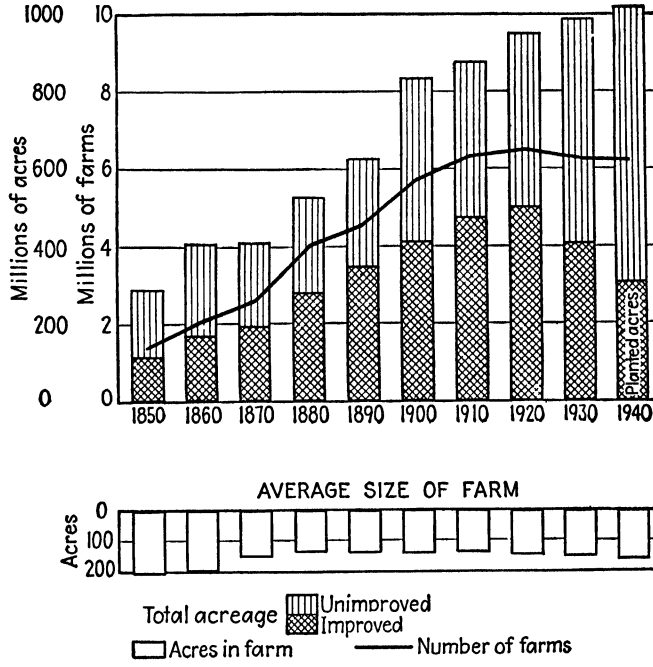


FIG. 45. The growth of farms, 1850–1940.

between 1890 and 1910. By 1930, it was nearly a quarter and by 1938 about one-third above the 1909–1913 level, yet during 1944–1948 it was running one-third above the average for 1935–1939.

Though values are a basic factor in the farmers' prosperity, one must make allowance in the following figures, when used as suggestive of agriculture's growth, for the marked shifts in the price level of farm products, remembering the decline from 1865 to 1896, the subsequent rapid rise to 1920, and the following reaction. The value of specified farm property rose from nearly $8 billion in 1860 to over $20 billion in 1900 and $78 billion in 1920; though it fell to $41 billion in 1940, the loss had been recovered by 1947. Of the 1940 figure, 56 per cent represented the value of land, 25 per cent that of buildings, 11 per cent that of livestock, and the balance that of implements and machinery. The average value of farm property

per farm fluctuated about $3,500 between 1860 and 1900, rose to the peak of $12,000 in 1920, dropped to under $6,800 in 1940, but was up to over $10,000 by 1945. The average value of farm land and buildings per acre rose from $16.32 in 1860 to almost $20 in 1900 and almost $70 in 1920. Though it had fallen below $32 in 1940, it was nearly back to the 1920 peak by 1947.

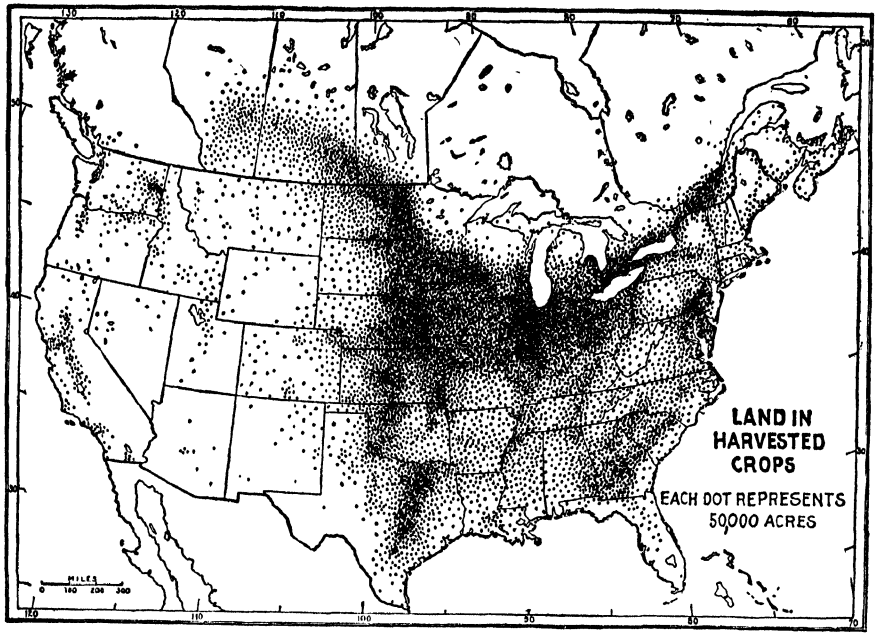


FIG. 46. Land in harvested crops. (*Reproduced from R. H. Whitbeck and V. C. Finch, "Economic Geography."*)

Though the census figures on the value of the farm output are inadequate and not strictly comparable, they are at least suggestive. The gross value of farm products given by the Census for 1879, which involves some duplication, was $2.2 billion; for 1899, the figure was more than doubled, and by 1909 it had risen to $8.5 billion. Shifting at this date to the Department of Agriculture's estimates of gross income from farm production,[1] which eliminate duplications, we find that the total for 1909 was $6.2 billion and then rose to a peak of almost $18 billion in 1919, only to drop to around $13 billion between 1923 and 1929, and to a low of $6.4 billion in 1932. In the years 1936–1940 it rose to an average of $10 billion, exclusive of govern-

[1] This includes the value of farm products sold and the value of those retained for consumption on the home farm, but excludes the value of that retained for feed or seed and that unfit for use.

ment payments and, in the following war period, came to exceed the peak of 1919.

Apparently, just about 1890 the net contribution of agriculture to the national economy, theretofore always the largest of all general activities, came to be exceeded by that of manufacturing. At the Census of 1920, manufacturing also surpassed agriculture in the number of individuals gainfully employed and since then has rapidly increased its lead. Yet the value of the property investment in farms, possibly excepting the 1930's, appears to have exceeded that in manufacturing. Thus the period saw the shift from a nation primarily of farmers in 1860 to an essentially industrial country in the twentieth century. This meant a change of far-reaching significance in the economic, political, and social life of the people.

The Growth of the Leading Crops. Throughout this period, corn held its position as much the most important and most valuable agricultural crop. Commonly, its value was from 50 to 100 per cent greater than that of the hay, the cotton, or the wheat crops, which made up the group ranking second in importance. The great increase in the average corn crop, some 150 per cent, occurred between 1865 and 1900, chiefly in the great corn belt extending from Ohio to the Missouri River, where it was closely associated with the growth of livestock raising. Since then there has been little change, the average crop fluctuating around 2.5 billion bushels. The average yield per acre remained about the same throughout the period, but it is now being increased around a sixth by use of the new hybrid variety.

Though commonly overlooked, the hay and forage crop has not infrequently ranked next to corn, but far below it, in value. Up to 1900, the rate of increase almost equaled that of corn, and since then the average crop has risen nearly one-half, aided by a slight growth in the yield per acre.

Between 1865 and 1900, the average wheat crop rose 133 per cent. Following a decade of slight gain, the crops of the subsequent period, fluctuating around 800 million bushels, were about a fifth larger, chiefly because of an expansion in acreage. The yield per acre rose slightly up to about 1900 since when it has remained around 14 bushels, or less than half that obtained in England by more intensive cultivation; but, as with most crops, there was an increase after 1940. The period brought considerable shifts in the main centers of production, notably the trend to concentrate in the region from Oklahoma north to the border. After about 1880, the crop declined in most states east of the Mississippi. In the Far West, the California crop increased rapidly up to about 1890 and then declined; that of eastern Washington and Oregon continued to grow; and the introduction of new varieties made possible some expansion in the semiarid regions.

Following the return of peace, the cotton crop was barely half that raised

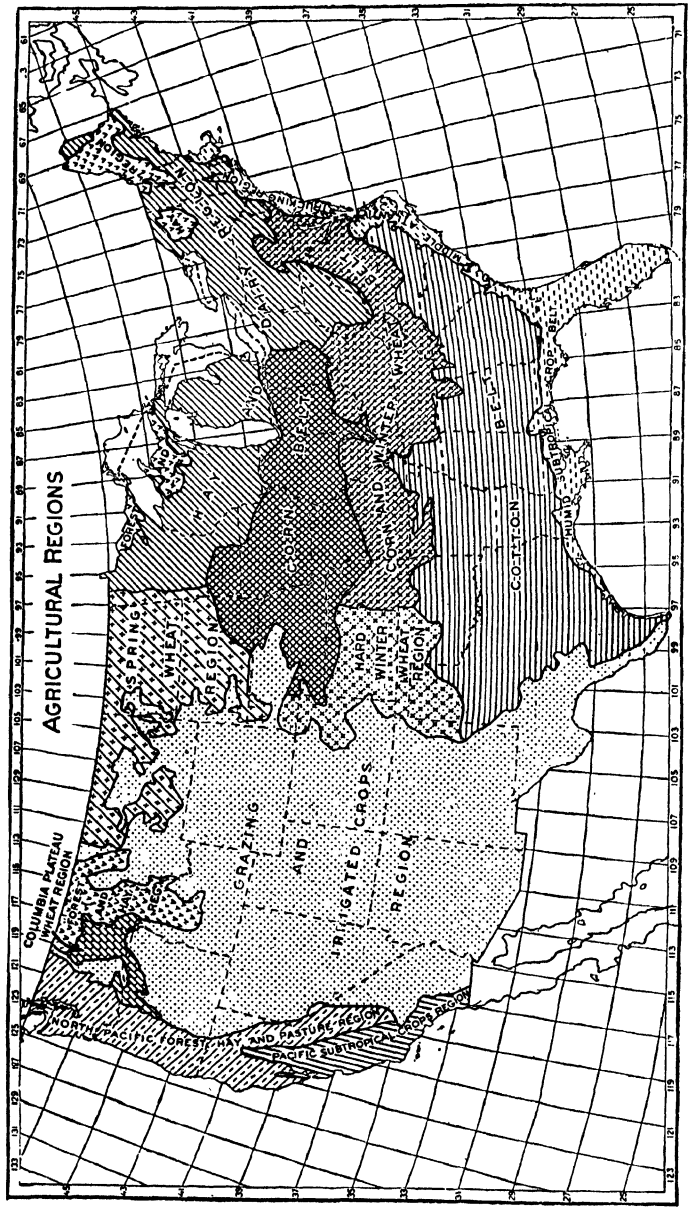


FIG. 47. Agricultural regions. (*U.S. Department of Agriculture.*)

in 1860, and it was not until after 1878 that the latter was regularly surpassed by crops exceeding 5 million bales. A fairly steady growth then raised the average crop to over 14 million bales in 1911–1915, the acreage being more than doubled. Subsequently, the crop fluctuated about this level, though 1937 brought an all-time record of 19 million bales after which both acreage and production were reduced. Production in the older states generally increased up to about 1920, but that in the trans-Mississippi section grew much faster. By 1890, Texas had surpassed Mississippi as the leading cotton-growing state and in recent decades has raised about a quarter of the total crop. Growing of long-staple cotton has lately been introduced in the far Southwest, and the rapidly rising output has helped to reduce the dependence on foreign supplies. The yield per acre increased a fifth to almost 200 pounds by 1900, but thereafter generally fell below that until 1936–1940 when, under the government's program, it rose to an average of 239 pounds. With the development since 1860 of uses for the seed, previously commonly thrown away, the value of the cotton crop has been increased, in recent decades about a sixth, and this has usually helped to give it second rank among all crops.

The only other important cereal crop is oats. Though its value is much below that of the wheat crop, the acreage devoted to it has almost invariably somewhat exceeded that used for cotton. By 1900, both acreage and crop had about tripled and, by 1914, both had been increased about a quarter more, bringing the production to some 1.1 billion bushels which has since remained the approximate average. Most of the increase occurred in the region extending from northwestern Ohio to the Missouri River. The yield per acre rose slightly up to 1900, since when it has remained about 30 bushels, far below that of Great Britain or Germany.

Although the five crops just described occupy nearly 90 per cent of the acreage devoted to all crops and make up about 80 per cent of their total value, some of the period's striking developments in the minor crops deserve mention. Among these is the rise of the beet-sugar industry. Starting about 1870, the crop remained insignificant till after 1890 and then increased by leaps and bounds; it permanently surpassed the cane-sugar crop after 1905 and just before the adoption of the quota system its output, averaging over 1.3 million tons, was six times that of cane. This growth then provided the country with over a fifth of its consumption of sugar and, as the insular possessions supplied nearly half, the former heavy dependence on foreign supplies, mainly Cuban, was greatly reduced. The adoption of the quota system secured a further increase in the domestic crops of both beet and cane. Beet sugar is raised in a belt extending from Ohio and Michigan to the Pacific, the leading states being California, Colorado, Michigan, Idaho, Montana, and Nebraska.

Though rice still remains a minor crop in value, its production underwent remarkable shifts during this period. The production in South Carolina and Georgia was resumed far below the 1860 level and declined to an insignificant figure after 1900 so that the country became a heavy importer. The center of production shifted to Louisiana which took the lead from South Carolina before 1890. Though the 1860 crop was not surpassed until the 1890's, the subsequent growth in Louisiana and later in Texas, Arkansas, and California was such that, after 1918, the United States became a large net exporter of rice and by 1939 was raising a crop almost seven times that of 1859.

It was not until about 1880 that the tobacco crop regained the prewar level, but after 1900 this was more than doubled, averaging over 900 million pounds, a figure which had been raised to almost 1.5 billion by 1940 with an average value of $277 million. Kentucky was far in the lead as a producer till about 1930, but since then North Carolina has rapidly surpassed her. South Carolina's crop has risen rapidly since 1900; Tennessee's has advanced to more than double the 1859 level, but Virginia's has seldom equaled that level. The United States commonly raises about one-third of the world's production.

Barley growing has enjoyed a rather unusual and persistent expansion, the crop in 1939 being sixteen times that of 1859. New York's output rapidly dwindled after 1890, and California lost its unvarying leadership after 1900 with the rapid growth that took place in Minnesota, the Dakotas, and Wisconsin. The rye crop showed little gain until after 1880, but by the 1930's it had doubled. The center of production passed from the Middle Atlantic states first to the East North Central group and then to Minnesota and the Dakotas. Between 1930, when little was raised, and 1940, the soybean crop rose nearly 1,000 per cent, and it then received a great impetus from the war. Production is mostly between Ohio and Iowa, centering in Illinois. With the growth of urban population, market gardening in the adjacent regions has been stimulated, while the introduction of refrigerator cars and better methods for preserving and canning enabled far-distant regions to specialize in vegetables for city markets. The same developments promoted the rapid expansion of fruit growing, notably in parts of the South and the Pacific coast states. In recent years, vegetables have provided about a tenth of the value of all farm crops, potatoes contributing over one-third of this; fruits and nuts have provided around a fourteenth of the total.

Animals and Animal Products. During this period, the numbers of the chief kinds of livestock on the farms showed a rapid increase up to around 1900. Since then, all groups but dairy cows and chickens either showed no enduring gain or declined. Much the greatest decline—almost

one-half since 1920—was in the number of horses. Among other livestock, however, there was an improvement in quality, which somewhat offset the effects of the decline in quantity.

The growth in the number of beef cattle and sheep was closely associated with the opening up of the range in the Plains and the Rocky Mountain region after 1865. The great northward drives of Texas Longhorn cattle started in 1866, and it is estimated that by 1884 some 6 million head had been sent out over one or another of the long trails which usually ended at the different cow towns of Kansas and Nebraska that sprang up at the rail heads as construction of the railroads advanced. There they were sold to corn-belt feeders to be fattened or shipped direct to the rapidly growing packing plants, now able to send fresh meat to the East in refrigerator cars. Some were also diverted to build up herds on the northern range from Dakota westward, and other breeds, especially the Hereford and Angus, were brought in to improve the herds' beef quality. The great boom period here came between 1878 and 1885 stimulated by high profits, the completion of the Northern Pacific, and the ending of serious Indian raids. Numerous large companies backed by Eastern and British capital entered the field, and soon the range was overstocked. A drought in 1886 followed by an extreme winter resulted in losses of three-quarters of the stock and the ruin of most of the companies. In the consequent reorganization of the industry, herds were reduced in size, provision was made for winter fodder, and steps were taken to secure private control of grazing land. By 1890, the total of all cattle in the country was 58 million or more than double the figure of 1860. Since then, the increase has been slight.

The rise of the range sheep industry of the Far West followed slightly behind that of the cattle industry. It also was based on stock from Texas and New Mexico of Spanish origin, driven northward and later improved by breeds brought from the East. The growth was so rapid that, despite the great decline in the flocks of the older states after the collapse of the Civil War boom, the number of sheep in the country reached 50 million by 1885 or more than double the figure for 1860. Since then, though subject to considerable variation, the number has fluctuated about a somewhat lower level. The declining flocks in the older states became a part of general farming and were kept for mutton and lamb rather than for wool. In the region between the high plains east of the Rockies and the western slopes of the Cascades and the Sierras, where most of the sheep are found, a similar shift away from the original primary objective of wool has taken place.

Though the raising of hogs remained fairly widespread east of the Mountain states, the growth of this industry was closely connected with the growth of the corn belt, where it became increasingly concentrated.

The census return of 63 million hogs for 1900 was almost double the 1860 figure, but has seldom been surpassed in any year since then.

The most steady and consistent growth among livestock has been that of the dairy cows. By 1890, the number was double that in 1860 and, by 1940, a further increase of 50 per cent had taken place, not to mention a large increase in the yield of milk per cow. This growth was more closely connected with the growth of population than that of any other class of livestock. For the same reason, the distribution of dairy cows corresponds more closely to the distribution of population, as the market for fluid milk is distinctly limited in area. Proximity to the markets explains the success of this industry in supplanting many other farm products in the older sections of the country. Favorable conditions for green pasturage and the purchase of feed help to explain such concentration as is found in Wisconsin and adjoining states where, owing to the fluid milk surplus, the production of butter and cheese is relatively great. Over two-fifths of the milk produced is consumed as milk, and about the same proportion is made into butter; the rest is used for cheese, condensed or evaporated milk, ice cream, and the feeding of calves. Though the shift of butter making from the farm to the creameries has been rapid, especially since about 1890, a fifth of the output is still made on the farms and nearly half the farms produce some butter. Cheese making is confined mainly to the factories, about two-thirds of the output coming from Wisconsin. The gross farm income from dairy products in 1940 was nearly $1.9 billion.

The growth of poultry raising has tended to resemble that of dairying. Most farms keep chickens as well as cows, and the quantity of poultry raised in any section is closely related to the density of population. Such concentration as exists is found in the region extending from the Middle Atlantic states to the Missouri River. The gross income from poultry and poultry products in 1940 was over $1 billion.

Almost half the gross farm income from livestock and their products—nearly $2.6 billion out of $5.6 billion in 1940—was derived from the sale or slaughter of meat animals. Most of these animals were sold, as the business of slaughtering on the farms has greatly declined; at the 1940 census, few farms reported any slaughtering of sheep and lambs, barely a tenth that of cattle and calves, but two-thirds slaughtered some hogs, this being most common in the South. Probably most of the meat obtained from such slaughtering was consumed on the farm, though some was sold.

The Relative Importance of Agricultural Products. Since a clear conception of the relative importance of different agricultural products is essential to understand our present-day agriculture, to interpret the farmer's psychology and political reactions, or to analyze the reactions of agricultural conditions upon general business and the national economy, the

outcome of the developments during this period can well be summarized. This is the more necessary because of the popular tendency to exaggerate the importance of certain crops such as cotton, wheat, tobacco, or sugar (of the first two, partly because they enter so extensively into trade), and to forget the predominance of corn and the great value of the hay crop. The accompanying table, covering the average annual value and acreage harvested of the leading crops, 1936–1940, shows the situation prevailing before the reactions of war became appreciable. Corn, it will be observed, still held its preeminent position with a value around twice that of the

AVERAGE FARM VALUE AND ACREAGE HARVESTED OF THE LEADING AND SOME MINOR FARM CROPS, 1936–1940

	Farm value, millions	Acreage harvested, millions		Farm value, millions	Acreage harvested, millions
Corn	$1,433	90.8	Potatoes, white and sweet	$292	3.6
Cotton and cotton-seed	785	27.0	Tobacco	277	1.6
Hay, tame and wild	698	68.6	Barley	113	11.0
Wheat	614	57.6	Sorghum, grain and forage	96	13.3
Oats	328	34.8	Sugar, beet and cane	72	1.1

cotton, the hay, or the wheat crops, which constituted the group next in importance. A third group includes oats, potatoes, and tobacco each of which crops had a value less than a quarter that of the corn crop. Next in rank below the field crops listed came soybeans, dry edible beans, peanuts, rice, and rye with values between $53 and $34 million. All vegetables other than potatoes had a farm value of over $400 million; fruits and nuts amounted to about the same, citrus fruits and apples each contributing a quarter of the total.

Previous to 1928, the gross farm income from livestock and their products was almost invariably exceeded by that from farm crops; ever since, the situation has been reversed and by 1940 the former was about 40 per cent above the latter. To the extent that crops were used to feed the livestock, the income from the latter was a duplication rather than an addition to the farmers' income. In 1939, a seventh of the value of farm products was consumed by the farm households.

Dominant Factors in the Trend of Developments. On looking back over the more detailed account, we observe certain basic trends and the

factors shaping them. The history of the country's agriculture since 1860 is clearly divisible into two rather sharply differentiated periods around the close of the century: (1) In the first, after the Civil War boom, there was a persistent decline in the prices of farm products to about the low point of the century in 1896. (2) In the second, there was a rapid rise to 1910 followed by the war boom and the subsequent reaction which still left the prices of 1936–1940 at the 1910 level. It was in the first period that the great growth in farm acreage and physical volume of farm products occurred, both more than doubling; in the second 40 years, the rate of expansion was far slower, the acreage increasing less than one-quarter and the volume of output about one-half.

The great growth in output during the first period, most of which took place before 1890, was primarily based: (1) as far as supply was concerned, on the availability of cheap fertile land in the trans-Mississippi region and of the new farm machinery, (2) on the demand from the rapidly growing urban population of the East and of Europe, (3) on the improved facilities and great reduction in the cost of transport overland and overseas which helped to enable the farmer to compete in this rising market, despite the growing competition from less developed countries and the trend toward protectionism on the Continent. Eastern farmers, because of this competition from the West, were forced to shift to other products or abandon their farms. The volume of farm products exported steadily rose to a peak about 1900, and throughout this period these exports made up around three-quarters of the value of all exports and nearly a fifth of the value of all farm products sold.

In the second period, expansion was severely limited by the small amount of land that could be added to the cultivated area. A growth in output became increasingly dependent upon more intensive, more scientific, and better mechanized methods of production; yet the most striking gain was in the greater output per unit of labor rather than in the slight gain per unit of land. In the second place, expansion was checked by the slower growth of the market both at home and abroad. In both the United States and western Europe, population increased at a much less rapid rate. In the United States, the per capita consumption of meats and grains tended to decrease, though there was also a substantial increase in that of dairy products, fruits, and vegetables, the classes of farm products where the growth in output was most rapid. The export market was further limited by the growing competition from less developed countries such as Canada, Argentina, and Australia—a competition also felt in the domestic market despite greater protective devices—and, especially after 1920, by the protectionist movement abroad. Previous to 1914 the exports of farm food products regularly exceeded the imports, but from 1925 to 1941 this situa-

tion was reversed. Just before 1940, only 8 per cent of the farmers' gross income was derived from exports or about half the proportion before 1914.

As a result of this slower growth, agriculture lost its preeminence as a sector in the national economy. Except as stimulated by the abnormal influence of the world wars when new records were made, the volume of agricultural exports declined and their value was far exceeded by that of manufactured goods. The farmer became more dependent upon the domestic market for the sale of his produce than ever before, and the greater possibilities for controlling that market led to demands for extensive governmental aid in doing so.

By the opening of the second period, as the supply of free fertile land was practically exhausted and the railroad system had been well rounded out while freight rates remained relatively fixed, elements of stability theretofore lacking were introduced into the agricultural situation. The rate at which Western competition with the East had been growing was greatly reduced, and regional shifts in the production of the great staples at least became much less marked. The outcome was a more stabilized regional specialization; the North Atlantic states concentrated on dairying, market gardening, and certain fruits; the South on cotton, tobacco, certain semitropical products, early market-garden products, and fruits; the North Central states on grains, livestock, and dairy products; the Mountain states on cattle, sheep, and beet sugar; and the Pacific coast states on fruits and grain (see the map on page 532).

The two periods are also differentiated by the contrasts in the movements and the general level of farm land values with their consequent reactions. In the country as a whole, the rise in the value of farm real estate per acre in the 40 years ending in 1900 was less than 25 per cent; only in the newer sections of the West was it marked. In the next 20 years, the national average increased 250 per cent; in 1940, after the violent deflation, it still remained 50 per cent above the 1900 level and by 1947 was nearly back to the 1920 peak. It was only very gradually, however, that the higher level of land values after 1900 led to the adoption of more intensive methods of cultivation and greater attention to conserving the fertility of the soil, though the agricultural program after 1933 gave a distinct impetus to the movement. The average size of the farms showed relatively little change between 1870 and 1930 (see the chart on page 529). The enormous bonanza wheat farms, such as arose in California or in the valley of the Red River of the North, and the largest cattle ranches tended to break up after 1890, yet the 1940 census showed a substantial rise in average size of the farm. This was due very largely to the growth of large farms in the region to the west of the 95th meridian and the inclusion of public land rented to farmers under the Taylor Grazing Act. Nearly all the farms of 1,000 acres or more

were located there and, although such farms made up but 1.6 per cent of the country's total and 10 per cent of the value of farm real estate, they included 34 per cent of all the land in farms. In much of the livestock-raising section, however, even 1,000 acres would not support a single family.

During the first period, the cheapness of land tended to accentuate the prevalence of the one-crop system, this being especially marked in the West as soon as cheap transport facilities became available to provide easy access to the great staple markets. This continued that process of mining the soil which has been so common a feature of the country's agriculture. The fact that so much farm land tended to rise in value, even when the soil was being depleted, was often sufficient to offset, if not to conceal, this element of loss in the eyes of the farmer. Doubtless there were many cases where, had this depletion been reckoned as an element in cost, the farmer would be found to have sold his produce at a loss; his profit, if any above a fair wage for his work, came from the rise in the value of his land.

Another factor accentuating the mining of the soil was the tendency wherever land was rising in value to overcapitalize it; it sold at a higher price than was justified by its earning power at the time of sale. The buyer, seldom having much reserve of capital and often faced with a heavy mortgage burden as well as taxes, found that he must get as much as possible out of the land at once to make both ends meet. This fairly common, but often overlooked, situation explains various features characteristic of the history of American agriculture.

In the first half of the second period, the faith in rising land values was strengthened not only by the rapidity of the advance even before the war but by the fact that it was marked in the older states as well as in the West. Yet the disastrous reaction in the second half of the period dealt this faith a blow from which it may never recover. Despite the renewed rapid rise during the Second World War, few farmers will count on its maintenance as so many did in 1918. Excluding monetary inflation or higher tariffs, uncertain but always possible, the prospect of any such general advance as characterized the past seems slight.

In this second period, therefore, chiefly after 1920, the shattering of the faith in constantly rising land values, combined with the much higher level of values that prevailed despite the great fluctuations, tended to induce farmers to give more attention to soil conservation. This was reflected mainly in the movement to secure greater diversification of crops—also stimulated during the depression by the wish to secure greater stability in income—and in the greater use of fertilizer or soil-building crops. After 1933, the government's agricultural conservation program also stressed prevention of soil erosion and by its subsidies gave a new impetus to the whole movement. By 1940, soil-conservation district laws existed in thirty-

eight states, and forty-six states had land-use planning committees, yet even then the progress made was very moderate. Though any such intensity of cultivation as prevails in much of western Europe would not be justified in view of the comparatively low cost of land and the high cost of labor in the United States, it is clear that the future expansion of this country's agricultural output will depend largely on the progress made along these lines plus the contributions of science.

The Mining and Quarrying Industry. Ranking second to agriculture among the extractive industries, though very far below it, stands the mining and quarrying industry. Popular impression tends to exaggerate the direct contribution of this industry to the national economy, but, despite its remarkable expansion after 1860, the industry in recent years has contributed less than 2 per cent of the national income and included but 2 per cent of the gainfully employed. Indirectly, however, the importance of the industry is enhanced by the fact that the development of so many other lines of economic activity has been furthered by its expansion.

The outstanding feature in the industry's history was the very rapid rate at which the physical output of numerous mineral products rose; in the case of many important products, the output doubled in nearly every decade down to 1920. Thereafter down to 1939, the output of metals fell off, but the rise in the output of petroleum, gas, and other nonmetals was such as to raise the industry's total by one-third. The basic factors in this growth were varied; besides the rising demand for the products, they included the discovery of new sources of supply, the developments in transport facilities, and the scientific progress in such fields as geology, chemistry, and mining engineering. In consequence, it was during this period that the industry was transformed from the small-scale mining of rich outcrops to the large-scale mining of low-grade ores, both surface and underground.

Technological Developments. On one side, scientific progress helped to create a demand for many mineral products theretofore little used, if not unknown, and greatly to increase the demand for others. Also it helped to discover and make economically available new sources of supply. Progress in geology furnished a surer guide in the search carried on by both private initiative and the extensive work of the government's geological survey; new technological devices for exploring mineral deposits lessened the speculative risks attendant upon their development. By about 1900, exploration of the rich resources of the West had made known the chief fields of metallic ores now worked, but discoveries of other mineral deposits, notably those of petroleum, continued to be made.

In addition, science, particularly chemistry, together with mining engineering provided better means for extracting these resources. The practicability of deep mining is said to have been first proved at the Comstock

Lode. At the start used chiefly for mining gold and silver, deep mining was later extended to copper and other ores, its adoption being furthered by improved methods for drilling, hoisting, draining, and ventilating, in all of which the advent of electric power greatly aided. Resort to low-grade ores on a large scale started in the Mesabi iron deposits in the 1890's and soon was employed in the Western open-surface copper mines. In the spread of open-surface mining, later employed for other minerals, the development of the power shovel played a large part. The use of low-grade ores also depended on the devising of better means for crushing, grinding, separating, and concentrating ores. Incidentally, it should be noted that improved methods for the recovery of scrap and waste provided an increasing secondary supply of metals which in cases like iron, copper, lead, and zinc came to equal between 15 and 50 per cent of the primary output from the mines.

The improved technology enabled even those branches of the industry forced to fall back on the use of lower grade ores to raise both their output and their productivity. Adequate data for the first half of the period are lacking, but a study for the National Bureau of Economic Research concludes that for mining as a whole between 1902 and 1939 output was nearly tripled and output per man-hour was multiplied more than 3½ times. This record, which even exceeded that in manufacturing for the same period, was made possible largely by the spectacular advances in the petroleum industry; excluding that, the rise in output was 41 per cent, and that in man-hour productivity 119 per cent. The increased output of the industry as a whole was secured with practically no change in the number employed and, owing to shorter hours, an actual decrease in man-hours of work. All this reflected a further step taken to secure more effective cooperation between man and his environment.

Developments in the Economic Organization. Along with the technological developments and greatly influenced by them, came the changes in economic organization. Outstanding among these was the marked trend toward capitalistic methods of production. The increase in the use of power is suggested by the fact that the rating of the power equipment in 1939 was over 13 million horsepower; although the figure of 1860 is unknown, it must have been insignificant; the figure for 1900 was under 3 million. The electric energy consumed in 1939 was over 8 billion kilowatt-hours, three-quarters of it being purchased. On the other hand, the use of labor increased much less rapidly than the use of capital goods or the volume of output, the number employed in the industry in 1939 being around seven or eight times that in 1860.

The resulting trend toward large-scale production led to increased use of the corporate form of organization and, in certain branches of the indus-

try, to a marked concentration of control over output. As classified by the 1940 census, corporations made up nearly half of the 21,000 operating concerns, but they had almost nine-tenths of those employed in the industry and a like proportion of the value of its output. Concentration of control among the leading branches of the industry was most marked in the case of anthracite, lead, and copper.

In mining, the problem of securing the proper adjustment of demand and supply, besides being aggravated as elsewhere by the increased use of fixed and specialized capital, is rendered more difficult by other conditions in certain branches of the industry. (1) Underground mines are difficult to close down without a heavy loss. (2) The natural conditions that limit the supply of minerals make it difficult to open new mines rapidly or suddenly to increase the output of existing mines. (3) Certain mineral products, largely used in manufacturing, are subject to great fluctuations in demand. (4) The oil industry faces another difficulty, since many producers may be drawing from one pool and each tries to secure as much as possible before the supply is exhausted, regardless of any glut in the market. Though the effect of these conditions varies considerably among different products, the result has been to make certain branches of the industry, notably oil and soft coal, subject to peculiar distress. This, combined with the importance of these two branches, explains the special measures adopted for their stabilization after 1933.

There were also various developments tending to reduce the financial risks of the industry. The better methods for determining the presence of mineral deposits have already been mentioned. New safety devices to protect both workers and property helped to offset the greater dangers that came with deeper shafts and more use of machinery. Consolidation of ownership of separate mines, sometimes of those yielding different minerals, helped to distribute risks and to afford greater financial stability. Where substantial control of output developed, it might, but did not necessarily, have a similar effect.

Developments in the Leading Mineral Industries. Until the rather recent expansion of the oil industry, coal was commonly by far the most valuable mineral product, and in 1939 over half of all those engaged in the mineral industries were employed in this branch. The output of coal rose from 13 million tons in 1860 to a peak of 678 million tons in 1918 which far exceeded that of any other country. Thereafter, owing to increased efficiency in its use and the competition of other sources of heat and power, the output declined and in 1940 was some 500 million tons (see the chart on page 544). The increased importance of coal in the national economy is reflected in the per capita production averaging about 5 tons a year during the 1920's or ten times the figure for 1860.

The great growth was in the output of soft coal, owing to the adoption of more efficient methods for its use and the opening up of new fields, the most productive being in West Virginia, southern Illinois, and adjacent states. Less valuable mines were opened in Alabama, the Mountain states, and scattered areas on the plains. In 1860, soft coal made up a third of the total output, but in recent years it constituted nine-tenths of it. The production of anthracite remained practically confined to Pennsylvania and reached its peak in 1917, since when it has been nearly cut in half. Tech-

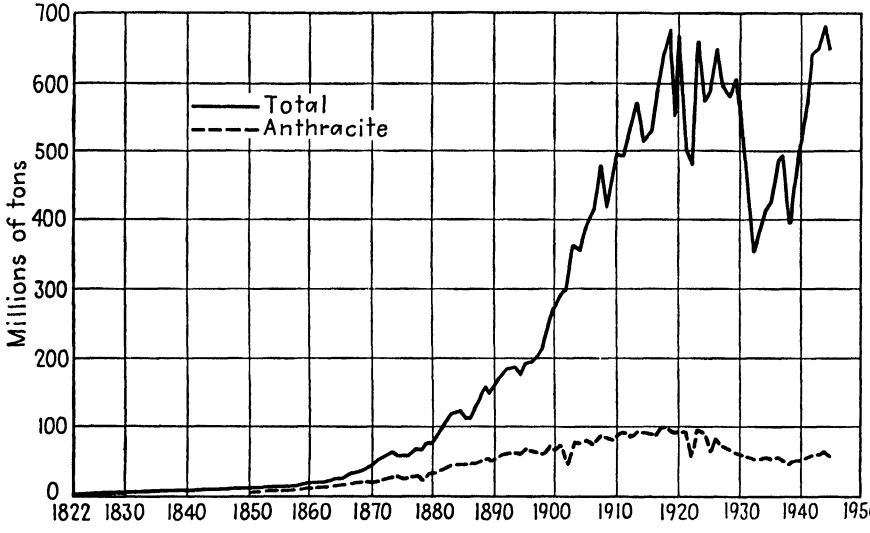


FIG. 48. Coal production since 1822.

nological progress was less rapid in coal mining than in other branches, but the output per man-year in 1929 was about double that in 1880, thanks especially to the spread of mechanical cutting and loading.

The phenomenal growth of the petroleum industry and the accompanying output of natural gas were entirely a product of this period, the first oil well having been opened in 1859. Production rose from 500,000 barrels in 1860 to 26 million in 1880 and 63 million in 1900. Until then, production had come almost entirely from the Appalachian field where it subsequently declined. The great increase since then, raising the output to 442 million barrels in 1920 and over 1,300 million in 1940, has come from the opening up of the mid-continent and Gulf fields in Texas, Oklahoma, and adjoining states and from the California field. This gave the United States around two-thirds of the world's output. The value of the natural gas sold in 1940 was over two-fifths that of the crude oil produced, and the quantity was nearly four times that of manufactured gas. It proved particularly useful

in that supplies were largest in sections where coal was relatively scarce, though now it is piped to coal-producing regions.

The production of crude oil has never been marked by the concentration of control that once existed in the subsequent processes of pipe-line transportation and refining. The Standard Oil Company at the height of its power, 1880–1911, when it controlled nearly 90 per cent of the refined product, never owned more than a fifth of the crude production. Since it was split up by the Supreme Court in 1911, there has been a marked tendency among the successor units as well as the more rapidly growing independents to extend their control over oil wells and secure a more effective integration. But to stabilize production, it was found necessary after 1933 to resort to interstate compacts limiting output and backed by the support of the Federal authority.

Ranking third in value of output among the mineral industries in 1939, though contributing less than 5 per cent of the total, was iron ore. From 1870, when the production was over 3 million long tons, up to 1910 the output more than doubled in every decade except that of the 1890's and it averaged 52 million tons, 1911–1915. Though subject to marked fluctuations thereafter, the average for 1936–1940 was but a trifle higher; yet the subsequent wartime demand raised production to over 105 million tons. During this period, in the production of iron ore as in that of coal—the two resources often called the bases of modern industrialism—the United States far outdistanced any other nation.

As in the case of other minerals, this growth was due to factors affecting both demand and supply. Demand increased with the growth in old, and the devising of new, uses for the metal, both being augmented by lowered costs of production. The output of ore per worker is estimated to have been eleven times greater in 1929 than in 1880. Much the most important of the new ore deposits opened were those of the Lake Superior region, particularly rich in ore suited for the Bessemer process. Though use of these deposits started before 1860, the great growth came after the opening of the rich Mesabi range in 1892 under open-surface mining. Recently five-sixths or more of the country's output has come from the Lake Superior region. The output of the Alabama mines rose rapidly after about 1880 following the discovery of a process for dealing with its high phosphorus content. The output from the Northeastern states, half the country's total in 1880, slowly declined to an insignificant proportion. The strong trend toward integration and large-scale production in the manufacture of iron and steel led to a marked concentration of control over the ore mines.

Copper ranked just below iron in the value of output in 1939. The remarkable growth of copper mining was entirely a product of this period. In 1860, not long after the Michigan mines had been opened, the output

was only 8,000 short tons but, from then on up to 1920, when it exceeded 600,000 tons, production was about doubled every decade. Marked fluctuations ensued, but under the war stimulus output passed the million-ton mark in 1942. After 1882, the United States became the leading producing country; after 1895, it provided over half the world's output. After about 1880, previous to which most of the growth had come from the rich Michigan veins, the expansion was chiefly based on the opening up of the mines in the Mountain states in some of which open-surface mining of low-grade ore was later introduced. By 1885, these states produced half the country's output and recently, as the Michigan output declined, over nine-tenths, Arizona, Utah, and Montana being in the lead. Of late, the United States has lost ground relatively to low-cost foreign producers, particularly the Chilean and the new African mines, though since 1900 there has been a large growth in the smelting and refining of South American ore. Concentration of control is marked, but integration is less common than in the case of iron; until recently few producers extended their operations beyond the refining process.

In 1860, the gold mines contributed more than half the value of all mineral products, but this preeminence was soon lost and in recent years, despite a larger output and higher price, the contribution has fallen to around 3 per cent. After the high point of $65 million reached in 1853, output slowly declined, the drop in California being partly offset by an increase in the Mountain states, and between 1872 and 1894 fluctuated around $35 million a year, except for the rise on the opening of the Black Hills mines in 1877–1878 (see the chart on page 667). Subsequently, following the introduction of the cyanide process making low-grade ore usable and the discovery of new deposits, output rapidly rose, regularly surpassed the 1853 record after 1899, and reached a new peak of over $100 million in 1915. The following sharp decline to about half this amount after 1920 was quickly reversed after the government raised the price of gold in 1934, the physical output being more than doubled by 1940. In 1894, Australia took the position as leading producer away from the United States, but in 1905 lost it to the rich South African mines which came to yield from one- to two-thirds of the world's output.

The rise of silver mining in this country dates from the discovery of the Comstock Lode of Nevada in 1859, and all the important mines since opened have been located in the Mountain states. As the chart on page 667 indicates, output rose rapidly up to 1892 when it was over 63 million ounces valued at $56 million. Since then, output has fluctuated sharply about a slightly lower level, but it has averaged considerably less in value. In recent years, so much silver has been a by-product of copper, lead, and zinc mining that the influence of its price on output is much modified. Ever since 1873,

when the long decline in the price of silver started, the mineowners have sought government support in one form or another, as will appear in the history of currency legislation. In view of the relatively insignificant contribution of silver to the national economy, the power of this interest, largely concentrated in the Senate, has been extraordinary. In 1921–1924, following the postwar drop in price, the Pitman Act guaranteed the domestic output of silver a price far above that in the world market; after 1933, when the value of the output had fallen to around $9 million or about that of the raspberry crop, similar laws were passed, not to mention one requiring the government to purchase over $1 billion of silver to help support the market. It was under such aid, together with the increased production of the associated metals, that output nearly recovered the 1915 peak.

This period also brought a great growth in lead and zinc mining. The output of refined primary lead rose from 15,000 short tons in 1860 to the peak of nearly 700,000 in 1925; that of primary zinc rose from practically nothing to the peak of over 600,000 short tons in 1929. The Joplin district in southwestern Missouri and Oklahoma became the chief center of zinc production. More recently there has been a marked rise in the output of both lead and zinc in the Mountain states where these ores are commonly obtained along with silver. In the production of both lead and zinc, especially the latter, the United States far surpassed any other country, normally contributing from a quarter to over a third of the world's output.

The output of other mineral industry products made up only about a tenth of the more than $3 billion value of all such products in 1939. Limestone, the leader in this group, is used in smelting iron ore and in the manufacture of Portland cement which, starting in 1872, has grown with great rapidity since 1900. The opening of Southern bauxite deposits and the discovery of a cheap process for making aluminum in 1888 helped to build up the manufacture of that product, which was monopolized by one company till after 1940, but since 1920 much of the bauxite used has been imported from Guiana. After 1890, the discovery of a new process for the extraction of sulphur and the opening up of the Louisiana-Texas deposits made the United States the chief producer of this mineral, and control of the output is highly concentrated. The same is true of the output of molybdenum, the growth of which has provided the country one of the important ferroalloys, in most of which it is seriously deficient.

It is obvious that the tremendous drain upon the country's mineral resources resulting from the growth in output during this period cannot go on forever. Thus far, the effects of depletion have been offset largely by technological progress, and there is no knowing what science may accomplish in the future. Further development of control over atomic energy, which has begun with the atomic bomb, may completely revolutionize the

importance of many mineral products. Yet such knowledge is quickly spread to other countries, and the comparative advantages which the United States once possessed because of its rich mineral resources have already been substantially reduced in many cases. How long the remaining resources will last depends on numerous uncertain factors of which the chief is scientific progress. A government study in 1944 indicated that those most basic, such as coal, iron, and the main constituents of fertilizer, are far from exhaustion, though the high-grade, open-pit Mesabi ore would last less than a dozen years at the high 1944 rate of production. Most serious is the outlook as regards petroleum, though it must be remembered that past forecasts as to the imminent exhaustion of this resource have always proved erroneous. The government study indicates that the proved reserves would last 18 years at the 1935–1939 rate of use, but some believe further discoveries may more than double this period. In 1947, the Bureau of Mines estimated that 21 out of 33 essential minerals would be used up within a generation. It declared we had already used up 97 per cent of the country's mercury, 85 per cent of its lead and silver, 80 per cent of its chromium, 70 per cent of its tungsten, manganese, vanadium, and bauxite, 65 per cent of its zinc, and 60 per cent of its petroleum.

The Forest Industry. Following mining and quarrying in value of output among the extractive industries, comes the forest industry. Complete figures on the value of all timber cut are lacking, but in normal times it was probably around $1 billion. The timber converted into lumber, about half the total cut and much the most valuable of the products, had a mill value of two-thirds of this sum in 1940. Around a third of the cut is used for fuel, and among the minor uses that for pulpwood leads. The lumber cut increased about 3½ times between 1869 and 1909, when the peak output of 44 billion board feet was reached. The subsequent substantial decline in output—one-third in 1940—was due chiefly to the substitution of other cheaper or more serviceable materials. Yet the per capita consumption of wood for all purposes still remained several times that in Germany or Great Britain, partly because of its greater use for fuel.

In 1869, the North Atlantic states produced two-fifths of the country's lumber and Michigan, Minnesota, and Wisconsin about one-quarter. Between 1879 and 1899, the Lake states were the chief producing region, but the very rapid expansion in the output of the South eventually gave that section the lead which it continued to hold until after 1929, with around two-fifths of the total. Since then the rise in output of the Pacific states, which became very rapid after 1900, has put this group in a position equal to that of the South. However, as this region holds over half the stand of saw timber remaining in the country and the South less than a quarter, it

will become the chief producing section, though hardwood will have to be supplied from the older sections of the country.

It is estimated that over half of the original stand of timber in the country has been cut and that the forests are being used up at a rate considerably exceeding their rate of growth. Recent decades have seen more efforts directed toward conservation of the timber supply and something in the way of reforestation, chiefly by the government in its forest reservations; but the long period required for growth, the price of timber, and often high taxes give little encouragement to private initiative in reforestation.

CHAPTER XXXIII

MANUFACTURING SINCE 1860

Introduction. The remarkable expansion of manufacturing may well be considered the dominating feature in the country's economic history during this period. By 1890, the net value added in manufacturing came to exceed the value of agricultural products and subsequently far surpassed it, making this branch of economic activity the largest contributor to the national income. By 1920, the number of people employed in manufacturing exceeded the number engaged in agriculture, and it could be said that the country was primarily an industrial rather than an agricultural nation. Before 1914, when the gross value of its manufactures exceeded that of Great Britain and Germany combined, it had become the leading manufacturing country of the world. In 1947, it was claimed the United States had one-half of the world's industrial output.

Another result was to make the nation relatively self-sufficing as regards manufactured products in general, though still deficient in various special branches, particularly those requiring much skilled labor. In fact by 1923–1925, the stage had been reached where, on the basis of the government classifications in each field, admittedly not strictly comparable, the imports of manufactures were barely over 3 per cent of the value of domestic manufactures while the exports of such goods were 4.5 per cent of the domestic production. That the exports of manufactures should exceed the imports was a striking change when compared with the situation before 1860.

The second outstanding feature in the history of manufacturing during this period was the rapid introduction of machinery and capitalistic methods of production with all the changes in economic organization that this involved. There was a marked growth in the scale of production and in the size of the business unit leading in turn to greater use of the corporate form of organization, the form that came to control seven-eighths of the output. Heavy overhead costs resulting from the large use of specialized capital intensified competition, frequently making it cutthroat in character, increased the difficulties in adjusting output to demand and, aided by the trend toward integration, furthered a concentration of control that often made substantial monopoly possible. Outside of railroads, public utilities, and mining, there was no important field of economic activity where the

problems arising out of modern capitalistic industry became more serious than in that of manufacturing.

Technological Developments. Underlying the introduction of new machinery and processes were research and invention, and back of them the progress in the various fields of science. Absolutely fundamental as all this was in the economic development of the period, no account of the innumerable steps in this progress can be attempted here; it must suffice to note that the rate of advance was doubtless more rapid than ever before in the world's history; the effects were generally cumulative, and the decade 1920–1930 probably surpassed any previous one in the extent and the speed with which such improvements were introduced.

The advance in science and technology was carried on not only by single individuals but increasingly through organizations backed by large resources and cooperative effort such as the universities, special research foundations, and large private corporations whose outlay for such purposes has mounted rapidly in the last two or three decades. In certain limited fields, the government also became active. The atomic bomb was the product of an unparalleled cooperative scientific and engineering effort backed by an outlay estimated at $2 billion, including plants. In recent times, the number of patents issued has been around 40,000 a year as compared with less than 5,000 just before 1860 or under 1,000 before 1850.

Of basic importance in this progress were the improvements in the devices for securing motive power and the inventions for using new forms of power, especially electricity. Steam power is now developed with vastly greater efficiency than ever before; electric power was only coming into widespread use about the opening of the twentieth century; and the introduction of the gas engine was still more recent. In the field of manufacturing, the amount of available horsepower rose from 2.3 million in 1869 to over 66 million in 1939, one-half being electrical power. As reflecting the rapidity with which power was displacing labor, it may be noted that during this same period the number of wage earners in manufacturing less than quadrupled.

Though technological progress was by no means the only factor responsible for the increased productivity in manufacturing and though better organization and management played a part, it was undoubtedly much the most important. Accurate measures of this productivity are unobtainable, but a careful estimate of Dr. Fabricant for the period 1899–1937 indicates that, while the physical output increased 276 per cent, the number of employees only doubled (practically all of the latter increase taking place before 1918) so that the number of workers per unit of product was cut in half. Meanwhile the hours of work per week were cut from 60 to 40, so that there was a reduction of two-thirds in the number of man-hours per unit of product, certainly a remarkable gain. Incidentally, as throwing

light upon the problem of technological employment, it should be noted that in nearly every industry showing a marked cut in man-hours per unit of product there was a decided increase in the total man-hours of employment.

The Growth in the General Use of Mechanical Power. The growing use of mechanical power was, of course, not confined to the field of manufacturing—in fact the greatest growth occurred elsewhere—but we may here summarize this development as a whole. The total installed mechanical power in the country in 1859 has been estimated at 4.8 million horsepower; by 1899 it had risen to 42 million and by 1919 to 372 million. The most recent comprehensive estimate places the total for 1935 at 1,230 million of which 70 per cent was provided by automotive vehicles, as is shown in the accompanying table.

DISTRIBUTION OF HORSEPOWER IN THE UNITED STATES, 1935

Electric central stations	44,670,000
Industrial power plants	20,133,000
Electric railway plants	2,500,000
Isolated nonindustrial plants	1,500,000
Mines and quarries	2,750,000
Agricultural prime movers	72,763,000 *
Automobiles, busses, trucks, and motorcycles	965,000,000
Airplanes	3,500,000
Locomotives	88,000,000
Marine	30,000,000
Total horsepower	1,230,816,000

* Of this item 46 per cent is wind and animal power.

This total was equal to almost 10 horsepower per capita. If we take the conservative estimate of 1 horsepower as equal to 10 man power, then this available horsepower was equal to that of 100 tireless slaves for every man, woman, and child in the country. The electrical horsepower could commonly be bought at a cost of $20 to $50 a year. Probably no other available figures can better suggest how the process of cooperation between man and nature, through the progress of science and invention, has contributed to the potential power of the American people to supply their economic wants more efficiently and adequately.

It must be understood, however, that of this installed capacity potentially available, only a small portion was actually used to produce power very much of the time. The percentage of production to total capacity was estimated to vary from 3 per cent in the case of automobiles to 50 per cent in the case of steamships. Despite the vastly greater installed

capacity of motor vehicles, it was estimated that the power actually used in central electric-generating stations in 1935—over 92 billion kilowatt-hours—slightly exceeded that actually used in motor vehicles. Whereas in 1860 all but a small fraction of the energy used was provided by work animals and human beings, today all but a small fraction of a vastly greater total is derived from mineral fuels and water power. The growth in the use of electricity since the first central station was erected in 1882 was such that up to 1929 the output of central stations practically doubled every 5½ years, but it was not until 1942 that it had doubled once more. The per capita output rose from 30 kilowatt-hours a year in 1902 to over 1,000 in 1940. As the electric light and power industry is one requiring a relatively large capital investment, this expansion, which raised the investment from about $500 million in 1902 to around $20 billion in 1940, made it one of the leading industries of the country as measured on this basis. Its essentially monopolistic character gave rise to the problems of control typical of public utilities generally.

The Corporate Form of Organization. The total capital employed in manufacturing as returned by the Census of 1920 (the last time this uncertain item was included) was $44 billion as compared with less than $1 billion in 1860. The fact that its rate of growth was much more rapid than that of total wages paid or the value of the output suggests the growing importance of this factor of production. The same trend is reflected in a recent estimate that, between 1904 and 1937, the net book value of capital assets per worker, corrected for price changes, increased some 30 per cent. This greater use of capital combined with the growing size of the business unit led to widespread adoption of the corporate form of organization, a form little used in manufacturing before 1860 except among textile concerns. In 1939, some 95,000 corporations controlled one-half of the concerns engaged in manufacturing; of the remainder about two-thirds were owned by individuals and one-third by partnerships. However, the concerns controlled by corporations employed nine-tenths of all the wage earners in manufacturing and turned out 93 per cent of the gross value of the output.

The increased use of the corporation in manufacturing, as well as in most other lines of economic activity, has been due to (1) the growth in the size of the business unit and (2) the evolution of our corporation laws. The first created a demand for the corporation since it was best fitted to secure the large amounts of capital needed, its existence did not depend on any individual's life, it had limited liability, and it provided the specialization and centralization of control in management that were needed in large enterprises. The second not only met this demand by making incorporation easy but also increased it by changes that made corporate charters more desirable.

The difficulty and expense involved in requiring a special act of the legislature to secure a charter were overcome, first by laws applying only to certain lines of business, and then by general incorporation laws under which any group could form a corporation to engage in most lines of business, provided they conformed to the general provisions of the law. Such laws had been adopted in most states by 1860 or shortly thereafter. Although the main characteristics of the corporation remained unaltered, there appeared a new movement, starting in New Jersey about 1888 and soon spreading to other states, to grant new powers and privileges to corporations, thus making incorporation more desirable. Particularly important among these was the right to act as a holding company and own the stock of other corporations for purposes of control, a privilege seldom granted before and very advantageous in many ways, particularly for facilitating concentration of control and for avoiding restrictions or limitations imposed on corporations by some states.

These various developments resulted in making the corporation the most important type of business organization, measured by the volume of business controlled, in many fields of economic activity. A study by the Twentieth Century Fund indicates that at the 1930 census corporations controlled over nine-tenths of the income produced in the two fields of manufacturing and mining and quarrying; almost as much in the field of transportation and other public utilities; nearly two-thirds in trade; over one-half in finance; one-third each in the construction, service, and miscellaneous industries; but in agriculture only 6 per cent. This study also found that in 1933 out of nearly 400,000 active corporations reporting for income tax purposes less than 600, each having assets of $50 million or more, owned 53 per cent of the total assets and produced 18.4 per cent of the total national income. On the other hand, it concluded that over "two-fifths of the entire business activity in the United States is not in corporate hands at all," and the largest corporations, as defined above, control less than a fifth of that activity. In 1948, there were forty-eight corporations with assets of $1 billion or more each, their total being $110 billion, though this involved much duplication. Of these, seventeen were banks, twelve insurance companies, six railroads, three manufacturing concerns, and three public utilities.

Though the evolution of the corporation and the growth in its use have been essential in the conduct of large-scale business enterprise, the results of this development, as in the case of most institutions, have been far from perfect; consequently we have a corporation problem. This problem deserves far more attention than it has received and, although by no means confined to manufacturing corporations, may best be briefly outlined at this point.

The Corporation Problem. One great advantage of the corporation, particularly important for large enterprises, is the greater opportunity provided for specialization of functions. The function of the real entrepreneur is performed by the stockholders who as owners take the main risks and are ultimately responsible for the management through their power to elect the directors. The creation of different classes of stockholders may provide for further specialization in the performance of this function. Bondholders, noteholders, trade creditors, etc., function as a group and provide the portion of the fixed or working capital not supplied by the owners. Finally, the directors and the officials whom they choose are immediately responsible for the general conduct of the business. The result of this specialization of functions is to create a situation where there may arise a marked divergence between the economic interests of these different groups and where, unless the laws provide adequate safeguards, one group may use its powers for its own advantage at the expense of the others. In a small corporation, this danger is far less serious, since the two groups where such manipulation is most likely, the officials or directors and most of the stockholders, are made up mainly of the same individuals so that there is no advantage in manipulation, except at the expense of the creditor group. But in the large corporation, with hundreds or thousands of stockholders and officials having control of enormous sums, the actual specialization of functions and the possibilities for manipulation and gain are far greater. It is because of the failure of our corporation laws to provide the safeguards needed to protect the different groups of interests that so many evils arise.

The evolution in our corporation laws has been primarily a product of the effort to adapt the corporation to the needs of large-scale enterprise, and in many respects the changes have been beneficial. However, another influence has been operative in securing changes that frequently were far less desirable. As the use of the corporation increased, it was found that a large revenue could be obtained from the fees charged by states whose laws were advantageous from the point of view of promotors and organizers of corporations. When it was seen that New Jersey was reaping a rich harvest from this source, other states sought a share in this lucrative business and changed their corporation laws to make them more attractive by offering greater privileges and immunities. Since the appeal was to those organizing corporations, these changes were apt to be shaped by the wants of promotors and corporation officials and too frequently were not accompanied by proper safeguards for protecting the interests of the creditors and stockholders.

This interstate competition led to such a deterioration in the character of the corporation laws of the states engaging in it that some came to possess the worst laws of the kind known. Under the generally prevailing

practice whereby corporations chartered in one state are allowed to carry on most lines of business in other states without any appreciable additional control, there was no serious obstacle to securing a charter in the state having the most lax laws and then carrying on business anywhere in the country. This situation tended to undermine the effectiveness of the more carefully drawn corporation laws of other states.

These lax laws made it possible for one or another of the groups in a corporation to use their position to gain at the expense of other groups. This is particularly true of the officials of a large corporation who are in a position where they control vast sums of money belonging to other people who know next to nothing about the actual condition and management of the company. The corporation laws of such states may be said to provide one of the greatest get-rich-quick devices known for the use of an unscrupulous person ready to take full advantage of the opportunities they afford. Certainly they have been a great instrument of injustice and a significant factor in furthering an inequitable distribution of wealth. That, with such opportunities and temptations existing, most large corporations have been honestly managed speaks well for those in control; but the need for reforms to check the operations of the unscrupulous minority must not be overlooked.

The failure to introduce such reforms is partly due to the typical delay, first in recognizing the evil and then in arousing people to action, which makes so much legislation lag far behind our economic development. Another obstacle is found in our form of government and the question how far the Federal authority can go in its control of corporations, though neither it nor the states have yet sought to exercise all such powers as they undoubtedly possess. The state "blue-sky" laws accomplished little, for at best they barely scratched the surface of the problem. The legislation of 1933–1935 creating the Securities Exchange Commission with certain powers to require adequate information on new security issues offered the public and to control electric-power utilities struck somewhat deeper, but the New Deal lamentably failed to attack the problem in any really comprehensive manner.

Another obstacle is found in the widespread confusion between the corporation problem and the trust problem. Because a few trusts have been among the largest corporations and in some instances have afforded striking examples of corporation evils, many assumed that the two problems were fundamentally one and the same. Such is far from being the case, though there are some interconnections. Certainly the most frequent and serious corporate evils are not among the trusts; nor are most of the trusts of today per se corporations, though their members may be such. The trust problem deals with the abuses connected with the efforts to secure and exercise

monopoly powers, especially as regards prices. The corporation problem may be said to consist in the need for devising a form of business organization suited to meet the wants of large-scale enterprise with the specialization of functions that this requires, which will at the same time provide adequate safeguards to protect all the different groups of interests concerned. At present, the chief evils have arisen from the failure to provide such safeguards.

Other consequences of the corporate form of organization arise from what is sometimes spoken of as its "soulless" character. The officials are supposed to be looking after the interests of the stockholders, and the stockholders are concerned only about dividends. Consequently, in all dealings with others purely pecuniary considerations are likely to be even more dominant than in other types of business organization. As officials of a corporation behind which they can hide, some people will do things that they might hesitate to do in a business which they themselves owned. The stockholders also are commonly acquiescent in acts done in their interest through the corporation such as they themselves would hesitate to do, or else they remain ignorant of them. Individual personal responsibility seems to disappear and is shifted to the shoulders of the impersonal corporation. A form of absentee ownership with its typical evils results.

The Growing Scale of Production. The increased use of fixed and specialized capital, enlarging the field for the operation of the law of decreasing costs, and the widening of the market where the growing volume of output could be sold were the chief factors back of the growing scale of production in most lines of manufacturing. This was most marked where the product was widely used in any given market area, where the demand was elastic, where the output could be highly standardized, and where technological conditions made possible extensive use of machine methods. The manufacturing industries with the greatest number of plants producing on a large scale at the 1940 census were motor vehicles, steel works and rolling mills, meat packing, and petroleum refining. Barely 1 per cent of all manufacturing establishments employed over 500 wage earners each, but this group employed 36 per cent of all those in manufacturing. The small concerns employing from none to 20 wage earners made up over two-thirds of all the establishments, but had less than a tenth of all the wage earners. Thus the great majority of those in this field were employed under the conditions prevailing in large concerns. The establishments with an annual output valued at $1 million or more made up 5 per cent of the total, but they employed 55 per cent of all the wage earners and turned out 67 per cent of the value of all products.

Localization of Manufacturing Industries. In industries where the trend toward large-scale production has been marked, this has been a

factor in the localization of the industry. Still more important a factor, however, has been the widening of the market area through better transport and communication facilities. This tendency toward geographical specialization illustrates the general principle that the degree of specialization is limited by the technological development in an industry and the extent of the market for its products.

Localization of industry is influenced by all the factors that determine the costs of production and distribution of a given product in one place, as compared with those costs in other places within the market area. Thus it will depend on such things as the relative costs of plant, raw materials, power, labor, capital, marketing the product, and the amount of taxes. These costs will obviously be affected by many things, such as cheap transportation, nearness to sources of supply and markets, climatic conditions, the existence of strong labor unions, local legislation reacting on any cost, and the whole social environment. What is called the "momentum" of an early start is another influence in that when an industry has once been started in a given place, for whatever reason, and has attained appreciable growth, some of the costs for a new concern locating there are apt to be lower than would otherwise be the case. However, an industry once having become localized in a region may find that changes have taken away the advantages it once enjoyed and transferred them to some other place; yet inertia and the costs involved may cause many concerns to linger on in the old locality.

Such changes are constantly taking place so that centers in which industries are localized are shifted from one region to another. Examples of such shifts during this period are found in the expansion of cotton manufacturing in the South, or the westward movements of flour milling, the packing industry, the manufacture of iron and steel, or boots and shoes. Such shifting, of course, is not confined within the political boundaries of a nation but may be international in scope, though tariff barriers tend to limit it.

Integration. Integration may be defined as the extension of the activities of a concern from one line of production into other economically related lines of activity. Such branching out may be said to be backward, forward, or sidewise, as related to the main activity. A concern turning out a crude manufactured article may extend backward into the production of the raw materials, sidewise into the making of by-products, or forward into the more highly finished products and the processes for marketing them. Integration, though by no means confined to the field of manufacturing, has been most conspicuous there and so may be touched upon at this point.

The movement toward integration has various causes. Backward integration may be due to the desire to control the raw products or other materials used, to ensure an adequate supply of the quality needed, at the time re-

quired and possibly at a lower cost. Sometimes control of raw materials is sought to strengthen a monopolistic position. Integration forward may be due to a wish to ensure a market for the semifinished product, to control the distribution of the product, or to obtain some of the middlemen's profits. Sidewise integration into the manufacture of by-products or goods which in the making or use are closely related to the main product may provide a chance to use waste materials or to spread the overhead over a larger volume of business. Sometimes it is due to the need for new outlets for investing large profits; occasionally the desire for monopoly control leads a concern to enter the field of a competing substitute. Nearly all forms of integration make possible more effective coordination and organization of the processes of production and distribution.

The trend toward integration has been most marked among industries conducted on a large scale, and in turn has tended to enlarge the scale of production. Thus the United States Steel Corporation controls iron-ore mines, coal mines, and limestone quarries providing its chief raw materials; it owns steamship lines and railroads carrying the ore to its furnaces; it produces many finished products as well as the cruder forms of iron and steel; and it has engaged in the marketing of its products in many countries. In the packing industry, large-scale slaughtering made it economical to manufacture innumerable by-products from the waste materials; to handle the main product, stockyards, private car lines, and an extensive system for wholesale distribution were acquired. The next step was to undertake the distribution of other foodstuffs, such as dairy products and groceries, so as to spread the overhead over a larger volume of business. To provide needed credit, close connections were established with banks and commercial paper houses. This barely suggests the extent of integration in this business, yet many other industries might be mentioned where it has gone nearly as far.

Ordinarily, however, integration has been confined to a narrower range such as control of raw materials, the making of by-products, or the field of distribution, as in the motion-picture industry where the leading concerns make, distribute, and exhibit their pictures. Starting in the retailing field, some of the largest department stores and mail-order houses have integrated into certain lines of manufacturing. By fostering larger business units, integration promotes greater concentration of control. Possible disadvantages arise where the integrated lines are conducted on a smaller scale than would otherwise be the case or where the concern becomes so large as to prove unwieldy with resulting losses in efficiency.

Scientific Management. Just as in agriculture and other lines of economic activity, so in manufacturing, the latter portion of this period witnessed a resort to more scientific methods. In the main, the new so-called

"science" of business management involved simply the use of more accurate, detailed, and thorough methods in studying the various problems of management. The progress made in different sciences contributed assistance; new measuring devices became available; far more statistical data were gathered; and thorough analysis of problems was stressed. Particularly important was the development of accounting, especially cost accounting, which provided a more accurate measure of financial results and a sounder basis for guidance and control in management. Still more recently, the growing interest in personnel administration, aided by the study of psychology and a more careful analysis of both jobs and the conditions surrounding the worker, has increased the efficiency of labor, though as yet only a small beginning has been made. In manufacturing, unlike agriculture, private initiative rather than governmental action was largely responsible for this progress.

Scientific management has been mainly concerned with problems in the internal management of each business concern; the larger and more difficult problem of adjusting a business to industrial society as a whole has only recently begun to receive much attention. In the First World War the necessity for conserving and mobilizing all the economic resources of the country in the most efficient manner made clear the importance of this broader problem. The subsequent depression made it only too plain that the growth in the complexity and interdependence of modern industrial society organized in the main on an individualistic, competitive basis results in much waste, both to individuals and to society, from a failure to secure the proper coordination in the control of economic activities. The Second World War and the subsequent reconversion issues only reemphasized the basic importance of the problem and its enormous scope, which involves the whole economic order.

The Growth of Industrial Combinations or Trusts. Like many other developments noted in this chapter, the growth of combinations has not been confined to manufacturing, but the subject is dealt with here because it is in this field that combinations have been most conspicuous. Though monopolies were not unknown even in colonial times, the present-day combination movement is basically a product of modern capitalistic industry with its characteristic growing intensity of competition, trend toward large-scale production, and increased concentration of control. Integration, localization of industry, and the changes in corporation laws have somewhat facilitated the movement. Mere size or the mass of capital controlled, especially when combined with the use of cutthroat and so-called "unfair" methods of competition, has proved a potent factor in securing and maintaining trust control. In some industries, other factors such as patent rights, railroad favors, exorbitant tariff duties, control of a

limited natural resource, or the support of a labor union have been important sources of power. Occasionally the prospective profits from promoting a combination have led to the formation of a trust, but the desire to obtain greater profit through cutting competitive losses, the lowered costs of large-scale production, or the power of monopoly to raise prices has been the chief motivating cause.

The combination movement first attained significance in the 1870's. It was at this time that the effects of the introduction of railroads and lowered rates in widening the market and intensifying competition were most felt. Although modern capitalistic methods of production were spreading rapidly then, the size of the business unit seldom grew as rapidly as its market area was expanded. After the 1880's, the widening of the market area through cheaper transport proceeded more slowly, but there was a marked increase in the size of the business unit in many industries, especially after 1897. This facilitated combination. More immediately, the appearance of the movement in the 1870's can be traced to the overexpanded condition of various industries in the reaction following the Civil War. The resulting keen competition was intensified by the depression of the 1870's, and relief was sought through combination. As in the case of the railroads, where the effort to effect combination appeared at the same time, the first form of organization adopted was some type of pooling agreement. This was the easiest to organize since, while checking certain forms of competition, it still left the members of the group free otherwise in managing their business. Usually, however, it was found difficult to get the members to abide by the pooling agreement, so the policy followed was apt to be shortsighted, and the pools constantly broke down.

The desire for a more effective and enduring type of organization led to the adoption of the trust form in the 1880's. During the 1870's, the Standard Oil Company, aided by the railroad favors common at that time combined with extension of ownership over pipe lines and very able management, had secured control over about nine-tenths of the oil-refining business. In 1879, it drew up a temporary trust agreement, and in 1882 a permanent one under which a majority of the stock of its associated corporations was placed in the hands of a group of trustees, the owners being given trust certificates. The trustees thus gained complete and permanent control, while the trust itself enjoyed even greater freedom and privacy than the ordinary corporation.

During the 1880's, this new trust form was promptly adopted by several of the largest combinations, though the pool continued in use, especially in industries where there were numerous producers. Shortly, however, a series of court decisions declared the trust form illegal, so that after 1890 it became necessary to seek some other form. Although this original trust

form disappeared, the term "trust," derived therefrom, has continued in popular usage as applied to monopolistic combinations in general.

Fortunately for the trusts, the holding company, just made available by New Jersey, proved in most respects nearly as well suited for their purposes, and many of the old trusts adopted this form, as well as some new combinations, though pools also continued in use. The prolonged depression after 1893 checked the movement and temporarily disrupted some pools, but after 1897, with the return of prosperity, there came 5 years of abnormal activity in the organization of trusts. A combination of favorable conditions and the seemingly innocuous character of the antitrust laws made this the great period for profits for trust promotors, and quantities of watered stock were unloaded on the gullible public. With this, a new era in the size of business units was inaugurated. Previous to 1897, scarcely any enterprises in the industrial field were capitalized at more than $50 million; thereafter concerns with a capitalization ranging from $100 to $1,000 million were not uncommon, though watering of the stock was far more frequent. The holding company was the popular form of organization.

The movement culminated in 1901 with the formation of the United States Steel Corporation, made up of a number of smaller combinations which had been formed in various branches of the industry during the years just preceding. Its capitalization of over $1 billion was the first of this size and far exceeded any other at the time. By 1903, when a brief industrial reaction set in and the public refused to absorb more of these securities, the movement was temporarily checked and later resumed at a much slower tempo.

At this time, the government became far more active and also more successful in prosecuting combinations. In 1911, the Supreme Court decreed the dissolution of the oil and the tobacco trusts, both organized as holding companies, thus showing the law still had some teeth in it, even if the details of the dissolution decrees might have been made more effective. These decisions, together with other dissolution decrees or injunctions and new legislation, forced the trusts to circumscribe their activities and seek a form of organization that was less conspicuous and tangible. Thus subsequent efforts at combination inclined toward the gentleman's agreement, the trade association, the institute, or some form more like the earlier pooling agreements.

This less tangible type of combination soon became very widespread, much more so than was generally realized. From the public point of view, as contrasted with the consolidated type, it possesses both advantages and disadvantages. It is seldom so strong as the latter and is less effective in checking competition and individual initiative. But it lacks the power to secure all the economies of large-scale production or to save all the wastes

of competition enjoyed by the latter and, being so intangible and hidden from public view, it is more difficult to control. As some of the largest consolidations lost much of their power, partly through government action and partly through the growth of competitors, the less tangible type became predominant and presents the chief problem of today.

The need to form organizations of industries with which the government could deal during the First World War gave a marked impetus to the combination movement, chiefly in the form of trade associations. This trend continued through the postwar decade, especially after 1925, following several favorable court decisions and the adoption of a governmental attitude encouraging certain trade association activities thought to be desirable. These same years brought a rapid growth in local combinations, chiefly in the large cities, sometimes working in cooperation with labor unions, and often dominated by racketeers whose use of violence to establish control exceeded anything of which even the earliest trusts had been guilty. Some of these local combinations, the scope of whose activities is seldom realized, are able within their limited area of action to practice a degree of extortion of which few of the more nearly nation-wide combinations are capable.

The depression after 1929 weakened many combinations till the government came to the rescue in 1933 with the law under which the National Recovery Administration (the NRA) was set up with power to draw up codes of fair competition subject to the President's approval. The labor provisions of the codes, described elsewhere, were a bitter pill for most employers, but it was thickly sugar-coated by provisions that made it possible to restrict price cutting and various other forms of competition, often to limit output or apportion it, and exempting such action from the antitrust laws provided it did not lead to monopoly or the oppression of small enterprises. The resulting pressure for organization among the producers gave a new stimulus to the trade association movement and, as these groups largely dominated the formulation of the trade practice provisions of the codes, the result was an unprecedentedly wide restriction of competition.

However, after May, 1935, when the Supreme Court declared the law unconstitutional, the elaborate structure collapsed. Subsequently in the petroleum and soft-coal industries, where the effects of uncontrolled competition were considered particularly undesirable, special legislation was resorted to, but in both cases it was condemned by the Supreme Court. In the case of coal, this was replaced in 1937 by a law levying a tax on interstate shipments sold below the minimum prices to be established by a commission. In the case of petroleum, since the courts held that control of production rested with the states, a law was passed permitting states to

enter into interstate compacts to limit the output. The power granted the AAA to limit output and control the marketing of farm products is another illustration of the general trend to restrain the former freedom of competition in the belief that this would promote recovery and stabilize industry.

Antitrust Legislation and Prosecutions. Though a considerable antimonopoly agitation arose after 1870, it was primarily directed against railroads, but the appearance of the big trusts in the 1880's led to public investigations which resulted in both state and Federal legislation. The Sherman Antitrust Law of 1890 was a general prohibition of combinations, monopolies, or restraint of trade in the field of interstate commerce. Most of the state legislation was similarly sweeping in its prohibitions of intrastate combinations and, like the Federal act, showed little effort to study the problem broadly and attack it in the only effective way by striking at the roots of such evils as arose. It was a policy of alleviation rather than of prevention, and affords another example of American faith in the efficacy of mere legislation, no matter how little it takes into account the economic forces against which it has to contend.

Until after 1901, the Federal government started very few proceedings against the trusts and these brought most meager results. Though an increasing number of states adopted sweeping antitrust laws, most did practically nothing to enforce them, New York, Texas, and Missouri being the chief exceptions. But starting with Theodore Roosevelt's administration, a marked change occurred. By this time, too, the general public was more aroused about the trusts, partly because of their rapid growth after 1897 and partly because of the rising demand for economic reforms, stimulated by the "muckraking" magazine articles that featured this decade.

All this resulted in increasing the number of Federal proceedings against the trusts, till a climax was reached under the Taft administration that was not surpassed until that of Franklin Roosevelt. Also new laws were passed to expedite trust prosecutions and to create the Bureau of Corporations with powers of investigation and recommendation. Though the government won several significant suits before, most cases dragged through the courts so slowly, often taking 4 or 5 years, that it was not until the decisions of 1911 decreeing the dissolution of the oil, tobacco, and several other trusts that the results of this greater activity became notable.

Indirectly, however, the Federal activities undoubtedly tended to check the organization of new combinations and to compel others to act with greater circumspection. In the oil and tobacco-trust decisions, the Supreme Court declared that the Sherman Antitrust Law did not prohibit combinations in restraint of interstate commerce that were reasonable under the common law, and so is said to have read the "rule of reason" into the law. Previously, the court had distinguished between direct and indirect or

incidental restraints of trade and had refused to condemn the latter. Whether the rule of reason really altered the interpretation of the law, or simply meant that the same things formerly called "indirect" or "incidental" restraints would thereafter be called "reasonable" and so escape condemnation, is a disputed question. Doubtless in most cases this would be true; but, as these decisions were generally accepted as modifying the previous interpretation, it would not hold true in all cases, and the law thus became more lenient and might enable so-called "good" trusts to escape condemnation. Certainly, subsequent decisions appear to justify this view.

Despite the substantial gains made against the trusts, the results fell far short of what the public desired; two decades after the Antitrust Law had been passed, trusts were more numerous than ever and the government seemed to be engaged in a losing struggle. Consequently Congress held a series of fairly prolonged hearings on the subject and studied the problem with much greater care than ever before. The results of this study were embodied in the Federal Trade Commission Act and the Clayton Act, both passed in 1914.

The former act created the Federal Trade Commission, which replaced the old Bureau of Corporations and was given similar though more extensive powers. It could be used to plan dissolution decrees and on its own initiative could investigate the results of such decrees. Most important was the clause declaring unfair methods of competition in interstate commerce illegal and giving the Commission power to investigate such methods and issue orders prohibiting their use.

The Clayton Act contained a variety of provisions, some of which applied to railroads and labor. Those applicable to trusts prohibited (under certain conditions tending to cause undesirable restraint of interstate commerce) tying contracts, local price discrimination, holding companies, and interlocking directorates, and provided various methods for enforcing these prohibitions. Another clause was designed to exempt organizations of laborers or farmers from being declared illegal under the antitrust laws and to exempt their members from prohibitions against "lawfully carrying out the legitimate objects thereof." Whether this guarded clause appreciably altered the situation as to the actual practices of these organizations is doubtful, though they considered it a great victory at the time.

The legislation of 1914 marks the first serious effort to strike at the roots of some of the trusts' sources of power and enact laws that were preventive rather than alleviative in character, but it overlooked many of these sources. However, the work of the Federal Trade Commission, particularly that directed against unfair methods of competition, since these had been one of the chief sources of power, was a marked advance. In state antitrust legislation, beginning about 1907, there was a similar trend toward pre-

ventive measures, generally confined to prohibiting specified unfair methods of competition. Yet, as previously, few states outside of New York tried to enforce their laws.

Starting with the First World War and becoming more marked thereafter, a decided modification of the general attitude of hostility toward combinations and fettered competition became evident. During the war, many prosecutions were suspended and the formation of trade associations was encouraged. In 1916, pooling among shipping lines, subject to certain prohibitions and the control of the Shipping Board, was permitted; in 1918, the Webb Export Combination Act authorized the formation of combinations to engage in the export trade, provided they did not tend to restrain domestic trade; in 1920, the Transportation Act repealed the long-standing prohibition of pooling among railroads, but made any such agreements subject to the approval of the Interstate Commerce Commission; in 1922, the Capper-Volstead Act sanctioned farmers' cooperative marketing associations, provided they did not tend unduly to enhance prices.

Another factor in modifying the opposition to trusts was the growing concern over the cyclical swings of business and the claim that combinations could help in stabilizing industry. This claim then began to be used as the strongest argument in support of combinations or restrictions on competition, and the claim stressing the economies of large-scale production, so prominent after 1897, received far less emphasis—doubtless due partly to a realization that the claim had been greatly exaggerated. Thus there developed a less hostile and more discriminating attitude toward combinations than had theretofore prevailed.

After the war, antitrust proceedings were resumed, but the government lost several important cases and its activities scarcely kept pace with the spread of combinations, most of which assumed the less tangible forms. At this time, the growth of local combinations and of those based on patent rights was notable. A constructive move by the Federal Trade Commission initiated its trade practice conferences for various industries which formulated codes listing as unfair various practices, some of which were accepted as such by the commission though it withheld definite approval of others. The more lenient attitude dominating the commission during the 1920's was finally reversed, but the effects of the depression after 1929 proved far more disastrous to the combination movement until the government came to the rescue in 1933 and embarked upon an unprecedentedly broad program for checking competition and keeping up prices. This program is described in the chapter devoted to the depression; here certain measures closely related to the trust movement may be noted.

The Robinson-Patman Act of 1936 made illegal the sale of goods at prices that were discriminatory as between individuals or localities as well

as at prices that were unreasonably low where the object was to destroy competition or to eliminate a competitor. Though of very wide application, this law was particularly aimed at the chain stores. The Miller-Tydings Act of 1937 legalized resale price maintenance agreements covering branded goods shipped in interstate commerce in any state permitting such agreements in intrastate trade. Since most states, largely because of the energetic action of such groups as the druggists, the grocers, advertising mediums, and producers of branded goods, had already passed such laws, the scope of its application was broad. Finally, in 1938, the Wheeler-Lea Act strengthened the law against unfair or deceptive practices by including such as injured the public as well as competitors, improved enforcement measures, and added to the restrictions on false or misleading advertising. At this date, too, the government resumed a more active prosecution of the trusts, particularly those in the building trades, aided by a large increase in the previously grossly inadequate appropriations for this purpose. On the outbreak of war, this attack was turned against certain international agreements controlling strategic materials, but again it was found expedient to postpone various cases until the return of peace. Meanwhile, most states continued to leave the trust problem to the Federal authorities.

To assert, as many do, that the Federal effort has been a general failure is far from justified. Had no action been taken, the situation today would certainly be far different. Obviously the results obtained have fallen far short of what was intended, and probably combinations that to a greater or less degree restrict competition are more widespread than ever before. Nonetheless, their power to exert monopolistic control and the means or practices that they could employ to secure and maintain such control have been substantially modified. The trusts themselves have learned from many failures something as to the long-run limitations upon their power, and the public has learned that a more discriminating attitude toward various forms of restriction on competition is needed, since unbridled competition does not produce the best results under all circumstances. Certainly the Federal effort has limited the growth and power of combinations and raised competitive practices to a higher level. That not more has been accomplished may be attributed mainly to the great strength of the economic forces back of the trust movement, to the failure of earlier legislation to strike directly at the trusts' sources of power, to the courts' limitations in interpreting the law, and to the totally inadequate financial and administrative support of the law's enforcement. Furthermore, since 1914, governmental policy, despite continued antitrust proceedings, seems to have been directed more toward checking competition and facilitating combination than toward promoting free markets.

In its broadest aspects, the trust problem is simply one phase of the

larger problem where to draw the line between permissible competitive and monopolistic practices and organization in modern industrial society. The variations in technological, economic, and social conditions among different industries are such that a policy that secures the best results in one case may not prove the most desirable in another. Also constant changes in these conditions may require shifts in policy. Actually, absolute freedom of competition and complete monopoly rarely exist. The problem where to draw the line of policy between relative freedom and relative monopoly needs to be studied with more thoroughness and discrimination than have thus far been applied to it.

Because of the spread of combinations and of practices restricting competition, it is frequently asserted that the era of competition as a force in the economic order is rapidly passing or has already passed. Since we have no adequate measure of that force, this can only be a question of opinion. Probably, competition reached its peak in this country during the last quarter of the nineteenth century when combinations were relatively few and cutthroat methods were so widely and unscrupulously employed. Since then, and largely since 1917, its power has been considerably modified. Yet even today, its force is probably greater than at any time before 1875. When concentrating attention on the large number of combinations and other devices restrictive of competition today, as contrasted with their comparative scarcity during the previous century, we easily overlook all the other changes in the economic order, including the far greater possibilities for using substitutes, which tended to intensify competition and to limit the power of monopoly, and for the most part still do so. Our economic order is still fundamentally competitive in character; how long it will continue so remains to be seen.

CHAPTER XXXIV

MANUFACTURING SINCE 1860 (*Continued*)

The History of the Tariff to 1890; High Protection Established. The rapid rise in tariff duties from a level of about 20 per cent in 1860 to 47 per cent at the close of the Civil War had been due primarily to the fiscal needs of the government. Hence it was generally assumed that, on the return of peace, duties would be reduced. Yet, as events turned out, such was not destined to be the case, at least as regards the duties that were essentially protective rather than revenue producing in character. Thus these years mark the beginning of a new period in our tariff history, the period of high protection, which, with but brief intermissions, has continued almost down to date.

The insistent demand for relief from taxes, as government revenue exceeded expenses, led to the abolition by 1872 of most internal revenue war taxes except those on liquors, manufactures of tobacco, and a few minor items. As the taxes on manufactured goods were removed, it was expected that the tariff duties on like products, which had been increased to offset these taxes, would be reduced. Facing a trying period of postwar readjustment, the interests affected vigorously opposed any such cut; in fact, some demanded still more protection. In an act of 1867, which raised the duties on raw wool and manufactures of wool to a much higher level than ever before, the producers were granted practically what they asked. Soon the duties on marble, nickel, copper, and steel rails were substantially increased. However, there was little opposition to the reduction or abolition of duties on commodities that were not produced within the country, originally imposed for the sake of the revenue, such as those on tea and coffee.

In 1867, a bill proposing considerable cuts in duties was defeated; instead Congress passed a law making few changes in the important protective schedules, such as those on textiles, iron and steel, or glass and clay products, but reducing many duties levied primarily for revenue. In 1872, in the hope of staving off the demand for a greater cut, most protective duties were reduced 10 per cent and nearly all the remaining revenue duties were abolished, thus leaving the tariff more purely protective in character than ever before. When imports fell off after the panic of 1873 and the Treasury faced a deficit, the 10 per cent cut was repealed in 1875—another

illustration of the disturbing effect of the heavy reliance upon customs receipts for revenue.

From then until 1883, no change of importance took place, except for the reciprocity treaty with the Hawaiian Islands under which each country admitted the chief products of the other free of duty, a concession that proved of great value to the sugar growers of the Islands. The protected interests then became adjusted to the new high level of duties; the influence of the South, so opposed to protection before 1860, was greatly reduced; the idea of returning to the prewar level of moderate protection was for-

FIG. 49. The tariff since 1821 (annual figures since 1870).

gotten; and the majority of the country quietly accepted the policy of high protection. Thus, as on so many occasions in history, temporary conditions arising out of war became at least immediately responsible for important and relatively enduring advances in the system of protection.

The first general revision of the tariff was made by the act of 1883. The surplus revenue was then averaging over $100 million a year, tempting Congress to extravagant expenditures and inciting the public to demand lower duties. A special Tariff Commission set up in 1882 reported in favor of cuts averaging about 20 per cent, but this went further than Congress was willing to follow and, by careful maneuvering, the bill finally enacted involved much less of a reduction. In certain classes of wool, cotton, and steel manufactures, where imports were fairly heavy, the duties were actually increased. Though there were some real reductions in protection, most cuts were made where the duties were already so high that they still remained almost prohibitive.

Also the act did not succeed in reducing the customs revenue; in fact, during the life of this tariff it averaged more than ever before, owing largely to heavier imports in more prosperous times. The problem of the surplus

revenue, however, did not seriously embarrass Congress; it found an easy solution in increasing the expenditures for pensions and the "pork-barrel" appropriations for rivers, harbors, and public buildings—another illustration of the evils attending marked fluctuations in the chief source of revenue. Though the group favoring lower duties introduced numerous bills, they lacked the power to pass them, but the resulting controversy made the tariff question more of a partisan issue than it had been since before 1860.

The Tariff from 1890 to 1897; Still Higher Protection. As the tariff became a leading political issue, nearly every shift in the party in power led to a change in the duties. After the Republicans regained complete control of the government in the election of 1888, they proceeded to revise the tariff in accordance with the principles of protection for which the party had come to stand, and in 1890 the McKinley Tariff Act was passed. This law marks the first step toward a still higher level of protection. In the case of textiles, though there were some cuts in the cheaper grades, duties on the better grades, where foreign competition was keenest, were generally advanced, often to between 50 and 100 per cent, and extensive use was made of minimum valuations and duties. On the cruder forms of iron and steel products, there was little change, except for the duty on tin plate which was more than doubled; on more highly finished goods, such as cutlery, there was a substantial increase. The duty on copper, though reduced, was still retained, despite large exports of the metal.

As a special effort was made to secure farmers' support, the duties on wheat, corn, potatoes, eggs, and barley were raised though, except for barley, it is unlikely that many farmers gained thereby. The duty on raw sugar was abolished, and instead a bounty of about the same amount, 2 cents a pound, was granted to domestic producers. This shift was to reduce the surplus revenue, as the duty on sugar, chiefly to protect the Louisiana cane-sugar growers, had yielded over $50 million a year, or more than any other single duty, since nearly nine-tenths of the sugar consumed at this time was imported. A provision chiefly designed for use in bargaining with Latin-American countries reflected a new trend in practices but yielded meager results.

The return of the Democratic party to power after 1892 led to another revision in the Wilson-Gorman Tariff of 1894. The bill passed by the House provided for a very substantial cut in duties and transferred a number of important raw products to the free list, but the Senate so modified the bill as finally passed that President Cleveland refused to approve it, and it became a law without his signature. The chief change put wool on the free list and abolished the portion of the duties on manufactures of wool supposed to offset the duty on the raw product. The bounty on sugar was also

abolished and replaced by a duty of about 1 cent a pound, partly because of the need for more revenue as customs receipts had declined in the depression. In the case of other agricultural products, as in that of most manufactured goods, duties were commonly cut between one-quarter and one-half. The belated transfer of copper to the free list was of no importance. Though the net result was an appreciable reduction, the general level still remained distinctly above that prevailing before 1860. The fiscal needs of the Treasury led to the provision for a moderate income tax, which was subsequently declared unconstitutional.

In 1897, following the return of the Republican party to power, the Dingley Tariff was enacted. In general, this act was designed to reestablish the level of duties of the tariff of 1890; in the details there was a tendency to raise duties still higher in the cases where foreign competition was most felt and to cut them somewhat where it was least felt. The result was a level of duties averaging 57 per cent, higher than ever before in the country's history, and in practical effect providing the greatest degree of protection the country had ever known.

The duty on wool was restored, that on the cheaper grades at a level higher than in 1890, and also the compensating duties on manufactures of wool. Cattle and hides, admitted free since 1872, were made dutiable. Both of these changes reflected the power gained in the Senate by the stock-raising interests of the Far West following the admission of new states. The duty on raw sugar was advanced to about 1⅔ cents a pound, partly to get more revenue. On other agricultural products duties were brought back nearly to the level of 1890. The duties on manufactures of silk and linen were raised to a higher point than ever before. There was little change in the duties on cotton manufactures and, except for an increase in the more highly finished goods, the same was true of iron and steel products. Among mineral products, the duties on coal and lead were raised. The duties on glass, china, wood, and manufactures of wood were restored to about the level of 1890, and those on chemicals, oils, and paints went back to almost the same level. The law also made provision for reciprocity agreements, but the results obtained were meager.

The Attitude of Different Sections toward the Tariff. The fact that after nearly 100 years of protection a tariff act that provided a greater degree of protection than ever before was asked for and passed caused some to wonder why industries should require more protection than they had enjoyed in their infancy, especially since some appeared to be taking on the guise of giants. To understand the support secured for such a policy it must be realized that the changes since 1860 had somewhat altered the interests of different sections in protection as well as the relative political power of these sections.

As before 1860, the Northeast was still the great center of the manufacturing industries that received most protection, and this section continued the chief stronghold of protectionist sentiment. Some of these industries had spread westward to the North Central states and, although few of the manufactures there were so dependent on the tariff as many along the Atlantic coast, they generally supported it and were joined in this by those interested in the protection of certain raw materials such as lumber, wool, beet sugar, coal, and iron. As the Far West was opened up and new states admitted to the Union, the protectionist forces obtained vigorous reinforcements there from those interested in lumber, certain minerals, cattle, sheep, beet sugar, and fruits. Since the population was sparse, the political influence of this section was strongest in the Senate; when the party in power had only a small majority in that body, as was often the case, these Western interests were in a strategic position to obtain favorable duties for their products. After about 1888, the influence of this section in shaping tariff laws became very appreciable; in recent years, in alliance with the Northeast, it has furnished the most vigorous and insistent support of the policy of high protection.

On the other hand, in the Central Northwestern states, chiefly devoted to wheat or corn and little interested in manufacturing, there developed, chiefly after 1900, considerable opposition to the high duties on manufactures. Such duties increased the cost of many farmers' purchases and they began to suspect—in most cases with good reason—that the duties on their own staple products were of no advantage to them so that in return for their support of protection they were getting only a gold brick. Although this did not lead them to oppose protection, they did fight for lower duties on certain manufactures that they purchased and for higher duties on their farm products.

The strongest opposition to protection before 1860 had come from the South, and this has continued to be the case ever since, though that opposition has become greatly modified. Throughout the country, adherence to one political party and its tariff policy often became a strong family tradition handed down from father to son and not easily broken. Though the strength of the South's traditional opposition to protection was very marked, the development of industries there which might benefit through tariff duties eventually modified the former free-trade stand. From early times, the cane-sugar growers of Louisiana had sought and received protection. After about 1880, the growth of cotton mills and the iron and steel industry in the South, the rising value of cottonseed products, and the expansion of the lumber industry and of fruit growing created a group of interests inclined to ask for protective duties. This in part explains why as time went on the Democratic party, to which the "Solid South" fairly

persistently adhered, tended in actual practice to abandon its traditional insistence upon a tariff for revenue only in favor of a policy of moderate protection. Thus the general trend toward greater protectionism down to 1900 was due chiefly to the decreased power of the South in national affairs after 1860 and the modification of that section's violent opposition combined with the rising power of the strongly protectionist states of the Far West.

The Reaction against Extreme Protection and the Tariff of 1909. During the unusually long life of the Tariff of 1897, there arose such discontent with its high level of duties that even the protectionists admitted that a downward revision of its rates was at least politically expedient. Five different causes had considerable influence in this reaction:

1. There was a growing group of manufacturers who were beginning to feel that the tariff was a handicap for them. Many manufacturers of the more highly finished products found that the increased cost of various raw materials caused by the tariff necessitated a higher price for their product and thus reduced their market. This was especially felt by those who were exporting manufactured goods, a group that increased very rapidly after the middle 1890's. These exporters also felt that our high tariff led other countries to impose high duties on American products and thus reduced their market still more.

2. There was the group of farmers, previously mentioned, chiefly in the wheat-growing region of the Central Northwest, who believed that they were getting a raw deal on the tariff and demanded lower duties on the manufactured goods they were buying.

3. The rise of about 50 per cent in the general level of wholesale prices between 1896 and 1910 caused much discontent and widespread complaint about the high cost of living. Though this rise was due chiefly to other causes, a portion could be attributed to the 1897 tariff, and it was argued that a reduction in duties would tend to lower the cost of living.

4. The rapid growth of trusts just after 1897 and the belief that the tariff substantially fostered this growth caused restlessness. Here again the actual influence of the tariff was exaggerated, but the cry that the tariff was the mother of the trusts and so ought to be abolished on all trust-controlled products found a popular response.

5. The growing sensitiveness to various forms of special privilege and to the spread of large fortunes aroused by the "muckraking" magazine articles of this decade led to attacks on the tariff as an iniquitous form of such privileges. Though never making any popular appeal or exercising much influence, one other point may be noted. The sudden realization that the country's natural resources were being rapidly depleted led to the rise of the conservation movement, and it was pointed out that, by abolishing

duties on various raw materials and importing more of them from other countries, it would help to conserve our own resources.

This gathering opposition led both parties in the presidential campaign of 1908 to advocate a cut in duties, and when the Republicans under Taft won out they passed the Payne-Aldrich Tariff in 1909. The act was a disappointment to those who had demanded lower duties for, though the general level was somewhat reduced, few cuts were of substantial importance and these were partly offset by advances. The return of hides to the free list made possible a cut in the duties on manufactures of leather. The duties on coal, iron ore, and the chief iron and steel products were considerably reduced, but they had ceased to be of much actual influence. The vigorously attacked schedule on wool and manufactures thereof was left virtually unchanged, as was the duty on sugar. Silk manufactures won an appreciable increase in protection; higher duties were also granted to certain cotton goods, zinc ore, and a few fruits.

Certain special features of the act also deserve mention. Products of the Philippine Islands were admitted free of duty, except for a nominal limitation on the quantity in the case of sugar and tobacco. This was of great advantage to the Islands by enabling them to get higher prices for some of their staples; in certain cases, it probably benefited American consumers. Another clause, replacing the reciprocity provisions of the act of 1897 and designed to be used as a lever in tariff bargaining, provided for an additional or maximum duty on products of a country unduly discriminating against American goods, though it proved unimportant. There was also provision for a Tariff Board, set up in 1911, to gather the information required in carrying out this clause or for general purposes in tariff legislation, something that was greatly needed. Finally, the law imposed a small tax on the net income of corporations, as more revenue was needed to meet the growing expenditures.

The Return to Moderate Protection under the Tariff of 1913. When the Democrats under the vigorous leadership of President Wilson gained control of the government, they promptly enacted the Underwood Tariff of 1913 providing for the most general and substantial reduction in duties of any act since 1860 and bringing the general level to a point not far above the moderate protection prevalent between 1816 and 1860. Numerous important products were transferred to the free list including lumber, coal, iron ore, pig iron, steel ingots, blooms, wire, rails, boots and shoes, wheat, flour, cattle, meat, eggs, milk, and cream, together with several manufactured products supposedly controlled by trusts. Of greater importance in actual effect, were the placing of wool on the free list, the cut in the duty on sugar, and the provision for its abolition after May 1, 1916. Substantial cuts were made in the duties on iron and steel products

and on textiles, notably those of cotton and wool. At least moderate reductions appeared in most of the other schedules.

On the other hand, duties were increased on many luxuries, chiefly for the sake of revenue. The maximum and minimum clause was dropped, but an antidumping clause was retained. The Tariff Board had ceased to exist in 1912 because Congress refused it an appropriation; though this law made no provision for it, an act of 1916 created the Tariff Commission with similar functions. A new feature appeared in the provision for higher duties on goods imported in foreign ships where existing treaties did not prohibit such discrimination. This effort to aid the merchant marine revived the policy of 1789–1815, but the general prevalence of treaties made it inoperative. Finally, as more revenue was needed and this act would reduce customs receipts, there was included a provision for an income tax, just made possible by an amendment to the Constitution. This income tax, which bore chiefly on the rich, combined with the reductions in duties, most of which bore with relatively greater weight on the poor, resulted in a marked shift of the burden of Federal taxation from the poor to the rich and was in part due to the growing discontent with the existing distribution of wealth. This shift and the return to moderate protection were the most significant features of this tariff law.

Such effects as the reduction of duties might normally have had were concealed by the outbreak of war in which the country was soon involved. Despite the great need for more revenue, no appreciable change in the customs duties was made. The provision for the abolition of the remaining duty of about 1¼ cents a pound on raw sugar after May 1, 1916, was repealed for the sake of the revenue, and a decided increase was made in the duties on dyestuffs to protect those who had taken up their production when the war cut off the imports, previously supplied chiefly by Germany. Thus, this was the first war involving a serious strain on the nation's finances during which no considerable change in customs duties was made. This was due in part to the traditional opposition of the party in power to raising duties and in part to the fiscal needs being so great that any additional revenue obtainable from this source would be a mere drop in the bucket.

High Protection Restored after the War. The return of the Republican party to power after 1920 would have led to an effort to repair the breaches in the high tariff wall made by the Democrats in any case, but the demand for this was intensified by various reactions from the war. The precipitate drop in prices of 1920–1921 was particularly marked in the case of farm products, and the resulting distress was most severely felt in the sections chiefly devoted to grain and livestock. An increase in tariff duties was among the relief measures insistently demanded by the farmers, regard-

less of the fact that for the great majority such duties could be of little real aid; the chief exceptions were the growers of wool, sugar, fruits, spring wheat (under certain conditions), and those producing for certain local markets near the Canadian border. Manufacturers also suffered from the reaction, especially those stimulated by the war. It was urged that unless duties were raised the new industries would be ruined, and even the older industries would suffer because the depreciating European currencies enabled Americans to buy goods in Europe at a low cost in terms of dollars and so stimulated imports.

The opposing argument that, since Europe had become heavily indebted to the United States during the war, it would be very difficult if not impossible to repay the debts if imports were restricted, received scant attention; it was even asserted that it would be better to cancel the debts than to receive imports in payment. Closely related to this was the claim that the unemployment caused by the depression would be aggravated unless imports were reduced. Finally, the old national self-sufficiency argument was revived to support protection for the new industries developed to supply vital war needs, such as those making certain chemicals, dyestuffs, and optical glass. Thus, once again conditions arising out of war, many of which were only temporary, became an important factor in bringing about an increase in the tariff that proved relatively enduring.

The Emergency Tariff Act of 1921 was a temporary law passed in response to the farmers' demands and designed to serve only until a general revision of the tariff could be made. It restored the duties on wool, corn, wheat, and meat at new high levels and raised the duty on sugar. In 1922, it was superseded by the Fordney-McCumber Tariff designed to restore the level of duties prevailing before 1913. In the majority of cases this was done. Where there was an appreciable departure from this standard, the tendency was as usual to make cuts where duties were already so high that the cut was of little effect and to raise the rates where foreign competition was most felt. "The outcome," to quote Professor Taussig, the leading authority on our tariff history, "was a tariff with rates higher than any in the long series of protective measures of the whole period."

On farm products, the duties were in general higher than ever before and, though some had little effect, the real protection afforded was doubtless greater than ever. The textile schedules went back to about the old level. Coal and iron ore were left on the free list, but on the cruder iron and steel products moderate duties were restored. The new industry making coal-tar products and dyes secured almost prohibitive duties. To placate the farmers, agricultural implements, binder twine, and potash were included in the free list. A new special provision for flexibility authorized the President, on the recommendation of the Tariff Commission, to raise or lower

duties by not more than 50 per cent where it was found this would tend to equalize differences in cost of production between the United States and the leading competing foreign country. Of the few changes made under this authorization practically all involved a raise in duty. Thanks chiefly to the work of the Tariff Commission, the act greatly improved the administrative provisions of the customs service.

The next change in duties came under the Hawley-Smoot Tariff of 1930. The intention of the Hoover administration was to limit the revision of duties chiefly to farm products, but the pressure of other special interests was such that, despite the opposition of the farm groups, many manufactured products were also granted more protection. As a result, the average ad valorem rate on dutiable goods was raised to 40 per cent or about a fifth above those of the Tariff of 1922.

Raw sugar and wool obtained only a moderate advance, but the average increase in the general agricultural schedule was over 70 per cent and established a far higher level than ever before. An attempt to raise the price of those farm products which could secure no benefit from duties because they were largely exported, through the device of an export debenture system, was defeated. Hides, leather, shoes, timber, cement, brick, and long-staple cotton were taken from the free list and made dutiable. Most duties on manufactures were left unaltered; the changes tended to raise the rates where most needed and reduce those already excessive. The flexible tariff provision was retained, though the President could no longer alter the rate recommended by the Tariff Commission.

The depression after 1929 brought the usual demand for more protection but, as the Democratic party, traditionally opposed to raising duties, was returned to power in 1933, no general upward revision resulted. In 1932, an amendment to a revenue act imposed duties on petroleum and its products, coal, lumber, and copper; in 1934, similar action was taken as to most forms of whale or fish oils, and in 1936 as to various animal and vegetable oils. To prevent any cut, all these new duties were exempted from the flexible tariff provision.

An important move in the opposite direction was initiated under the Trade Agreements Act of 1934, designed to stimulate exports and help in world recovery. This law authorized the President to enter into reciprocal trade agreements with foreign countries under which, in return for concessions, American duties might be reduced up to 50 per cent. Such agreements were to be for not over 3 years and thereafter were terminable on 6 months' notice. The authorization, originally limited to 3 years, was later renewed and when, in 1945, it was extended to 1948, a further reduction to 50 per cent of the duty effective on Jan. 1, 1945, was permitted in order to make additional cuts possible. By this time, agreements with twenty-eight

nations had been made cutting rates on 42 per cent of the dutiable goods; in nearly half of some 1,200 rates affected, the cut had been 50 per cent. With certain exceptions, concessions made to one country were automatically extended to other countries entitled by treaty to most-favored-nation treatment. This was due to a shift in national policy in interpreting the most-favored-nation clause which occurred in 1923. Previously, unlike most countries, the United States had always held that a concession made to one nation would be extended to another nation only when it made a reciprocal concession. Thus the trade agreements brought a very substantial reduction in duties. Additional agreements late in 1947 secured further cuts establishing a moderate general level of duties, but in June, 1948, the Republican Congress refused to extend the law for more than one year and added minor restrictions.

The trade agreements law reflected the rising tendency among nations after 1920 to settle their commercial relations by bargaining arrangements rather than by unilateral action. It also had the great advantage of taking the question of duties, within the specified limits, out of the hands of Congress where the influence of pressure groups and logrolling methods was so great and thus of securing action based on broader and sounder considerations of social policy. Though the world disturbances of the time make any measurement of the results impracticable, the country doubtless benefited from both the stimulus to exports and the lowered cost of imports.

In addition to the raising of tariff duties, the period since the First World War has seen a world-wide movement, though most marked in the totalitarian states, to resort to indirect or administrative methods for restricting imports that constituted an "invisible tariff." The United States, partly in self-defense, was led to adopt similar methods, though it proceeded more slowly than many, since it enjoyed a favorable balance of trade. Its restrictions took the form of antidumping measures, countervailing duties on bounty-fed imports, penalizing imports from countries discriminating against American products, prohibiting the import of goods made by convict or forced labor, requiring goods to be marked to show the country of origin, fixing quotas for imports from given countries, and various regulations adopted as police measures to protect public health, safety, or morals and the health of plants or animals.

Though there may be excellent justification for most of these forms of restriction, some of them can be used to secure a disguised form of protection. Much depends upon impartial administration. It is claimed that the restrictions to protect plant and animal health went much further than was necessary for that purpose. The quota system can easily be developed into an extreme type of protectionism, and in the case of sugar it was used to

aid domestic growers chiefly at the expense of those in the insular possessions. It may also be noted that most of the real pressure back of the law to grant independence to the Philippine Islands in 1946 came from protectionist groups hoping thus to cut off the free imports of sugar, tobacco, vegetable oils, etc., from those islands.

The Tariffs Unscientific and Their Influence Exaggerated. A survey of the tariff history of this period suggests two features as deserving special comment. One is the very unscientific way in which tariff duties have been determined, a criticism that must be conceded by both protectionists and free-traders. Admittedly, the determination of tariff duties on any scientific basis is extremely difficult and requires far more detailed information than has ever been available. Few if any experts possess all the knowledge needed to fix the duties on a single class of commodities; yet there were nearly 3,000 commodities upon which duties were fixed in a recent law. Even if the knowledge were available, no congressman would have time to secure a mastery of the subject. Few have shown much inclination to act on the basis of such expert opinion as was available.

Too frequently protective tariff acts are looked upon as another form of pork-barrel legislation where each congressman expects to get some duties beneficial to his constitutents, and his vote for duties sought by others is secured by granting him what he demands. Of course, conflicting interests develop and compromising bargains have to be made, but this only increases the lack of any scientific method in the results. The work of the Tariff Commission has brought some improvement and the recent trade agreements policy still more; yet it is probably vain to hope that the tariff will cease to be a football of politics.

The second point for comment concerns the effect of the tariff on the country's economic development during this period. The question is so complicated and the lack of detailed facts so great that only a few tentative conclusions, based largely on theoretical reasoning, are possible. Undoubtedly, the high duties prevailing after 1864 somewhat hastened the growth of various lines of manufacturing, enabled branches to attain a greater size than would otherwise have been possible, and helped some new or infant industries to become fairly well established. In other cases higher costs resulting from protective duties, particularly those on raw materials (for few countries with a protective system impose such duties on raw materials used in manufacturing as does the United States), have hindered development.

It is most significant that the branches of manufacturing which have enjoyed the greatest growth are, generally speaking, those where machine methods displaced hand labor and mass production prevailed. Thus the coarser cotton goods, the cruder forms of iron and steel, and the highly

finished "American specialties" such as sewing machines, typewriters, watches, automobiles, and agricultural machinery are able to compete successfully in the free world's markets. Commonly too, these industries pay higher wages than those paid in the industries receiving the highest actual protection. American manufactures have been least successful in lines where the high labor cost could not be reduced by the use of such methods, as is seen in the continued imports of the finest textiles and cutlery. All this suggests the conclusion that the general trend of development in manufacturing would have been much the same without protection, though high duties sustained the expansion of certain branches and hastened the firm establishment of various infant industries.

As far as agriculture and other extractive industries are concerned, protective duties have been of still less influence. Often the duties had no effect whatever; in other cases, simply a slight influence in a few small sections; in only a few cases of important commodities has there been a substantial effect upon production. Certainly farmers as a whole would always have been distinctly better off if there had been no protective duties of any sort. Since about 1900, however, the number of cases where those engaged in the various extractive industries might gain from protection, even if the nation did not, has substantially increased.

In popular thinking, the effects of the tariff upon the economic development of the country have been grossly exaggerated; both the desirable and undesirable effects have never been so great as the advocates or opponents of protectionism have been wont to claim. One reason for this is the prolonged partisan discussion of the issue which led to extreme claims on both sides and the very complicated character of the problem which made clear-cut disproof of these claims most difficult. Further, the general public has shown neither willingness nor ability to analyze the facts or apply the economic principles involved to test these claims. This only illustrates once more the universal tendency of people to seek or accept the simplest explanation for economic phenomena, however complicated the causes may be in fact.

A second explanation of the exaggeration is found in the failure to realize that the great size of the United States, the unusual variety and richness of its resources, and the distance of its markets from most other countries inevitably greatly reduce the importance of a protectionist system. In such a country, no tariff could exercise the influence upon general economic development that would be possible in a small nation of limited resources in close proximity to numerous other important countries. This is only one illustration of the common tendency to overlook the differences created by these conditions when we compare our problems with those of other countries, particularly those in Europe.

The Development of Manufacturing in General. Considerable space has been devoted to the main trends in manufacturing and the factors affecting them, partly because manufacturing came to attain such importance in the national economy and partly because they illustrate certain characteristics of modern industrial society which have given rise to many of the outstanding economic problems of today. We now turn to a brief account of the actual development of manufacturing, first taking up the general growth, then that of certain leading branches, next the geographical distribution, and finally the basic factors in growth.

The growth of manufacturing during this period is shown by the accompanying table based on census returns.

THE GROWTH OF MANUFACTURING, 1859–1939

Year	Number of establishments, thousands	Number of wage earners, millions	Gross value of products, millions	Value added by manufacture, millions
1859	140	1.3	$ 1,885	$ 854
1869	252	2.0	8,385	1,395
1879	253	2.7	5,369	1,972
1889	355	4.2	9,372	4,210
1899	512	5.3	13,000	5,656
1899 *	204	4.5	11,032	4,646
1909	264	6.2	19,945	8,162
1919	210	8.4	59,964	23,735
1929	206	8.3	67,994	30,591
1939	184	7.8	56,843	24,682

* Figures for this and later years exclude establishments with less than $5,000 annual value of product.

The decline in the number of factory establishments after 1909, despite the rapidly growing volume of output, reflects the strong trend toward large-scale production. The growth of manufacturing and its contribution to the national income are best measured by the figures showing the value added in manufacturing. For measuring growth, however, they need to be corrected for changes in the price level, and this is shown by the chart on page 583. It will be seen that the most rapid rate of growth occurred during the two decades 1869–1889, and that the decade 1919–1929 ranked next in rate of growth. Measured on this basis, the output in 1929 was twenty-eight times as great as in 1859; on a per capita basis it was over seven times as great. The following decade of depression brought no ad-

vance, but the subsequent tremendous war effort saw the industrial plant nearly doubled and the volume of output more than doubled so that it reached a point far exceeding anything ever known in any country. The preeminent position in the national economy that manufacturing attained as the result of its growth after 1860 is suggested by the charts on pages 596 and 890.

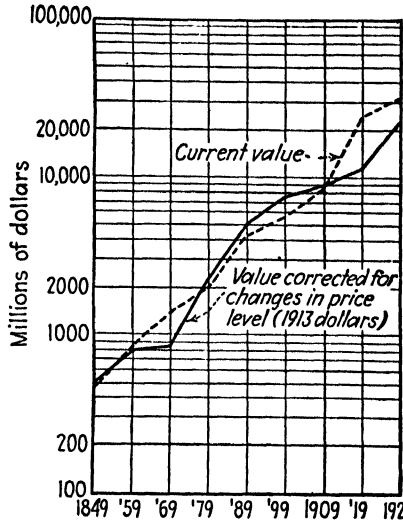


FIG. 50. Rate of growth of manufactures, 1850–1930 (net value added in manufacturing).

The Leading Manufacturing Industries. Measured by the value added in manufacturing, the leading groups of industries in 1939, as classified by the census, were in order: food and kindred products; iron and steel and their products, excluding machinery (these two groups being far in the lead); machinery, except electrical; chemicals and allied products; textile-mill products and other fiber manufactures; printing, publishing, and allied industries; apparel and other finished products made from fabrics; and automobiles and their equipment. In each of these groups the value added was over $1 billion. The ranking of single industries on the same basis showed the motor-vehicle and the steel works and rolling-mill industries far ahead of all others; next in order came newspaper publishing and printing, the making of bread and other bakery products, and the refining of petroleum. Half of these industries have developed almost, if not entirely, since 1860.

Outstanding Developments in Some Leading Industries. The rapid growth of the basic iron and steel industry, which eventually resulted in an output far exceeding that of any other nation, was primarily a product of technological development and rich natural resources. The introduction of the Bessemer process in the 1860's combined with the rich Lake Superior ore and excellent coking coal, made possible a cheap form of steel and consequently a great increase in demand. Soon the basic open-hearth process enabled the industry to use ore with higher phosphorous content and also scrap, and today nine-tenths of the steel is made by this process. A feature of recent decades has been the development of numerous ferroalloys, which substantially increased the uses for steel. Few industries made greater progress in introducing laborsaving machinery: the blast furnace output per man in 1919 was thirty times that in 1850; in 1929, the output of steel-

mill products was over fifty times that in 1869, but the number of wage earners was only ten times greater and their hours of work were shorter. It was such progress that enabled the industry after about 1896 to compete with its less highly finished products in the world markets. The marked trend toward large-scale production and integration placed most of the output of the cruder products in the hands of a few concerns, though the proportion controlled by the U.S. Steel Corporation fell to around two-fifths or about a third below that in 1901. The center of the industry shifted westward, and there was a rapid growth in the region bordering on the Great Lakes between Chicago and Buffalo.

Textile industries as a group enjoyed a considerable growth during this period, though there was much variation as between different branches. The cotton-manufacturing branch not only retained its preeminent position but greatly increased its lead over the wool-manufacturing branch and by 1939 attained a value added in manufacturing of $572 million, which was double that of the latter. A feature of the period starting in the 1880's was the rapid expansion of cotton mills in the South, chiefly in the Carolinas, and concentrating on the cheaper grades of goods. This growth was based largely on abundant water power, cheap labor, and proximity to the raw material. Cotton goods were the only textile products of importance in the export trade, and cotton made up three-quarters of the quantity of all fibers consumed in textile mills. Though second in rank, the manufacture of wool textiles, facing the competition of cheaper fibers, advanced much less rapidly. Most of the growth was in the output of worsted goods, a line just starting in 1860 but now using three or four times the wool used in woolen goods, where there was little gain.

After 1860, the manufacture of silk grew more rapidly than any other branch of the textile industries until the recent meteoric rise of the rayon industry. Its growth was largely based on the introduction of machine methods and the aid of high tariff duties. Professor Taussig inclined to the belief that the conditions in the industry at this period afford a case where the infant-industry argument for protection was applicable. Yet here, as with other textiles, the finer goods requiring relatively more hand labor continued to be imported. The industry has remained highly localized in the states from Connecticut to Pennsylvania. Almost equaling its rate of growth was the manufacture of knit goods, originally chiefly devoted to underwear and hosiery. Recently there has been a marked development of various products for outerwear as well. Cotton constitutes most of the fiber used, though silk and of late rayon have risen in favor. Production is concentrated largely in New York and Pennsylvania, but numerous mills are now found in the South and in Wisconsin and Minnesota. Barely started in 1909, the manufacture of rayon experienced a spectacular rise, and by

1939 its value added in manufacturing reached $120 million or nearly three times that of the silk manufacture, which suffered severely from its competition. In the textile industries generally, though the scale of production rose, integration was not marked, nor was there any appreciable concentration of control except in the worsted and rayon branches.

Among the manufactures of food products, the meat-packing industry showed a marked trend toward large-scale production, an unusual degree of integration, and a concentration of control over the interstate business in a few dominant concerns. Local slaughtering rapidly declined, and Chicago early became the center of production, though there was a later substantial growth at Missouri River points. The dairy industry affords another example of the transfer to the factory of work formerly done largely on the farm; rather similar was the striking development of the canned-foods industry, which was almost entirely a product of this period. The milling industry was marked by the trend toward large-scale production and a shift to the west resulting in making Minneapolis the great flour-milling center, though recently there has been some dispersion to points in western New York, Kansas, and Texas.

Among other industries, only a few can be mentioned where important developments occurred. Judged by absolute values, no industry during the twentieth century had a peacetime growth that could compare with the manufacture of motor vehicles; the output of all types rose from 22,000 in 1904 to a peak of about 4.7 million in 1937. Cheap raw materials, machine methods, streamlined organization of large-scale production, and an unparalleled domestic market secured world leadership. Much the same was true of the smaller scale development of the so-called "American specialties" such as typewriters, calculating machines, sewing machines, printing presses, agricultural machinery, sound-reproducing machines, boot and shoe machinery, and a great variety of electrical machinery, all of which were extensively exported. The substitution of cheap woodpulp for rags in the manufacture of paper after 1860, together with the continued improvement of printing presses, promoted the great expansion in the printing and publishing industry. Since 1860, the manufacture of clothing, first that for men and more recently that for women, has been shifted largely to the factory, though the advantages of factory methods here are not such as to eliminate the output of the sweatshop with its putting-out system, or custom work, and even some home production.

Geographical Distribution of Manufacturing. Since 1860, the center of manufacturing as defined by the census has moved westward; in 1860, it was just east of Pittsburgh, in 1920, a little northwest of Columbus, Ohio, and by 1940, not far from Chicago. The great manufacturing section of the country is still comprised in the region east of the Mississippi and north

of Maryland and the Ohio River. This section turned out two-thirds of the value of all manufactures in 1939 as compared with nearly four-fifths in 1860. Most of the proportion that this section lost was gained by the states just beyond the Mississippi, for the South and the Far West showed only moderate gains. Within the great manufacturing section, however. there were decided alterations in the relative importance of different groups of states. Whereas in 1860 the New England states turned out 25 per cent of the value of all manufactures and New York, New Jersey, and Pennsylvania 39 per cent, by 1939 their proportions had fallen to 8 and 28 per cent, respectively; meanwhile the proportion of the five states north of the Ohio and east of the Mississippi rose from 15 to 31 per cent.

This westward trend has been due to the opening up of the West and the resulting increased supply of raw materials obtained there along with the growth of markets provided by the rising density of population. An analysis will show that such manufactures as experienced a marked development outside the North Atlantic states were usually lines where nearness to raw material or to market were relatively important considerations. As a rule, they were not lines turning out the most highly finished products; such products were still more commonly made in the older manufacturing centers. The advantages of an early start in many lines which those older centers enjoyed doubtless somewhat checked the decline in their relative importance, but the influence of this advantage will steadily decrease. Present tendencies indicate that the region between western Pennsylvania and the Missouri River is likely to remain the greatest manufacturing section of the country, though the most concentrated development continues to be found in the North Atlantic states. A substantial relative growth may occur in the South and on the Pacific coast. The Second World War has given this an impetus. Also, as industries expand their use of imported bulky raw materials, growth along coastal regions will be promoted.

The Main Factors in the Growth of Manufacturing. In 1860, the United States was still relatively backward in manufacturing. Today its output of manufactured products is vastly greater than that of any other nation; it imports only a small fraction of its consumption of such products and it exports much more than it imports, so that as regards manufactures it has become self-sufficient to an unusual degree. It remains to analyze the basic factors responsible for this remarkable growth, and this must rest on a study of the main factors affecting costs of production.

Previous to 1860, the chief comparative advantage enjoyed by American manufacturers had been the low cost of raw materials while the chief disadvantages under which they labored had been the high cost of labor and of capital. After 1860, the available supply of raw materials was greatly increased, both in quantity and variety, by the opening up of new sources

through discovery, improved methods of extraction or use, and cheaper transport. Though a less important factor than in earlier times, this advantage still continues to be a basic element in the success of many lines of manufacturing. Yet we must recognize that, because of the depletion of our exhaustible natural resources and the competition of newly developed resources in other lands, the time will come—in fact, already has come in certain cases—when for some manufactures this advantage will disappear.

The scarcity of labor, particularly skilled labor, which had previously been the most serious disadvantage, still remained such throughout this period. Despite the rising influx of immigrants down to 1914 and the constant flow of workers from the farms to the industrial centers, the demand rose so that labor continued to be scarce relative to nearly every other country. Wages were kept at a high level and, although high wages per hour or per day do not necessarily mean a high labor cost per unit of product, since they may be offset by greater efficiency, such is not commonly the case. To this day, the high cost of labor remains the most serious general disadvantage in the development of such lines of manufacturing as have to face foreign competition. It was by getting around this disadvantage through the introduction of a more efficient substitute for labor in the form of capital—the laborsaving machine—that much of the industrial development of this period was made possible.

The substitution of machinery for labor greatly increased the amount of capital employed, and in this country the cost of capital in the form of interest had also been relatively high. During this period, however, the extent of this disadvantage rapidly decreased and finally disappeared. The rapid accumulation of domestic capital combined with the growing inflow from abroad steadily reduced the difference between interest rates in this country and in western Europe. By 1900, the difference was slight; after the First World War, it may be said to have disappeared or even shifted in favor of the United States; the Second World War gave this country a decided advantage. In view of the rapidly rising use of capital as a factor of production, this shift from a disadvantageous to an advantageous position in its comparative cost was of great importance.

Concerning the fourth factor of production, business management, lack of satisfactory means for measurement makes comparisons difficult, but it would appear that here also the United States gained a distinct advantage. During the nineteenth century, the unusual opportunities provided by the rapid growth of the country, the great freedom of individual initiative, and the absence of any social taboo on entering business together with the energy, resourcefulness, and spirit of enterprise of businessmen helped to develop a group of entrepreneurs which the world looked up to as leaders; foreigners in large numbers came to study their methods. Their willingness

to experiment and their development of American methods of business organization have been substantial factors in the growth of manufacturing.

With the advent of machine methods involving large-scale production to secure efficiency, a large market became essential to success, as it had not been in the pre-factory period. Hence the importance of the fact that during this period, as far as the domestic market is concerned, the American manufacturer secured the advantage of the greatest market in the world. This was a product both of the increase of population and of the growth in per capita income. Since it was in mass-production industries that the country scored its greatest successes, the availability of this large market helps to explain those successes.

However, manufacturers are not in most cases limited to domestic markets. Lowered transport costs also widened the accessible world markets, but they gave easier access to both the American and other world markets to foreign competitors as well. In the United States, the policy of high protection since 1865 has tended to retain the growing domestic market for American manufactures; similarly the general reaction toward protectionism in other countries has helped to keep their markets for their own producers. Also our geographical distance from competing manufacturing countries, not to mention the distance from the seaports to the inland markets, has provided added protection for our manufacturers. Thus, although the domestic market may not be the only accessible market, it has been decidedly the most important one, generally speaking, at least in the case of the United States.

The preceding analysis of comparative costs applies only to lines of manufacturing whose products entered into international trade. But the lowered cost of transport and other developments of the period, despite trade barriers, greatly increased the number of such products. Had conditions remained as they were around 1800, this analysis would play a far less significant role in explaining the growth of manufacturing. Still, many manufactures are of such a nature, physically or economically, that they have to be produced, if at all, in a place near where they are used and so do not enter into international trade. In the United States, the number of such goods is greatly increased by the size of the country and its distance from competing foreign manufacturers. The growth of such lines of manufacturing during this period is obviously to be explained primarily by the increase of population and of per capita income. Though this class of manufactures was doubtless considerable, it steadily declined in proportion of the total, owing to the widening of the market. Hence the chief explanation for the rapid expansion of manufacturing after 1860 is to be found in the changes favoring lowered costs of production described in the first part of the analysis.

Chapter XXXV

LABOR CONDITIONS SINCE 1860

Introduction. In spite of the growth in population and other factors tending to increase the supply of labor, the rapid economic development of the country created a demand that fairly kept pace with the growing supply. In consequence, the relative scarcity of labor that had characterized the country from the start continued throughout this period. Of course a shifting number of unemployed was always to be found and in depression periods, as after 1929, it mounted to an appalling figure. Even then, legislation and the various measures for public relief, by checking the desperate struggle for jobs of those facing starvation, provided an artificial support for the wage-rate structure sufficient to keep it at a level distinctly above that prevailing in other countries. This scarcity, as theretofore, helped to maintain relatively high real as well as money wages, and thus a relatively high standard of living among the mass of the people, at least among the employed.

The decline in the importance of agriculture and the rise in that of manufacturing, trade, and transportation caused the growing proportion of the working population employed in the latter fields to be subject to the economic and social conditions that such work entailed. These conditions, especially those in manufacturing, underwent rapid changes during this period—sometimes for the better, sometimes for the worse. In the latter case, they created new problems necessitating some form of action to lessen the resulting evils. In time, extensive legislation was enacted to curb some of them. More important was the effort of the workers to improve their condition by united action, resulting in a great impetus to the organized labor movement. The issues thus created became so vital and so widespread as to make the labor problem one of the most serious social problems of the day.

Factors Affecting the Supply of Labor. The growth of population through both natural increase and immigration, the basic factor in the labor supply, has already been described. The total number of persons fourteen years of age and over in the country's labor force in 1940 was nearly 53 million, or 52 per cent of the population of that age. In 1870, those ten years of age and over gainfully employed numbered over 12 million, or 44 per cent of that age group. In this group the peak of 53.3 per cent was

reached in 1910, and the subsequent decline to 50 per cent in 1930 (comparable figures for 1940 are not available) was due chiefly to prolonging the education of the young and in part to retirement, either voluntary or enforced, among the old. The decline would have been greater but for the rise in the percentage of all females in the age group that was employed.

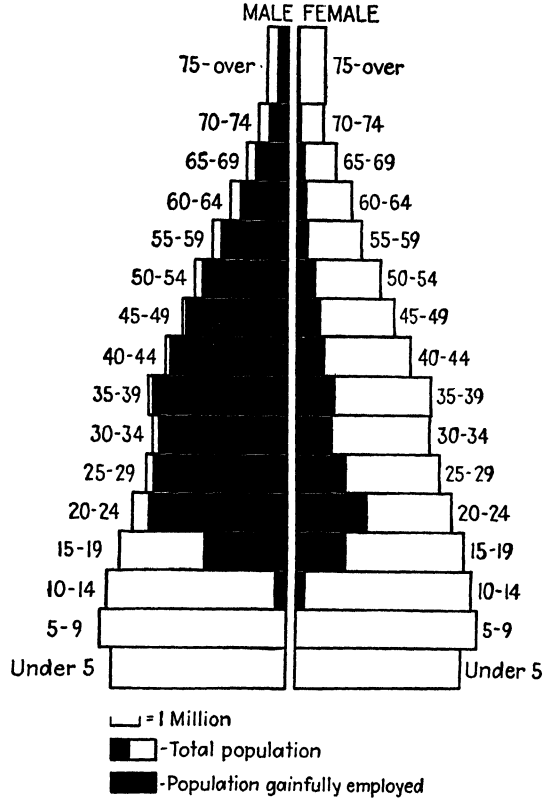


FIG. 51. Total population and population gainfully employed by sex and age groups, 1930.

The changes in the proportion of the population that was employed are a product of various factors. The general spirit of work characteristic of Americans in the past seems to have continued without much change until rather recently. There are now signs that among the well to do it has somewhat abated, the exception being the larger proportion of young women seeking a career. In this group today more are content to retire at an earlier age than formerly, others take more time off for recreation, travel, and rest, or for devotion to philanthropic and social activities. However the group thus affected is still extremely small. That a similar tendency toward earlier

retirement among the masses will result from the spread of private retirement pensions and the recent social security legislation is obvious.

More important is the decline in the proportion of children found among the employed. The peak in the absolute number of gainfully employed children from ten to fifteen years of age was reached in 1910 when there were nearly 2 million, or a fifth of the total population of that age. In 1940, there were only 250,000 in the labor force who were fourteen or fifteen years of age, or 5 per cent of that age group, and the number below that age was so small that the census omitted their enumeration. Over half of these were employed in agriculture, mostly on the home farm. Were comparable figures available, they would also show a decline in the proportion of those employed in the age group just above fifteen years, though it would be less marked, especially as the high-school age is passed. This trend is a product of the prolongation of the period of education aided by child-labor legislation.

A yet more important change, but one tending to increase the proportion of the gainfully employed, has been the entrance of women into numerous types of work that formerly either did not exist or were not generally open to them. Out of 534 occupations listed in the Census of 1930 there were only 30 in which there were no women. Of the total of nearly 13 million females in the labor force in 1940, a quarter were in clerical, sales, or kindred work, a sixth in domestic service, and about an eighth each in manufacturing as operatives and in professional or semiprofessional work. By the close of the Second World War the number employed had risen to about 19 million, though it dropped to 17 million in 1947. This group then made up 28 per cent of the working force as compared with 18 per cent in 1900. In many cases, this trend simply meant that more women worked for pay outside of the house instead of working for nothing about the house. By 1948, it was estimated that there were more married than single women in the country's labor force owing to an increase of 50 per cent in the number of working wives since 1940. Husbands were the sole earners in only three-fifths of the husband-and-wife households. The census does not classify women working in the home among the "gainfully employed," and the services thus rendered are not usually included in the estimates of national income, yet the large contribution of this group to that income should not be overlooked. In 1940, 29 million were doing housework in their own home and Dr. Kuznets estimated the housewives' contribution to the national income in 1929 as equal to some $23 billion or over one-quarter of the total.

The rapidity of the shift of women to gainful occupations is reflected by the fact that in 1880 only 14.7 per cent of all females ten years of age and over were so engaged, but in 1940 over 25 per cent of those fourteen and

over were classed among the labor force. During this period, the proportion of males ten years of age and over (fourteen and over in 1940) reported as gainfully employed remained practically unchanged at about 79 per cent of the total. As a result, the rate of increase in the number of women gainfully employed during this period was about twice that among the men. The chart on page 590 shows by age and sex groups how the total gainfully employed portion of the population was constituted in 1930.

The opening of many new lines of work for women has been of great importance both for the sex and for society as a whole. For the sex, it has provided vastly better opportunities to secure economic independence or to contribute to the family income, and with these have come greater freedom in every way and increased chances for self-development and self-expression. In short, it has helped to broaden and enrich the whole life of the sex. For society it has meant a greater use, at least outside the home, of all the potential capacities of women, social as well as economic, for contributing to the life of the nation, so many of which remained undeveloped or wasted in a society that so narrowly circumscribed the activities of the sex as did that of most of the nineteenth century.

The labor supply is determined not only by the number of workers but also by the hours of work per year, the intensity, and the quality of the work. The changes in the length of the working day will be discussed in more detail later. Here it will suffice to note that there was a general tendency to shorten the working day in practically all lines of activity. Perhaps as nearly accurate a general statement as can be made would be that, in 1860, the average working day was slightly over 11 hours; by 1890, it had been reduced to about 10 hours and by 1930 to around 8 hours. The following depression brought a sharp decline followed by some increase and the Census of 1940, the first to cover a broad range, showed that half of the employed worked 40 hours or less per week or less than 7 per day for a 6-day week. Besides the reduction in daily hours there has been that in the number of days per week or per year. One day of rest in seven has become general, a half day off on Saturday is given in a growing number of occupations, and a few trades have a 5-day week. In the course of the year, more holidays and the rapidly growing practice of granting a week or two for vacation, often with pay, have further increased the free time of workers. Unfortunately, too, working hours have been reduced by the growth of strikes or lockouts, and the loss through unemployment during depressions has been great.

It must not be assumed that the reduction in the hours of labor has necessarily decreased the amount of work accomplished; indeed, up to a certain point, it has often had the opposite effect. Along with this reduction, in part a cause of it, has come a decided increase in the intensity and speed

of work. Chiefly responsible for this is the greater use of power-driven machinery, itself tireless but setting the pace for the worker. Many other developments such as specialization and the devices of scientific management have also tended to eliminate the more leisurely pace of the business world of a century ago and have reacted upon executives as well as on the wage earners in all lines of work. In cases, this has been partly counteracted by the policy of restricting output adopted by certain trade-unions. The strain of the modern pace would make the long hours of earlier generations impossible in many fields of work. Yet the output per worker has generally increased, and the worker himself has far more free time for such use as he chooses to make of it.

The supply of labor is also affected by its quality: the skill, intelligence, and other traits that the worker applies to his task. First, however, it should be noted that many tasks formerly involving considerable manual skill and dexterity and even purely mental effort are now performed by machines the guidance of which may require little special ability. Also division of labor has so simplified many jobs that only a brief period of training is required to attain proficiency. The comparative scarcity of skilled craftsmen in the country has made these changes most advantageous.

Yet there still remained numerous crafts where skill was required and in many lines of work, notably the professions, much more training than ever before became necessary. On the whole, this need was met with better success than ever. Training for the crafts was still generally provided by a period of apprenticeship though, outside of a few trades where the unions were strong and set up definite standards, this tended to become informal in character and of uncertain duration. Of late, more attention has been given to the training of workers by employers and by provision of trade and technical schools. In many crafts requiring considerable manual dexterity or artistic ability, the United States is still at somewhat of a disadvantage relative to other countries; as far as energy, initiative, adaptability, ingenuity, and the general level of intelligence of the working class are concerned, the country has, if anything, an advantage over others.

Progress in General Education. Though primarily significant for its general social effects and of course not confined in influence to the laboring class in the narrow sense of the term, general education is of great importance, even from the purely economic point of view. This was a field where, during these years, building in the main upon foundations previously laid, notable progress was made.

After 1865, there was a marked advance in teaching methods and the training of teachers, resulting in a rapid growth of normal schools. European ideas, particularly those of Pestalozzi, Froebel, and Herbart, were studied

and, in more or less modified form, widely adopted. Later, the advance in psychology provided a sounder basis and gave a new stimulus to the study of pedagogy. In teaching, the old methods of simple recitation and the cramming of facts were increasingly displaced by methods designed to stimulate the students' interest and develop his capacity for sound thinking. The elementary-school curriculum was greatly broadened and the kindergarten was introduced, at first as a private institution, for its rapid spread in the public schools came after 1890.

In secondary-school education the outstanding features during this period were the growth of the high school, the expansion of its curriculum, and the provision of more specialized vocational courses. The growth of the public high school, which practically displaced the old academy, became marked only after 1880 at which date there were about 800 high schools in the country. Thereafter, following the general recognition of the need for free secondary-school education, the growth was very rapid and by 1940 the country had some 25,000 public high schools. Between 1890 and 1940, the enrollment of students in the secondary grades almost doubled every decade, and the proportion of the total population fourteen to seventeen years of age attending school rose from 7 to 73 per cent. The old 3-year course was extended to 4 years, the curriculum was greatly broadened, and special schools were established for training in such fields as business, technology, agriculture, or domestic science.

Almost as remarkable as the high-school growth, was that of higher education as represented by the colleges and universities. After about 1890, there was a rapid expansion of the state-supported universities, the establishment of which had been stimulated by the Land Grant Act of 1862, and the private institutions received gifts on an unparalleled scale. The curriculum was greatly expanded, greater freedom in the choice of studies was permitted, and specialized courses or schools for vocational or professional training were extensively developed. Increasingly, training for the professions was postponed until after a general college education had been secured. The spread of coeducation, together with the growth of colleges for women, for the first time opened to that sex advanced educational opportunities equal to those available to men. Mention should also be made of the development of extension and correspondence work, along with evening courses and better provision for adult education, and the recent rise of junior colleges.

Though the remarkable advance in general education during this period cannot be accurately measured in quantitative, to say nothing of qualitative, terms, certain figures are most suggestive. Between 1870 and 1930, the proportion of illiterates in the population ten years of age and over was cut from 20 to 4.3 per cent. In 1860, the census returned 47.5 per cent of

the population five to twenty years of age as attending school. Up to 1900, the rise in this percentage was slow but by 1940 it had reached 71. The average number of days of schooling received by those who became twenty-one years of age is estimated to have risen from 434 in 1860 to 1,590 in

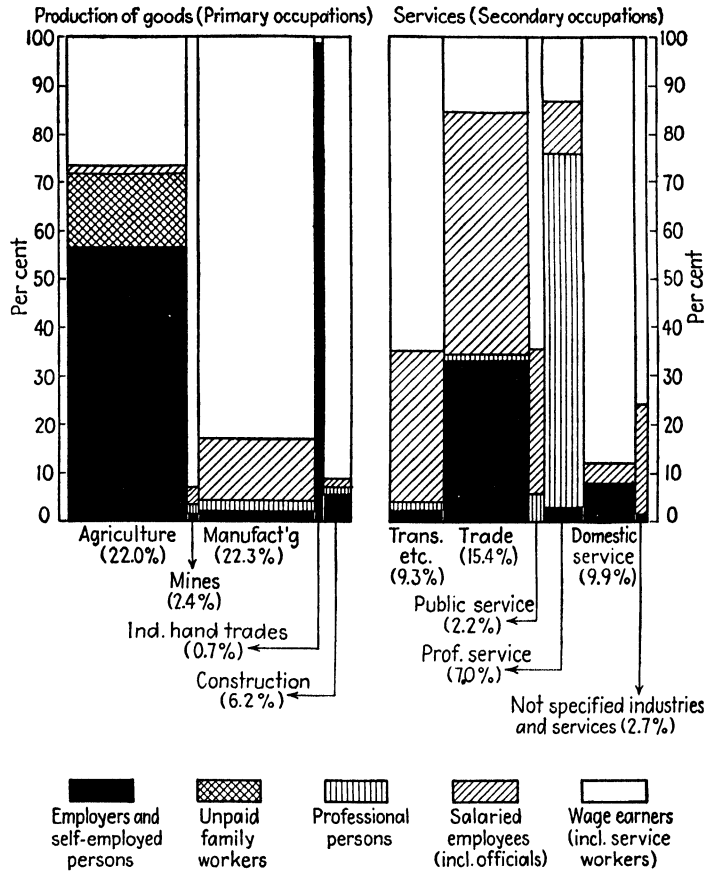


FIG. 52. Distribution of gainful workers in various industrial divisions by class of work, 1930. (*Reproduced from W. S. Woytinsky, "Labor Supply of the United States," by permission of the Committee on Social Security.*)

1930, an increase of 268 per cent. In 1890, only one in fifteen of the population fourteen to seventeen years of age was attending high school whereas by 1940 nearly three out of every four did so. As late as 1890, only one person out of every thirty-three among those eighteen to twenty-one years of age was in college; by 1940 almost one out of every six. However, since the great gain in secondary and higher education is relatively recent, most of the older generation of today have not benefited from it. In 1940, of the

total population twenty-five years of age and over, little more than one in three had finished an elementary-school course, only one in seven had completed a high-school course, and less than one in twenty a college course.

Back of this spread of education was the growing belief that it was essen-

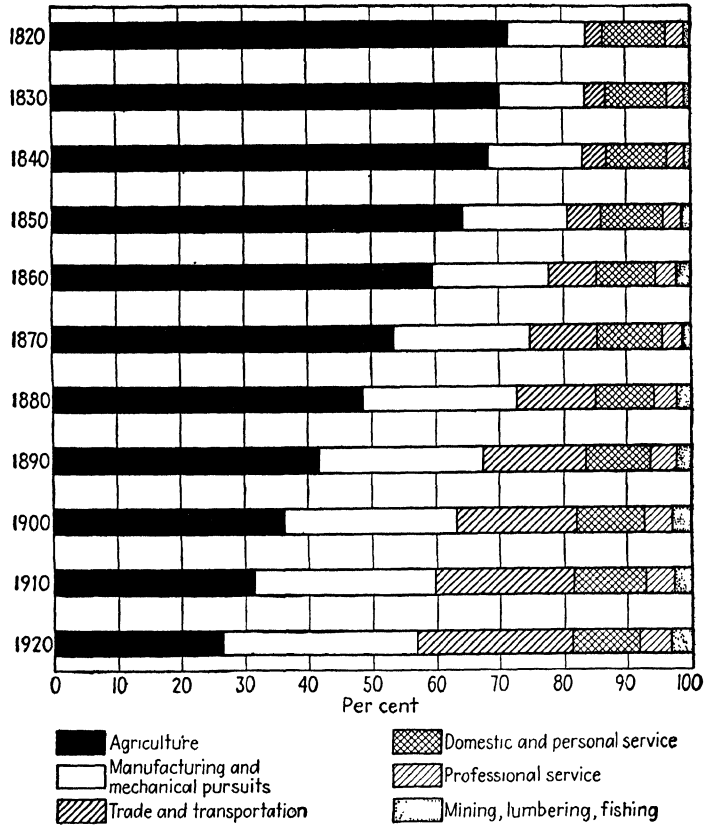


FIG. 53. Percentage distribution of persons engaged in gainful occupations, 1820–1920. (*Based on figures of P. K. Whelpton, Journal of the American Statistical Association*, 1926.)

tial to progress, not only along economic and political lines, but for every phase of the social process. As this belief spread, the democratic ideal of greater equality of opportunity led to a growing insistence that the chance to secure an education, at least through high school, be made available to all. Finally, the rising standard of living, resulting in a broader outlook on life's possibilities, created a greater and more general desire for education, not simply as a means toward greater success in earning a living, but also for the cultural values that contribute to the enduring satisfactions of life.

Distribution of Workers by Occupations. The changes in the various

lines of economic activity during this period were naturally reflected in the occupational pursuits of the people. The distribution of all those engaged in gainful occupations at the Census of 1930 is shown on the chart on page 595. A second chart on page 596, based on a slightly different classification and not showing the class of work in each field, indicates the shifts during the century preceding 1920. The outstanding changes, it will be noted, are the decline in the proportion of the gainfully employed found in agriculture and the rise in the proportions found in manufacturing and in trade and transportation. Relatively, though not absolutely, there was also a marked growth in the number engaged in professional service. The Census of 1940, though not strictly comparable, showed 23 per cent of the employed (except those on emergency work) to be in manufacturing, 19 per cent in agriculture, 17 per cent in wholesale and retail trade, 9 per cent in personal service, 7 per cent in professional and related services, 6 per cent in transportation and communication, and the remainder scattered.

For various purposes, it is also desirable to classify the gainfully employed on a basis indicating the class of work performed and the economic status of the different groups. For 1930, this is shown in part on the chart on page 595. Since it provides a comparison covering most of this period, a classification made by Professor Hansen is given in the accompanying table.

OCCUPATIONAL DISTRIBUTION OF THE GAINFULLY EMPLOYED, 1870–1940

	Percentage of total gainfully employed *			
	1870	1900	1920	1940
Farm laborers	23.1	15.2	10.0	6.9
Farmers	24.0	19.8	15.5	10.5
Proprietors and officials	4.6	6.2	7.6	8.3
Professional	3.3	5.4	6.6	8.8
Lower salaried	2.5	4.6	9.6	15.9
Servants	7.8	5.0	3.1	5.6
Industrial wage earners	26.6	35.3	42.4	39.3
Unclassified	8.1	8.5	5.1	4.7
Total absolute number, million	12.5	29.0	41.6	50.7

* See articles in *Journal of the American Statistical Association*, December, 1920; December, 1922; and December, 1944. The first gives an explanation of the basis of classification; the last, by T. M. Sogge, applies it to returns of the Census of 1940, which covers the "labor force" rather than the "gainfully employed."

The outstanding trends shown are the decline in the proportion of farmers and farm laborers and the increase in that of industrial wage earners. Among the smaller groups, the greatest change is the growth of the lower salaried class which reflects the rise of occupations where the work is less purely manual in character. The growth in the proportion of the class of proprietors and officials suggests that outside of agriculture the opportunities for securing independent or responsible positions were increasing rather than declining, as is so often assumed. Particularly significant is the fact that in 1940 there was more than one individual who was in a position of relative independence as an entrepreneur, official, or professional person for every three who were in subordinate positions as wage earners or among the lower salaried class; the latter group was by no means so large a proportion of the total as is commonly believed.

To provide a somewhat different classification, the analysis of the census figures for 1910 and 1940 made by Dr. A. M. Edwards will prove instructive (see the accompanying table).

SOCIAL-ECONOMIC GROUPS GAINFULLY EMPLOYED

	Per cent of total	
	1910	1940
Professional persons	4.4	6.5
Proprietors, managers, and officials	23.0	17.8
Farmers (owners and tenants)	16.5	10.1
Wholesale and retail dealers	3.3	3.9
Other proprietors, managers, and officials	3.2	3.7
Clerks and kindred workers	10.2	17.2
Skilled workers and foremen	11.7	11.7
Semiskilled workers	14.7	21.0
In manufacturing	9.8	*
Elsewhere	4.9	*
Unskilled workers	36.0	25.9
Farm laborers	14.5	7.1
Other laborers	14.7	10.7
Servant classes	6.8	8.0

* Comparable figures not available. 1940 figures relate to those in the "labor force," except new workers.

As here classified, independent entrepreneurs, officials, and professional people made up a quarter of all the gainfully employed in 1940, though two-fifths of this group was engaged in farming. Unskilled workers constituted only a slightly larger proportion in 1940 and showed a marked decline

since 1910. On the other hand, each of the three intermediate groups of semiskilled, skilled, and clerical workers, especially the last, increased in relative size and together embraced half the total in 1940. These changes reflect the very significant tendency to reduce the amount of unskilled work required and a widespread move on the part of workers out of the lowest group into one of the generally better paid occupations among the intermediate group. By 1940, therefore, the great bulk of the gainfully employed was to be found in this intermediate group; the remainder was almost equally divided between the unskilled laborers at the bottom and the self-employed or managerial group at the top.

So much attention has been devoted to what is called the "struggle" between labor and capital that it is desirable to see what light these tables throw on the relative size of these two groups. A hard and fast line sharply differentiating the two groups from one another or from those outside either group who may be said to make up the general public cannot be drawn. Both economic status and conflicts of economic interest need to be considered. Probably the group of industrial wage earners is the only important one in which, as a whole, the economic reactions are those of labor in opposition to what is called "capital." Only a portion among the groups of farm laborers, servants, or lower salaried "white-collar" class finds itself in direct conflict with capital. The only group that as a whole reflects the interests of capital is that made up of proprietors and officials, though there would be exceptions even here. Probably the great majority of the five groups listed under the headings of farmers, farm laborers, professional, lower salaried, and servants have economic positions and interests that differ in greater or less degree from those of either labor or capital and may be said to constitute the general public. Thus a very rough guess would be that labor makes up something less than half the gainfully employed, that capital is represented by less than a twelfth, and that over two-fifths fall outside of either group and make up what may be called the "general public."

Far too frequently, current discussion assumes there are but two economic groups, labor and capital, and that the lines between them are sharply drawn and their interests always opposed. First, this assumption exaggerates the degree of homogeneity and unity of interests that exists among each of these two groups; labor has its aristocracy as well as capital, and numerous conflicts arise within each group. Second, the existence of this large third group is of the greatest social importance. It is a mediating factor in our political, economic, and social life between the opposing forces of labor and capital and, as such, it tends to lessen the sharpness of conflict, to give greater stability to the social order, and, even if slowly, to further social progress.

But this very fact makes it important to note that this third group making up the general public is declining in relative importance. This is due primarily to the shift from an agricultural to an industrial country. With the check upon the expansion of agriculture following the disappearance of free fertile land, the decline in the relative importance of the farming population, which constituted the largest element in this third group, will probably proceed at a more rapid pace. Thus, in spite of some minor counteracting tendencies, we may expect that in the future a growing proportion of the population will be found in the groups of labor and capital, tending to broaden and to accentuate such conflicts of interest as arise between the two and to weaken the stabilizing influence of the third group. But, for the present, this third group still constitutes a factor the significance of which should not be overlooked.

The Trend of Wages. As to the changes during this period in the economic conditions affecting the laboring class, those in wages may well be considered first. The chart on page 601 giving an index number for weekly money wages and real wages (thus eliminating the effect of shortening the daily hours) provides a summary view of the general trends.

The rise in money wages starting in 1862 continued up to 1870 when the level was about 80 per cent above that in 1860. Except for moderate declines after the panics of 1873 and 1893, wages remained only a little below this level for the rest of the century. Between 1900 and 1914, wages increased a third to a level more than double that of 1860. Again the effects of war intervened to boost wages, and by 1920 they were more than twice as high as in 1914. Again, too, just as after the Civil War and to an even greater extent, this sudden gain was substantially retained; in fact it was soon exceeded, and before 1930 the weekly money wage was more than five times that in 1860. Moreover, the loss after 1930 had been more than made up by 1940. How much of the great gain secured during and just after the Second World War, to be described later, can be retained remains to be seen.

In the case of farm labor, wages followed the general trend. In 1860, male farm labor was getting about $10 a month with board, and the small group hired by the day received from 90 cents to $1 outside the harvest season. By the latter part of the century, the monthly rate ranged between $12 and $14, then rose to $22 in 1914, and to $52 in 1920. A drastic cut during the depression reduced the rate to $18 in 1933, but it recovered to $28 by 1940 and by 1943 the war had raised it well above the 1920 peak. The day rate without board was almost $1.50 in 1914 and only a little higher in 1940. There were marked sectional variations, the highest wages prevailed in the Far West and the lowest, a half to a third of the former, in the South.

Outside of agriculture, common laborers were getting about $6 a week

and artisans not quite twice that in 1860. By 1880, after the postwar readjustments, common labor was receiving around $7.50 and artisans $15 a week, and there was only a slight advance up to 1900. The following sharp rise, greatly accentuated by the effects of the war, brought the pay of common labor to some $27 a week in 1920 and that of artisans to around

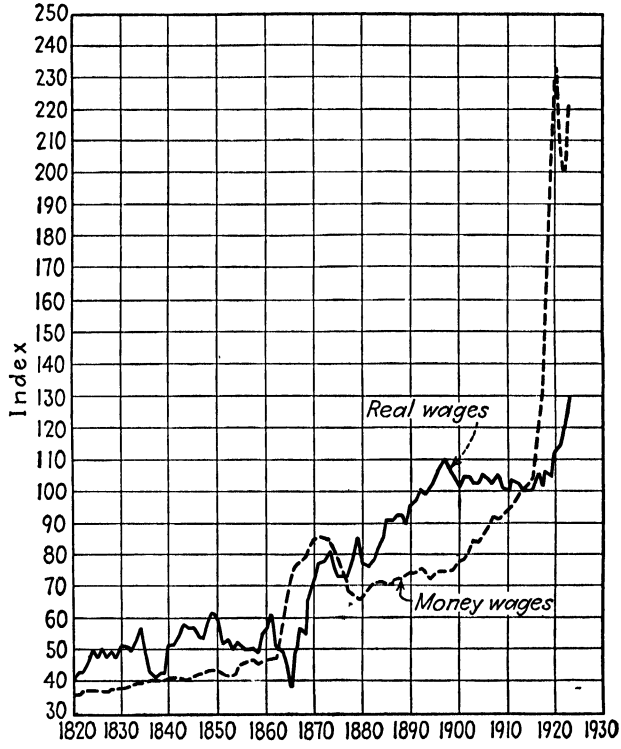


FIG. 54. Index of weekly money wages and of real wages, 1820–1923. 1913 = 100. (*Based on figures of A. H. Hansen, The American Economic Review*, 1925.)

$43. By 1930, a small additional gain had been secured and the loss during the subsequent depression had been more than recovered before the next war brought another spectacular rise. The much greater absolute increase in the wages of artisans than of common labor since 1860 may be attributed chiefly to more effective organization and probably in part to a faster growing demand. Hourly wage rates, as shown on the chart on page 602, for those outside of agriculture rose more rapidly than weekly wages because of the reduction in hours of work per week.

However, his real wages—what his money wages will buy—are of primary concern to the worker. The course of real weekly wages during most

of this period is shown on the chart on page 601.[1] It will be seen that the greatest gains were made during periods when the general price level was falling, as between 1865 and 1897 and again after 1920; the chief losses occurred in periods of rapidly advancing prices, as during the Civil War and the First World War. But it is also to be remembered that these changes were modified by greater employment in times of rising prices and more unemployment when prices were rapidly falling. Between 1860 and 1900, weekly real wages were almost doubled; in the next two decades of rapidly

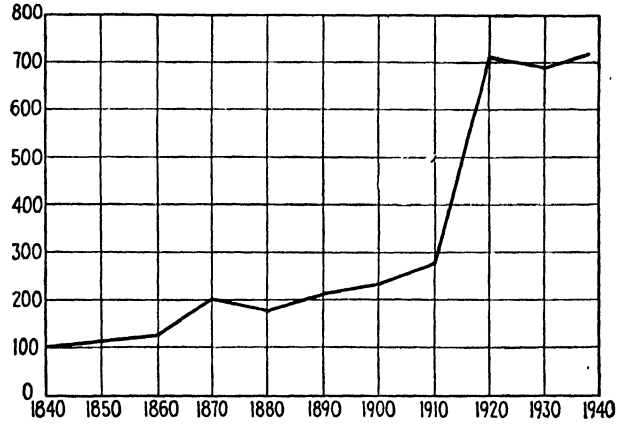


FIG. 55. Index number of average hourly wage rates, exclusive of agriculture, by decades. 1840 = 100. (*From National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

rising prices, they remained almost stationary, though many secured a substantial reduction in the weekly hours of work. The decade of the 1920's brought an increase of over one-quarter so that by 1930 the level was more than twice that prevailing just before 1860. The subsequent depression brought a substantial decline and unemployment for an unpredecented number, yet by 1940 the real weekly wage of those fully employed had somewhat more than recovered the loss. The war then raised the level to much the highest point in history, and by 1947 it was about double that in 1913.

When it is remembered that the great gain in real wages since 1860 was secured along with a very substantial reduction in the hours of work, the result can well be considered one of the greatest contributions of the evolving economic order to the well-being of the people. Unfortunately, it must be added that, despite this gain, which was substantially augmented by

[1] Data for a really comprehensive and satisfactory index are lacking. For other indices, see H. G. Moulton, "Income and Economic Progress," p. 181, Washington, 1940, and R. S. Tucker, in Barron's *The National Financial Weekly*, Oct. 23, 1933.

free governmental contributions of goods and services, a great many families were still living at a level below what is now considered a health and decency standard. This arbitrary standard, however, is much higher than would have been set in 1860.

The Hours of Labor. In 1860, the length of the typical working day was probably over 11 hours; that of the working week may well have been nearly 70 hours. Organized labor, still struggling to secure a 10-hour day, had met with very limited success; the ineffective legislative restrictions had accomplished little. After 1865, nevertheless, organized labor began to demand an 8-hour day, and in 1868, Congress passed a rather ineffective law establishing this for government employees. Amendments in 1892 and 1912 greatly strengthened the law and extended it to cover workers employed on most government contracts. An active campaign in the 1880's enabled a few crafts to obtain the 8-hour day, but in 1890 most unionized factory workers had a 9-hour day, while 10 hours was typical in most occupations along with a 58- to 60-hour week. It required the combined efforts of many groups for the next 30 years to reduce the typical working day to between 8 and 9 hours.

Thanks to rapid progress in unionization, some aid from legislation, and rising prosperity, after 1897 enough gains were secured so that by 1914 the typical working week was about 5 hours shorter than in 1890. The following war years brought a more rapid advance. The Democratic administration was favorable to labor; union membership quickly mounted, and the basic 8-hour day, applied to the railroads in 1916 and later to workers on the vast government war contracts, tended to become the standard in a wide range of occupations. The reduction in the field of manufacturing was especially noteworthy; in 1909, only 8 per cent of the wage earners there worked 48 hours or less per week; nearly 40 per cent worked 60 or more. In 1919, the figures were 48 and 12 per cent, respectively.

During the 1920's, there was no marked alteration in the general situation. The concerted drive of employers slightly reduced the proportion of those in manufacturing working 48 hours or less a week, but the proportion working 60 hours or more was cut to 7 per cent. In 1923, the great steel industry, which had long insisted that only a 12-hour shift was practicable for it, adopted an 8-hour shift for most of its employees. As organized labor saw its goal of an 8-hour day almost attained and in some crafts surpassed, it began to demand still shorter hours. In 1926, the Federation of Labor came out for a 5-day week, and then in 1932 for a 6-hour day and a 30-hour week.

The severe and prolonged depression of the 1930's throwing many millions out of work led to a general effort to spread employment by cutting the hours and days of work. Under the NRA codes the 40-hour week was

widely established, and it was generally retained even after the codes lapsed and the worst of the depression passed. Its continuance was further assured by the Fair Labor Standards Act, to be described later, under which the basic 40-hour week with extra pay for overtime was put into effect in a wide range of industries in the autumn of 1940. Moreover, the shorter hours secured by trade-unions or by law were by no means confined to those directly affected by these two modes of action. All workers tended to benefit thereby, since employers in other fields were put under pressure to shorten the working day or face the prospect of losing their employees. Thus groups like farm laborers, retail-store workers, and domestic servants, generally lacking both unions and favorable legislation, secured a shorter working week, though it still remained the longest for any large groups. The result as shown by the Census of 1940 was that half of all the wage and salary workers at work during the last week of March in that year (except those on public emergency work) worked 40 hours or less per week, over one-quarter worked from 41 to 48 hours, and less than a fifth had longer hours.

Thus the typical worker had gained 25 or more hours of leisure time per week since just before 1860, not to mention the reduction in the years of his working life. This remarkable gain in leisure time must be considered one of the chief contributions of the period to the rising standard of living. How far such reductions in working hours can go and how rapidly they can be carried out, without reducing workers' earnings and at the same time avoid an increase in production costs and thus a lowered standard of living, will vary with different industries and the rate of advance in technological and economic efficiency. It is significant that the most rapid advances in real weekly wages appear to have been obtained in the periods 1865–1896 and 1920–1930 when the reduction in weekly hours of work was proceeding more slowly than between 1900 and 1920 or after 1930. Also there seems to be general agreement that there are very few occupations at present where a reduction of the working week below 40 hours would increase efficiency in production. That any very general adoption of a 30-hour week as a permanent standard could be made at the present time without lowering the standard of living, at least for a period, seems highly improbable. It would, therefore, have to be justified by a belief that the resulting loss arising from the reduction in goods and services consumed was more than offset by the gain in leisure time. Moreover, what that gain might be would depend upon the wisdom with which the leisure time was used, a problem concerning which the American people still have much to learn.

The Strain of Work. Though the introduction of machinery did much to reduce the amount of hard physical labor performed, the tending of machines driven by power at a fast pace and the specialization of tasks

involving constant repetition of a given movement along with close attention often involved a nervous as well as a muscular strain. Nor was the greater strain of work confined to those working on machines; with the increased tempo of business, it spread through nearly every occupation, from the purely clerical job to that of the highest executive. Greater speed of action was an element in the growing efficiency of the economic order. To make sure of this efficiency, hours of work often had to be shortened and retirement at an earlier age became more common. The working-man over forty-five found it harder to get a new job, and compulsory retirement at around sixty-five, from the chief executives down, became increasingly frequent.

With power-driven machinery, too, came greater danger of injury and loss of life. Other conditions surrounding work in mines, factories, and elsewhere created new dangers to health, though in emphasizing these we doubtless have minimized the industrial diseases and accidents of the earlier age. Despite the growing safeguarding measures, the annual toll of industrial accidents still remains a staggering one.

Unemployment. Although unemployment is not a new risk, the proportion of those who now have to face it is undoubtedly much larger than before 1860. One reason for this is the greatly decreased proportion of those living on the farms, where there was always work to be done, and the increase in the proportion engaged in manufacturing, mining, and other occupations, where the fluctuations in employment have always been more marked but have been further aggravated by the swings of the business cycle. Another cause is the great increase in the frequency of strikes and lockouts and the number of workers affected thereby. The annual total of days of work and of wages lost thereby has become an enormous figure.

Competition and Mobility of Labor. As noted previously, competition among workers takes two main forms: the direct competition among those seeking the same job and the indirect competition among the products of different workers selling in a given market. In both forms, competition became far keener than ever before during this period. Direct competition was increased by all the developments tending to create greater mobility of labor such as lowered costs of transportation, better means of communication, and all the changes furthering a more efficient organization of the labor market, including newspaper want ads and the spread of private or public employment agencies.

Though many of the customary checks on mobility still remained, they were less effective than formerly, and movement from one occupation to another or from one place to another, despite the appearance of some new restrictions, was easier than ever before. The latter is illustrated by the great rapidity of the settlement of the West, by the drift from the rural

districts to the cities, and by the more recent migration of Negroes from the South to the North. The Second World War witnessed unprecedented shifts, both in locations and in occupations. The increase in mobility was also international in scope, as was reflected in the growth of immigration, at least up to 1914, from countries that had contributed little or nothing to our population before 1860.

Similarly, all those developments which helped to widen the markets for commodities and to increase the efficiency of their organization tended, in an even greater degree, to intensify the indirect form of competition. Here, too, the effects were international in scope, in fact more nearly world-wide than in the case of direct competition, though the use of artificial barriers was also more common. As never before, the competition of the cheap labor of the Far East as well as of Europe was felt in countries with higher labor costs. This was partly responsible for the first attempts to secure international agreements establishing a few standards as to working conditions. Like other groups, the working classes of this country were being increasingly affected by conditions in the world at large.

The effects of these two forms of competition vary among different groups of workers. The chief tendency is to bring about a greater degree of standardization of wages and working conditions; thus some may lose while others gain, for standardization may reduce the highest wages and raise the lowest. Yet the ultimate result is a net gain for both labor and society as a whole, since greater mobility of labor will tend to place workers where they are most productive, and greater mobility of commodities will promote their production where they can be obtained at the lowest comparative cost.

Scientific Management and Personnel Administration. Early scientific management had dealt chiefly with the problem of increasing efficiency by standardizing processes or movements, by securing greater speed of work, and by the introduction of mechanical aids. The more recent emphasis on personnel administration stresses the study of the worker's fitness for the job, his psychology, and the conditions which, by making him an ambitious, contented, and willing worker, tend to increase his efficiency. The developments in the field of psychology have contributed largely to the study of these problems. Job analysis and greater attention to vocational guidance and the selection of employees help to assure the allocation of workers to the tasks for which they are best fitted; together with the efforts to make the employee better satisfied with the conditions under which he works, they tend to lessen the losses arising from a heavy turnover of labor.

The Laborer and Capitalistic Industry. Even under the handicraft organization of industry, the wage earner had been in a weak position for

bargaining with his employer, for he had to earn a living and seldom possessed appreciable savings upon which he could fall back during unemployment. Moreover, his labor was in the nature of a perishable product—a day's work lost was lost forever—so that acceptance of a low wage might be agreed to rather than face this loss. The spread of large-scale capitalistic industry to so many fields of production during this period further weakened the bargaining position of a very large group of workers.

Not only was the employer of a large number of workers less dependent on securing the services of any one worker, but he lost all personal contact with his labor force. The relatively close human relationship of former days was replaced by a hard, impersonal relationship such as was typical of the "soulless" corporation. Also, modern capitalistic industry, more keenly competitive than ever before, except where combinations arose, increased the pressure on the producer to lower his costs, including that for labor. Finally, the prospect of a wage earner's eventually advancing to a position as an independent employer steadily dwindled in those industries where the size of business units increased. These developments, by creating a growing gap between employers and employees and accentuating their conflicts in interests, led the workers to try to unite so as to improve their bargaining position. The history of the resulting labor movement is given in the following chapter.

Chapter XXXVI

THE LABOR MOVEMENT AND LABOR LEGISLATION SINCE 1860

The Labor Movement to 1879. The rapid growth of manufacturing under the factory system after 1860 and the spread of capitalistic methods of production generally served only to confirm the conclusions that labor had arrived at by the 1850's: that these new conditions were inevitable, that it was useless to struggle for a return of the old order, and that the sooner labor adopted practical measures for improving its condition under the new situation the better. To this task, the labor movement now turned. But in the years between 1865 and 1879 the difficulties of the task were increased by (1) the postwar readjustment problems and (2) the long depression after the panic of 1873.

As the markets for more goods became national in scope, it was obvious that, unless the standards of pay and working conditions that labor sought to establish were also made national in extent, competition would tend to undermine them. Hence a leading feature of the labor movement of this period was the effort to nationalize it and particularly to establish national trade-unions. Between 1864 and 1873, some 26 national trade-unions were organized; by the latter date, their membership had risen to around 300,000.

Most unions were formed in the more skilled trades little affected by the introduction of factory methods, the chief exceptions being the textile workers, the printers, the coopers, and the boot and shoe workers. The last two especially were facing the rapid introduction of machine methods at this time. The Knights of St. Crispin, organized by the boot and shoe workers in 1867, had attained 50,000 members by 1870, making it the largest union in the country. National unions were also formed among the curriers, ship carpenters, calkers, cigar makers, coach makers, tailors, railway conductors, locomotive engineers, telegraphers, wool hat finishers, miners, and various branches of the woodworking, iron and steel, and building trades. Yet the national organizations were still weak, serving mainly as a forum for agitation, discussion of problems, and formulation of broader policies; the main seat of power and action remained with the locals and the city trade assemblies.

Renewed attempts to secure a national organization representative of labor in general led to the formation of the National Labor Union in 1866.

Being closely associated with the 8-hour day agitation and greenbackism, its activities centered on legislation rather than on unionism; this led to the establishment of a labor lobby in Washington in 1869. A recognition of the international aspect of the labor movement resulted in sending a delegate to a European congress the same year. Absorption in political movements led to the disintegration of the union after 1872.

The 8-hour movement succeeded in getting this day for Federal employees in 1868, but the laws obtained in several states proved very ineffective. In 1872, a great strike of the building trades in New York for the 8-hour day was successful, but in the succeeding general depression this movement had a temporary setback. Various cooperative schemes were undertaken, especially where strikes failed, but few proved successful. Where skilled crafts were opened to the competition of the less skilled,there were efforts to limit the number of apprentices and admission to the unions. Employers were also active in organizing to oppose the unions and, although most such associations had only a local basis and refused to recognize the unions, there were some instances of collective bargaining. The first national trade agreement was secured by the puddlers in 1866 and lasted for many years; in 1869, the anthracite miners obtained an agreement for a sliding scale of wages which continued until 1874. Other union activities included the accumulation of strike and benefit funds, the introduction of the union label, and agitation for land and currency legislation.

The prolonged depression after 1873 gave a serious setback to the labor movement. Strikes were more numerous and on a much larger scale than ever before, such as those among the cigar makers, the textile operatives, the miners, and the railroad men; but most failed, often resulting in the disruption of the union. In the Pennsylvania mining region, an organization known as the "Molly Maguires" terrorized the section by its violent crimes until it was crushed in 1876 after a trial resulting in the execution of ten of its members. In 1877, the first great railroad strike took place, starting in Pittsburgh and spreading to the East and the Southwest. Being marked by considerable violence and much destruction of property, it led to the first use of Federal troops to maintain order during a strike in times of peace. Though the strike failed, it for the first time aroused the whole nation to the seriousness of the labor problem. During these years, the largest of the unions, that of the boot and shoe workers, nearly vanished, and such strength as remained in the labor movement was confined to local unions and the city trade assemblies. By 1878, the total union membership had fallen to around 50,000.

Though the depression was doubtless the main cause for the decline in the unions' power, this was also a product of divergent interests and internal dissension arising from the pursuit of different isms. An increasing propor-

tion of the labor leaders was drawn into the movements to prevent the retirement of the greenbacks and to provide cheap money in other ways, thus diverting their energies from business unionism to politics. Cooperative schemes were again taken up as a means of economic reform. The more radical groups turned to socialism or anarchism. These years are marked by the first appearance in this country of an active interest in modern socialism. Various radical political groups arose, the most important being the Socialist Labor party started in 1877. Owing to the prominence of the foreign-born element in the trade-unions, which had grown very rapidly since 1848 in such cities as New York and Chicago, many labor leaders were drawn into these reform movements and, by adding to the dissensions as to objectives and policies, further weakened the unions.

The Labor Movement from 1880 to 1896. From the return of more prosperous times in 1878 until the panic of 1893, the labor movement, though still suffering from the dissensions of the preceding years, gathered new strength and shifted toward a program of pure trade-unionism of a militant yet opportunist type. The first task was to build up the membership of the weakened unions and then to unite the forces of labor through some central organization. There was a renewed and more aggressive push to secure the 8-hour day, and in the resulting strife a more definite wage consciousness developed than had appeared theretofore. The conservative railroad brotherhoods, emphasizing their benefit systems, remained less militant than the craft unions, among which the cigar makers under the leadership of Samuel Gompers was notably active. A new effort to unite the forces of labor was made in 1881 by the formation of the Federation of Organized Trades and Labor Unions. Though mainly supported by the craft unions, it was chiefly concerned with legislation and failed to accomplish much. In 1886, it was merged with the new American Federation of Labor (the AFL), which later became the leading force in the labor movement.

During the early 1880's, however, the Knights of Labor suddenly rose to dominate the labor movement. Started in 1869 as a secret organization, it had barely 20,000 members a decade later. Then, having abandoned secrecy and perfected a national organization, its membership passed 100,000 in 1885 and skyrocketed to over 700,000 in 1886, when the Federation had only 138,000 members and the total union membership for the country was about 1,000,000, a figure not reached again until 1901. The underlying unit of organization of the Knights was the local assembly, above it came the district assembly, and at the top the general assembly. Though the majority of the locals consisted of craft unions, the general organization was not on a craft basis and a growing proportion of the membership was drawn from a great variety of trades and included many

semiskilled or unskilled workers and often farmers. The resulting diversity of interests and lack of unity proved a serious element of weakness. Most of the power was lodged in the general assembly whose action often caused discontent among the locals. Although the program of the Knights was a very comprehensive one, designed to appeal to its heterogeneous membership, and included many reforms necessitating legislation, the organization took an aggressive part in the labor movement of the 1880's.

The 3 years beginning in 1884, when there was a brief financial panic followed by wage cuts, were marked by numerous strikes accompanied by considerable violence. Success in strikes against the Gould railroads in the Southwest in 1885 greatly stimulated labor's activities. The violence culminated in 1886 in Chicago where a group of strikers attacked some strike-breakers. When the police intervened and were attacked with stones, they fired, killing four and wounding many. The next day, at the close of a workers' protest meeting in Haymarket Square, a bomb was hurled among the police who at once opened fire. The bomb outrage was attributed to a group of anarchist labor leaders, four of whom were subsequently hanged and others imprisoned. The adequacy of the evidence and the justice of the convictions were always questioned, and in 1893 the governor pardoned the surviving prisoners. This violent culmination of the series of labor disputes aroused much public hostility, was a factor in the failure of many strikes, and gave a decided setback to the labor movement.

After 1887, the Knights of Labor rapidly declined, owing to failure of many strikes and the elements of weakness in its organization. The unskilled workers dropped out, many craft unions shifted to the federation, and the membership dropped to 100,000 in 1890. Thereafter, the farmer element dominated, and the Knights ceased to be a factor in the labor world. In the meantime the old federation of craft unions was merged in the new American Federation of Labor formed in 1886 with Samuel Gompers at its head. Its organization was on a craft basis with the national trade-unions, allowed considerable autonomy, as the chief constituent elements. Until very recently, it always included most of the total union membership; the conservative railroad brotherhoods and the extreme radicals were the chief groups that chose to remain outside.

In the quieter years after 1886, the federation steadily built up its membership to 260,000 in 1893. It concentrated on pure trade-union activities and gave less attention to labor legislation and politics. The struggle for the 8-hour day was continued and proved most successful among the city carpenters. The growth of employers' associations provided a basis for collective bargaining, and the era of trade agreements really began with that of the iron molders in 1891. Also some favorable legislation was secured, such as laws against black-listing or discrimination against union men and

laws promoting arbitration. But labor's increasing activities were opposed by the spread of employers' associations, the greater use of court injunctions, and resort to the conspiracy or the new antitrust laws to curb them.

In marked contrast to similar preceding periods, most unions passed through the long depression after 1893 without heavy losses of members or serious disorganization, thus indicating the far stronger basis of the movement. The membership of the federation fluctuated only slightly

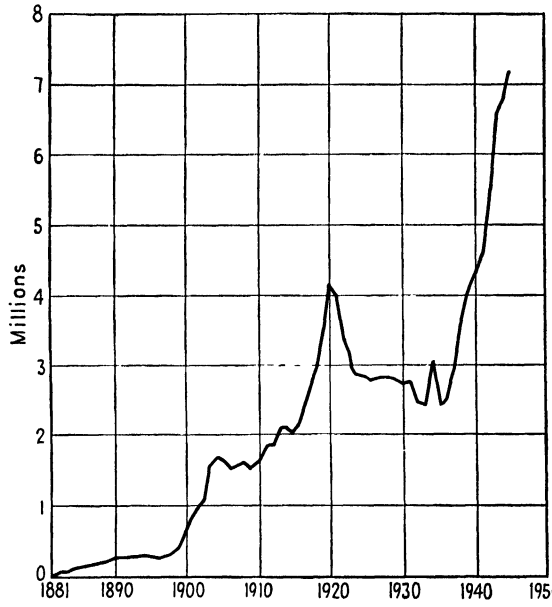


FIG. 56. Membership in the American Federation of Labor since 1881.

around 270,000. Just before the panic, however, the iron and steel workers' union, the strongest in the country, suffered a disastrous blow. The loss of its strike at the Homestead works of the Carnegie Steel Company in 1892, which was attended by much violence, shattered the union and, in this industry, over forty years passed before much power was recovered.

As depression set in and wages began to be cut, strikes involving over 750,000 workers occurred, but unlike most of those in the 1880's they were generally defensive in character. Outstanding was the strike at the Pullman Car works in Chicago in 1894, which soon spread to the railroads entering that city. Eugene Debs, who had just organized the American Railway Union, distinct from and rather opposed to the older railroad brotherhoods, became the leader. When a large amount of property had been destroyed and Chicago was nearly cut off from access to the outside, President Cleveland ordered out Federal troops, Debs and others were

arrested, and the strike eventually collapsed. A big strike by the United Mine Workers also failed, and numerous others met a similar fate. As usual, this led many workers to turn to political action to secure reforms through legislation; even the Federation of Labor showed greater interest in such measures, though it generally refused to engage directly in politics. Many workers, especially those among the left-wing groups, became active in the Populist or other radical party movements reflecting the social unrest of these years.

The Labor Movement from 1897 to 1917. The period from 1897 to 1917 was one of fairly general prosperity with only minor setbacks, and under this favorable condition the labor movement made such progress that this has been considered the flowering of the modern period in American trade-unionism. The total membership in all unions, which had fallen to less than 450,000 in 1897, rose to about 3,100,000 in 1917. That in the federation rose from 272,000 in 1897 to nearly 1,700,000 in 1904 and, after remaining almost stationary for 6 years, jumped to 2,500,000 in 1917. The chief gains were made in the building trades and among the railroad workers, the miners, and the printers; in fact, nearly half the total union membership was in the transportation and building groups, the rest, outside the miners, being widely scattered. Union members made up the highest proportion of the workers in the coal, glass, and stone industries. Though unions outside the federation had about 40 per cent of the total union membership in 1897, this had fallen to 24 per cent in 1901 and to 20 per cent by 1917, thus reflecting the growing predominance of the federation in the labor movement.

The railroad brotherhoods held aloof from the federation, and the radical elements developed several independent organizations. Most prominent among the latter was the Industrial Workers of the World (the IWW), formed in 1905. Disregarding craft lines, it sought to include all workers in an industry and favored direct action. Originally most active in the West, it included the Western Federation of Miners organized in 1893 on an industrial basis. It was seriously weakened when they seceded in 1907 and later joined the federation. It was also active in the Western lumber industry and subsequently in the textile industry of the East. Its membership was subject to marked fluctuations and probably never rose above the 30,000 reached in 1912; but the radical policies adopted and the violence attending its strikes aroused a none too scrupulous opposition which, combined with its lack of strength, resulted in many failures, so that after 1920 it practically vanished.

During these years, the Federation of Labor and its affiliated unions were actively pushing their business-unionism programs. The rising cost of living led to numerous strikes for higher wages which were fairly successful.

By 1900, the 8-hour day generally prevailed in the building trades, coal mining, and granite cutting, and in 1907 was secured by the printers. Between 1898 and 1902, a number of important trade agreements were secured, but the success of the great anthracite coal strike in the latter year so alarmed employers that a more belligerent attitude was assumed, and several organizations were formed primarily to oppose labor's demands.

The greater strength obtainable by organizing all classes of workers in an industry and the resulting reduction of the weakening jurisdictional disputes led to some shift toward industrial unionism. This was most marked in the more radical unions, but even the federation, traditionally opposed to it, felt it wise to make some concessions. The brewers' union became the first prominent industrial union in the federation; much the most important subsequently was the United Mine Workers which, under the leadership of John Mitchell, rose to great power after about 1900. In some industries, greater unity among the crafts was secured through local building trades' councils or amalgamated craft unions.

Though the federation relied chiefly on the tactics of business-unionism, the growing strength of the opposition and the difficulty in securing certain reforms without legislation forced it to pay more attention to political action. This became noticeable after 1906 when a bill of grievances demanding legislation was presented to Congress and received scant attention. Though always opposed to forming a separate political party, the federation then began to advocate throwing the labor vote to the candidates most willing to support its demands. When the Democrats, who were generally supported by organized labor, came into control under President Wilson in 1913, more favorable legislation than ever before was secured. The Department of Labor was created in 1888, and its head was given a separate seat in the Cabinet in 1913. Certain provisions of the Clayton Act of 1914, designed to limit the use of injunctions and the application of antitrust laws in labor cases, were considered a great victory, though they subsequently proved largely abortive. Other laws provided better protection for seamen and the basic 8-hour day on the railroads. The more radical groups, seldom able to agree among themselves, supported labor or socialist parties that accomplished little, though the socialists polled 900,000 votes in the 1912 election.

The Labor Movement from 1917 to 1933. During the First World War, the cutting off of immigration, the drafting of men into the armed services, and the abnormal demand for workers put labor in an exceptionally strong strategic position. The governmental measures for dealing with the labor situation will be described in the chapter devoted to the war, here it will suffice to note the chief gains made by labor during these years. Since resort to conscription of workers was lacking, it was necessary to try

to prevent loss of labor power through strikes and otherwise by making the conditions of work fairly acceptable. A sort of armistice in the struggle between laborers and employers was accepted, the use of strikes was greatly curtailed in favor of conciliation or arbitration, and unions were left free to organize. The result was an unprecedented growth in membership; that of the federation rose to 4.15 million by 1920 and the total for all unions to 5.11 million.[1]

There was a notable extension of unionism among the semiskilled or unskilled workers in several industries where unions had possessed little or no strength, such as the textile, packing, metal, and clothing industries and among the seamen, longshoremen, and certain groups of railway employees. Unusual progress was made in bringing women into the unions, especially among the clothing, textile, and packing-house workers, railway clerks, and telephone operators, so that by 1920 there were nearly 400,000 female members of the unions—over five times the number in 1910. Two-fifths of this total was made up of garment workers, and the clothing industry had the highest percentage of organized female workers, followed by the leather industry and printing and publishing.

Though wage rates seldom kept pace with the rising cost of living outside the occupations where the shortage of labor was most acute, constant employment and a heavy premium for overtime enabled many workers outside the white-collar class to fare better than ever before. Progress was made in securing a shorter basic working day which, where overtime was frequent, brought a high take-home pay. Standardization of working conditions was advanced, the closed shop was extended, and the unions became more firmly entrenched than ever before.

The strength of this abnormal wartime growth was tested, following the reaction in 1920. Employers' organizations launched an extensive campaign to regain some of the ground lost during the war, recovery of the open shop being especially stressed. Defensive strikes were frequent but seldom succeeded and, among the newer unions, often destroyed them. By 1923, the total union membership had fallen to less than 3.7 million of which nearly 3 million belonged to the 108 unions affiliated with the federation. The heaviest losses occurred in the metal and transportation unions; in the textile and packing industries, all the recent gains vanished. Among the newer unions, those in the clothing industry were most successful in holding their own, and the older craft unions suffered relatively little. Despite the setback, unionism remained much stronger than before the war.

In the relatively prosperous years that followed up to 1929, however, total union membership declined some 300,000. The chief gains were among the building and public service workers, but they were more than offset

[1] About 230,000 of these were members of international unions living in Canada.

by losses among the soft-coal, clothing, and metal workers. The new high level of real wages resulting from the postwar readjustment tended to lessen discontent among the workers as did also the various welfare measures which employers were rapidly introducing at this time along with their promotion of company unions, membership in which rose from 700,000 in 1922 to 1,500,000 in 1928. Together with the continued antiunion activity on the part of employers and various unfavorable court proceedings, this resulted in modifying the aggressiveness of the labor movement; between 1926 and 1930, the number of strikes fell to the lowest level since the early 1880's.

This trend of affairs produced growing dissatisfaction and dissension among the union ranks. The younger and more radical groups felt that the federation leadership had become too capitalistically minded, unaggressive, and lacking in effort to organize the semiskilled or unskilled workers, especially those in the mass-production industries. They demanded that the unions be organized on an industrial basis and believed that the jealousies of the dominant craft unions blocked such action. To promote the desired changes in policy, they resorted to the practice of boring from within, whereupon the federation sought to expel its communist members who then tried to set up rival unions of their own, but constantly fell out among themselves and so accomplished little. The socialists were not generally expelled and so continued as a disturbing element for the conservative leaders. Further discord arose from the rapid postwar spread of labor racketeers in the large cities who muscled in to control the unions and ran them, often with much use of violence, primarily to line their own pockets. They aroused much public hostility, and it was felt that the federation was too lax in trying to eliminate them. When the outbreak of the depression led to another drop in total union membership to less than 3 million in 1933, the discontent was further aggravated. The main product of all this dissension was a violent split in the ranks of organized labor in the following period.

The Labor Movement, 1933–1941. The advent to power of the Democratic party under Franklin D. Roosevelt in 1933, at the crisis of what is commonly regarded as the worst depression in our history, marks the beginning of a veritable New Deal for labor. Probably never before had the need of labor for assistance been so great; certainly never before had the government responded to labor's needs in such a wholehearted manner. This response was made possible by an unusually favorable political situation. In the campaign the Democratic party, traditionally the more friendly to labor despite its conservative Southern element, had stressed the New Deal, designed to improve the condition of the masses, and its victory had been an overwhelming one. The widespread unemployment and economic

distress with the increasingly insistent demands for relief, leading even to fears of a social revolution, created a state of mind such that measures of reform, which might otherwise have been long delayed, were quickly passed. The resulting legislation will be described subsequently, but the effects on the labor movement were electric.

Within a year, the loss in total union membership since 1923 had been practically recovered; by the close of 1937, when membership reached 7.3 million, it was nearly 50 per cent above the previous peak of 1920; by 1940 it was around 8.5 million. Then the Second World War conditions, as will be explained in the chapter describing that period, raised the total to around 15 million in 1945. Significant gains were made in mass-production industries such as the steel, rubber, and automobile, where the unions had had little strength. A much larger numerical growth occurred among the older unions, where the soft-coal miners staged a remarkable revival, to say nothing of the gains of the teamsters, the clothing workers, and many others. The lead in this organizing movement was taken by the advocates of industrial unions.

In 1935, when the federation refused to give the movement adequate support, a group of eight of its affiliated industrial unions with nearly 1 million members, under the leadership of John L. Lewis of the United Mine Workers, formed temporarily their own Committee for Industrial Organization (the CIO) and with their own resources began an aggressive campaign of organization, featured by the use of the sit-down strike, which generally met with marked success. The federation, finally stung to action, suspended its CIO affiliates in 1936 and started to combat their unions with rivals of its own after efforts at reconciliation had failed. The breach was widened in 1938 when the CIO adopted a permanent form under the title of the Congress for Industrial Organizations, additional unions shifted their allegiance to it, and the federation revoked the charters of its rebel unions. Though it took back the Mine Workers in 1946, they withdrew in 1947. By 1940, the federation had about 4.3 million dues-paying members and over 7.6 million in 1947. How many paid dues in the CIO is uncertain, but it claimed about 4 million members in 1940 and 6 million in 1947. Thus most of those in the ranks of organized labor were split into two about equally powerful groups, and the intense rivalry between them came to absorb no small portion of their energies.

The remarkable growth of union membership after 1932 was chiefly based on favorable legislation. The Norris-LaGuardia Act of 1932, in an effort to eliminate weaknesses in the Clayton Act concerning use of the injunction, greatly enlarged the legal area of union activities, and similar laws were later passed in many states. The National Industrial Recovery Act of 1933 authorized the President to create an agency to establish codes

of fair competition in industry. Every code was to contain labor provisions giving employees the right to organize and bargain collectively through representatives of their own free choice; granting them the right freely to join, or refuse to join, any union; and requiring the employer's compliance with the maximum hours of labor, minimum rates of pay, and conditions of employment approved or prescribed by the President. Though intended to promote collective bargaining by independent unions, many company-sponsored unions were formed under the NRA before the law was declared unconstitutional in 1935.

To replace the union protective provisions, Congress immediately passed the Wagner National Labor Relations Act. This law sought to ban, as unfair, practices interfering with the free organization and conduct of unions by employees, to prohibit support of company unions by employers, and to secure equitable conditions for unions in collective bargaining. The law applied to industries or trades involving or affected by interstate commerce, with minor exceptions. To administer its provisions, the National Labor Relations Board was set up with extensive powers to hear complaints, settle disputes as to bargaining units and other matters, and issue cease and desist orders. Through the energetic administration of this law, the constitutionality of which was upheld in 1937, some of the most serious obstacles to the union movement, chiefly those originating on the employer rather than on the employee side, were removed or seriously weakened, and the opportunity for labor to bargain on more equitable terms was greatly improved. By 1946 about 14 million, or nearly half of all those in occupations with active unions, were working under collective bargaining contracts. Yet most workers still remained outside the union fold.

The Extent of the Unionization of Workers. The attention given to organized labor often leads people to overlook the fact that, until a few years ago, unions have never included more than a small fraction of the country's workers, much smaller than in the industrialized countries of western Europe. Among the many factors explaining this may be listed: the very recent industrialization of the country; the extensive use of machine methods tending to decrease the proportion of the more easily organizable skilled craftsmen required; the size of the country with its enormous free-trade market and the possibility of shifting industry from one region to another; the great influx of immigrants up to 1914 with the obstacles attending their organization; the difficulties in securing favorable legislation arising from the framework of government and the influence of the employer class; and, finally, the high standard of living, the weak labor-class consciousness, and the marked spirit of self-sufficient independence among the workers.

Professor Wolman estimates that, in 1910, 8.6 per cent of the employee

class belonged to a union; that at the peak in 1920, following the war growth, the figure was 17.5 per cent; and that by 1930 it had fallen back to 9.3 per cent or, if agricultural employees are omitted, to 10.2 per cent. By 1940, however, the proportion had risen to something over a quarter of the workers considered organizable, and then the war raised it to over two-fifths or some 15 million in 1945.

This rather weak showing as far as the mass of employees goes was partly offset by a concentration of strength in certain industries, crafts, and localities. During the first third of this century, over half the total union membership was to be found in transportation, building construction, and mining; these groups together with the smaller membership in the printing and clothing trades are said to have constituted the foundation of the American labor movement. In manufacturing, as late as 1930 only about one-eighth of the employees had been organized, though subsequently the proportion was increased and probably was nearly one-half by 1945.

Such real strength as the unions possessed previous to 1933 was to be found rather in small segments of industry or in particular crafts; ordinarily in both cases only where skilled work was required. On the railroads it was the train-service brotherhoods that possessed real power; in mining the anthracite coal miners have long been supreme, while, until after 1933, the fluctuating power of the union in the bituminous fields seldom extended to the South; the strength of the building trades, though widespread, has been most marked in some of the large cities where they often completely dominated the situation. This greater city strength holds true of unions very generally. Among the public-service employees, only the postal clerks and mail carriers were powerful; among the professional unions, the musicians and the small group of actors; in transportation, outside the railroads, the longshoremen and the street-railway unions were the strongest.

Thus the direct benefits obtained by trade-unions were largely confined, at least until the last decade, to a very small proportion of the workers, chiefly in the skilled crafts. That this group, constituting the aristocracy of labor, did benefit very materially is seen in the relatively greater gains that it made, as compared with common labor, in securing shorter hours, higher hourly wage rates, and better working conditions in the period before 1933. It has frequently been charged that the outlook and activities of this group have been narrow, selfish, and disregardful of the far greater need of the masses among the workers; that, despite the obstacles to organizing the less skilled, more could have been done; and that, in cases where legislation was essential to secure results, the unions have too frequently failed to lend support unless it was in their own immediate interest to do so, thus leaving much of this task to the small group of social reformers.

Doubtless, as recent developments seem to indicate, there is some justification for such charges. It must be remembered, however, that the obstacles have been great and that even the craft unions have had to face a long and difficult uphill struggle. Nor have their achievements been entirely without benefit to the masses among the workers. The higher standards that they attained for themselves indirectly tended somewhat to raise those of the masses, and some of the laws that they supported were of general benefit. Yet it must be admitted that widespread and effective action, both union and governmental, to aid the great body of workers had to await the advent of the New Deal era.

The Growth of Labor Legislation. Between 1865 and 1875, little was accomplished in securing labor legislation. During the remainder of the century, a modest advance was made, but it is only since about 1900 that progress in obtaining both state and Federal laws became marked, particularly during Wilson's war administration and that of F. D. Roosevelt in the depression.

In securing this legislation, two groups have been mainly active. Labor, chiefly through the power of its organizations and the weight of numbers, has forced legislators to give its demands greater consideration; yet certain types of governmental interference have been opposed by the more conservative leaders. The second group consists of the little band led by those actively interested in social reform, who have done much to guide the efforts to secure legislation, particularly that for the more depressed masses. Hindering or actively opposing legislation were various conditions and groups. Mere inertia, owing partly to ignorance of, or indifference toward, undesirable conditions, has played its part, supplemented by the strong spirit of individualism and the belief in a policy of *laissez faire*. This spirit, deeply embodied in our political institutions and the framework of our government, created legal obstacles; as a result, many laws were declared unconstitutional or seriously limited in scope. The division of powers between the Federal government and the states proved more of an obstacle in this field of legislation than in most, and the very number of the states added to the difficulties faced.

The most active opposition came from employers, chiefly through their organizations, and from the more conservative elements who felt that the legislation was unnecessary, unwise, or prejudicial to their interests. As among the different states, the competition of economic interests was a deterring factor, each state fearing that a higher standard of labor legislation might involve increased costs of production and drive business to other states. Recently, as the export of manufactures increased, the fear of raising labor costs relative to those of foreign countries has gained force. The net results of the opposing forces as they became embodied in legisla-

tion cannot be described in detail; only the more important general trends can be noted here.

As regards child labor, most progress was made previous to 1933 by state legislation limiting the working hours for children and women. The first 8-hour law for children was passed in Illinois in 1903. By 1920, over half the states and by 1940 nearly every state limited the hours of labor of children under sixteen in most occupations to eight a day, and some set a higher age limit. The South Atlantic states, still the most backward in this respect, have recently much improved their laws. Compulsory school-attendance laws, commonly through sixteen years of age, now found in all states, though uncertainly enforced, also restricted child labor. Nightwork for children has been very extensively prohibited. The age at which children can be employed in most kinds of industry has been advanced substantially; fourteen years is the common minimum with higher limits in some states and industries.

The Federal laws of 1916 and 1919, prohibiting employment in factories and mines of children under fourteen and of children under sixteen at night or over 8 hours a day, were declared unconstitutional. The proposal of a constitutional amendment to permit the prohibition of child labor under eighteen, though submitted to the states by Congress in 1924, had been approved by only 28 states up to 1944. Meanwhile, encouraged to try again by a more liberal attitude of the Supreme Court, Congress included in the Fair Labor Standards Act of 1938 provisions prohibiting the employment of children under sixteen in interstate commerce or in making goods entering into such commerce and also those under eighteen in occupations that were hazardous or detrimental to their welfare, with minor exceptions.

From the first, really effective limitation of the hours of women's employment by Massachusetts in 1879, then set at 10 hours a day and 60 a week, down to 1908 when the Supreme Court upheld the Oregon 10-hour law for women employed in factories and laundries, only fair progress was made; but now nearly every state has some such limits in most occupations and in many an 8- or 9-hour day has been established. Weekly limits of hours, commonly from 48 to 54, are also set in most states in various occupations, and nearly half the states prohibit certain kinds of nightwork by women. However, the requirement of extra pay above a 40-hour week of the Fair Labor Standards Act is an effective check on a longer week in the occupations where it applies.

In the case of adult males, limitation of hours was narrowly circumscribed and confined chiefly to public employees, those working on public contracts, and those in a few hazardous occupations like transportation and mining. The 8-hour day law of 1868 for Federal employees has previously been mentioned. More inclusive in scope was the Walsh-Healey Public Contracts

Act of 1936 which required that, in practically all government contracts of $10,000 or more, the contractor must observe the basic 8-hour day and 40-hour week, refrain from employing boys under sixteen or girls under eighteen, comply with state health and safety regulations, and pay as a minimum the prevailing wage. Over half the states and many cities fixed an 8-hour day for most employees on public works or connected contract work. In practically every state where mining was important, an 8-hour day for miners was decreed and over half the states supplemented the Federal act of 1916 by shortening the hours of workers on steam and electric railways. Though only a few states set daily or weekly limits on hours for all male factory workers, the recent Fair Labor Standards Act, where applicable, tends in normal times to secure a 40-hour week.

Minimum wage legislation started in Massachusetts in 1912 and was soon adopted by a number of states. Owing to constitutional difficulties, it was confined to women and children or public employees down to 1933; even then it met with a series of adverse Supreme Court decisions starting in 1923. New attempts at state legislation and then under the NRA codes, where men were included, also ran foul of the courts. Not until 1937, when a more liberal Supreme Court upheld a law very similar to that condemned in 1923, did the way seem clear for action. The next year half the states had minimum-wage laws, though only one was applicable to men, and practically all, by vesting the determination of the minima in commissions, provided the needed elasticity in application. Sweeping Federal action came with the Fair Labor Standards Act of 1938, the constitutionality of which was upheld in 1941. In the field where it applied, it established minimum standards for wages and hours as well as for the use of child labor. These standards were to be raised so that after October, 1940, there was to be a basic 40-hour week and a minimum pay of 40 cents an hour with time and a half for overtime, though exceptions were allowed for certain less efficient groups.

Another group of laws has regulated the conditions under which wages were paid. Various states require weekly or biweekly payment of wages and at a time and place convenient for the worker. The conditions under which fines or other deductions are made have sometimes been regulated, and the worker has been given a more secure lien to protect the wages due him. Other laws curtailed abuses incident to payment in truck and the use of company stores. Occasionally, public legal assistance is provided workers in suits involving wage payments or other disputes, though usually this is done by the private legal-aid societies of the larger cities.

Public employment offices have been established to help workers locate jobs, to secure a more efficient allocation of the labor force, and to lessen some of the excessive charges or other evils existing in many private

agencies. The first was started in Ohio under an act of 1890, but the growth was slow and there were less than 100 state or municipal offices in operation in 1916. In the emergency during the First World War an extensive Federal-state system was erected, which was generally allowed to lapse on the return of peace. Thereafter, little progress was made until the depression led to the Wagner-Peyser Act of 1933 which established the United States Employment Service. By 1938, stimulated by the offer of a Federal subsidy for those adopting an approved plan to secure coordination, all the states had entered the system. During the Second World War, control was centralized under Federal authority but subsequently relaxed.

To induce the states to provide more free training in industrial, agricultural, and home economics work the Smith-Hughes Act of 1917, which created the Federal Board for Vocational Education, offered grants-in-aid to any states willing at least to match them and to cooperate in improving these educational facilities. The resulting stimulus to action, in which all states joined, led to the establishment of several types of schools especially designed for the purpose in which over 2.6 million pupils were being trained in 1942. Additional educational grants were made in 1946.

Another field in which legislation has done much for the workers is that relating to occupational disease, safety, and industrial accidents. Although the accident rate in the United States has been relatively high, some industries have secured a notable reduction. It was estimated that in 1945 there were 16,000 deaths from industrial accidents, 84,500 suffered a permanent impairment of working functions, and 1,900,000 sustained temporary disabilities. Innumerable laws have been passed to compel the provision of better safeguards against accidents and to ensure more healthful conditions of work, and the general creation of state labor bureaus with more efficient systems for inspection has secured better enforcement.

Further legislation has made progress in shifting the heavy losses still remaining from the worker to industry. Under the old common-law doctrine, the employer was responsible for the exercise of reasonable care in guarding against accidents; beyond that, he was not responsible to the worker for accidents arising from the occupational risks, the negligence of fellow servants, the contributory negligence of the worker, or the risks "assumed" by the worker. When to these exceptions were added the worker's difficulty in meeting the legal costs of prosecuting a claim for damages and the meager net return generally obtained even when successful, it was seldom that the worker escaped most of the losses from accidents.

This situation has been largely remedied by (1) very general statutory modification of the old common-law doctrines and (2) state and Federal legislation, chiefly since 1910, and favorable Supreme Court decisions in 1917, inducing or compelling employers to provide compensation for indus-

trial accidents. Though some concerns have their own plans for meeting such risks, most use private or state-controlled insurance. As a result, the worker has more certain and adequate compensation, most of the burden is borne by industry, as it should be, and much litigation is avoided.

Down to 1935, however, there still remained a large group of risks involving losses against which American legislation was notoriously backward in providing protection. Sickness, old age, invalidity, and unemployment, one or another, if not all, commonly face the worker sooner or later, and few are adequately prepared to meet the financial problems thus created. It was estimated in 1935 that half the population sixty-five years of age and over, or nearly 4 million, were dependent upon others for support, a quarter being supported at public expense, and most of the rest by relatives and friends. Ill health was said to affect from four to six times as many workers as suffered from industrial accidents. Total unemployment was commonly existent for around 6 per cent of all workers, and in times of depression the proportion grew much larger.

Before 1935, only one state had an unemployment insurance law, the Wisconsin act of 1932, though there were a few union or employer-union systems in operation. In the field of old-age pensions, the Federal government and some local units had provided for certain limited groups such as classified civil service employees or local teachers, firemen, and policemen. Few states had acted before 1929 and barely half by 1934; also, not all laws were compulsory. Against the other risks arising from nonindustrial sickness, death of the family supporter, etc., almost no legislative provision had been made, aside from funds-to-mothers acts. The worker had to fall back on such plans as private initiative on the part of employers, unions, fraternal organizations, and charitable institutions offered, or such insurance as he was able to procure. As so frequently happens, it required the suffering of a disastrous depression to arouse the country to action; the resulting Social Security Act of 1935 introduced one of the most sweeping reforms benefiting the masses in recent years.

This law provided for (1) a Federal system of old-age benefits and insurance, (2) a state system of unemployment compensation, and (3) a group of grants-in-aid to the states to further welfare work for various special groups. Compulsory old-age insurance benefits, varying with their previous earnings but with $85 a month as a maximum, were to be provided, beginning in 1942, for those sixty-five years of age and over. These were to come from a fund built up by equal contributions from employers in the form of an excise tax on their pay rolls and from employees through deductions from their wages or salaries, at a rate rising from 1 per cent each in 1937 to 3 per cent each in 1949, though the rise was later postponed. Several large groups, however, were excluded from this system including, besides

the self-employed, hired agricultural laborers, domestic servants employed in homes, maritime workers in American waters (granted unemployment compensation in 1946), and those working for Federal, state, and local governments or for charitable, religious, and educational institutions. At the 1940 census, these groups included over 16 million or nearly a third of the employed population.

To provide for the needy aged until insurance payments became available and also for such aged people as might be in need thereafter, a system of old-age pensions was set up under which the Federal government agreed to match the funds up to $15 a month per person of such states as adopted an approved plan for old-age pensions. By 1938, all states had adopted such a plan. Finally, there was a special group including employees of railroad, express, and sleeping-car companies and their subsidiaries that in 1937 secured a law providing for a retirement plan estimated to cover about 1.5 million workers, the benefits of which were substantially increased in 1946.

In 1939, amendments advanced to 1940 the date when benefit old-age pensions were to begin, put the fund on a pay-as-you-go basis instead of accumulating a huge reserve, and extended benefit payments to new groups including aged wives and minor children, aged widows, young widows with minor children, and orphans. An important object of these measures was to enable the aged to live at home and decrease the number in public almshouses or private charitable institutions, as well as to relieve relatives and friends of the burden of their support.

The provision for unemployment insurance excluded groups similar to those excluded from old-age insurance, and also employees of those having less than eight workers, except where a state set a lower limit. The funds were to be obtained from a Federal pay-roll tax, originally 3 per cent but later reduced, of which 90 per cent was to be credited to employers who made payments to states that had approved unemployment-insurance systems. This put strong pressure to bear on the states and, since the tax was nation-wide so no state adopting the plan was put at a disadvantage, all soon had approved systems. The state systems vary somewhat, but in most the benefit paid is about half the weekly wage up to a $15 maximum; the minimum is three-quarters the weekly wage or $5, whichever is lower. Sixteen weeks is the common limit for the duration of benefit payments. These laws are estimated to cover about half the gainfully employed.

The most serious deficiency in the Social Security Act was the failure to make any general provision for health insurance and medical care, though filling this gap will prove very expensive. However, among the various forms of grants-in-aid included in the law there were several designed to further health promotional activities by the states, and in 1946 a grant of

$75 million a year for 5 years was made. There were also grants for vocational rehabilitation of the physically disabled, for the needy blind, and for crippled and needy children. The administration of the act was vested mainly in the Social Security Board which was also to determine broad policies and suggest needed changes.

In 1945, the Board announced that its payments up to then had totaled about $9 billion and about 4.3 million were receiving cash benefits. By that date 73 million had registered for social security cards and 40 million were already eligible to receive benefits when they reached the age of sixty-five.

Another group of laws dealt with arbitration or mediation in labor disputes. About half the states have set up machinery for the voluntary settlement of such disputes. In some states, under certain conditions a public investigation is made compulsory, though in others it is optional. Actually few states have accomplished very much through voluntary arbitration laws. A series of Federal laws since 1888 has sought to provide means for settling disputes on interstate carriers with moderate success. The conciliation service set up in 1914 in the Department of Labor has been distinctly useful in mediation work, and in 1938 the Federal Maritime Labor Board was set up to provide mediation in the shipping industry. Compulsory arbitration has been strongly opposed by both employers and workers, besides facing constitutional obstacles. Such a requirement in the Kansas Industrial Court Act of 1920 was condemned by the Supreme Court. Consequently, where strikes threaten serious inconvenience to the public, it is common for some public official such as the President, a governor, or a mayor, to offer mediation. The pressure to come to an agreement lest public hostility be aroused often promotes a successful outcome, yet it may be questioned whether something more is not necessary in disputes vitally affecting a local or the national economy.

The advance in labor legislation since 1860 until the last decade or so was the product of slow uphill work trying to secure effective organization among the laborers and a recognition of the need for action among the public or the lawmaking bodies. Typically, reforms lagged far behind the need of the times, and still do. Nor did all the laws adopted prove wise; others, too frequently were poorly administered. Yet, considering the magnitude and complexity of the problems involved, much was accomplished. The results greatly aided in making the lot of the laboring class of today markedly superior to that which prevailed in 1860.

Chapter XXXVII

MARKETING AND TRADE, DOMESTIC AND FOREIGN, SINCE 1860

Introduction. That this period with its rapid growth in population and wealth should be marked by a great increase in the volume of trade was to be expected. But, just as during the preceding period, trade was greatly stimulated by better transport and communication facilities. It was not until this period that an adequate railroad system was secured and long-distance haulage of freight by rail became common. The real success of steamships in carrying ocean traffic was attained much after 1860. At no other time in history has the area of most markets been so rapidly extended as during this period. More and more commodities sold in markets that were national or nearly world-wide in scope, and this of course promoted greater territorial specialization and division of labor.

This growth of trade necessitated a further expansion in marketing facilities, and also made possible greater specialization of marketing functions, thus leading to important changes in marketing organization. Often the marketing process became more complicated and involved a larger number of services before goods passed to the final consumer. In spite of economies obtained by more efficient marketing methods, the whole process grew to absorb a relatively larger amount of economic resources than ever before. Thus the volume of production is thought to have increased about nine times between 1870 and 1930, though the population increased only about three times and the number engaged in production about 3½ times; yet the number engaged in distribution increased nine times and handled about the same volume of goods per capita as in 1870. As a result, about twice as large a proportion of those engaged in gainful occupations was employed in distribution in 1930 as in 1870.

The Frontier Markets. The organization of the market varied greatly, not only as among different commodities and different regions, but as between different periods. The more primitive methods naturally prevailed on the frontier or in isolated rural sections of earlier settled regions. The organization typical of such sections has previously been described, but a few features characteristic of that which appeared in the Far West may be noted here.

The early unstable mining camps of that region required little in the way of facilities for trade. Their main product, bullion, was easily carried out by packsaddle or the express company agent, and the few necessities not locally produced and consumed by the predominantly male population lacking settled homes were brought in by pack train to the general store. The settlements on the Pacific coast had access to world markets by ocean transport and thus were able to send out the growing surplus of grain, lumber, or other products and bring in needed manufactures. San Francisco was the chief trading center through which these supplies were distributed into the interior, and this trade extended well into the Great Basin to the east of the Sierras. For the section farther east, most goods were carried across the plains from Missouri River points and distributed through Denver or Salt Lake City.

In the interior sections devoted to agriculture, the problem of markets presented even more difficulties than confronted early settlers in the Middle West. Since this vast area had practically no river transportation except the limited facilities provided by the Missouri and the Columbia, railroads were essential before anything but local markets for most commodities could develop, the great exception being livestock that could stand long drives. Unlike the region east of the Missouri, railroads were extended westward into this section ahead of any considerable volume of settlement. When settlers came, they tended to locate near the railroads. Consequently many settlements in the Far West enjoyed access to distant markets almost from the first, and their development was not checked by poor marketing facilities such as had hampered pioneers in the East not located on a waterway. With distant markets for the staple products available, greater specialization was possible, and the market organization of this region quickly took on the character of that in the older sections of the country

Changes in Rural Markets. As the rural districts grew in population and wealth and obtained better marketing facilities, they both bought and sold more goods; the opportunities for specialization in one or another line of production increased; each locality tended to become less self-sufficient economically; and, as the markets for various commodities expanded in area, the rural population found itself increasingly bound up with markets that were national or international in extent. Everywhere, greater specialization in marketing facilities was developed. Though the general country store by no means disappeared, one after another of its commodities passed into other channels of trade. This was particularly true of the products that the farmer had formerly sold to these stores. The farmer sold a smaller variety of things produced in slight quantities and concentrated more on a few staples such as dairy and poultry products, grain, livestock, cotton,

fruit, and garden truck, which he sold to dealers specializing in handling the staple, or in more recent years disposed of a growing proportion through commission men or his own cooperative marketing organization.

Similarly, though to a less extent, the farmer secured more of his purchases through other channels. The growth of neighboring towns with specialized retail stores and easier access to these towns, especially after the advent of the automobile, provided better opportunities for securing many goods for both farm and household; in some sections, cooperative purchasing societies provided another channel, and the rise of great mail-order houses combined with the introduction of rural free delivery and the parcel post gave easy access to an endless range of supplies in distant markets. In certain lines, such as farm machinery, the manufacturers secured local agents to sell direct to the farmer. Facing such conditions the old country peddler practically disappeared, and where the general country store survived these inroads upon its trade, its business tended to become confined to goods in constant demand commonly bought from hand to mouth such as groceries. The storekeeper himself, instead of infrequent trips to the city to obtain new stock, was in frequent touch with jobbers and the smaller wholesale distributors of the nearest city. Thus the general tendency was to link up the marketing organization of the country districts more closely with that centering in the great cities.

Trade and Markets of the City. The important developments in marketing organization naturally occurred chiefly in the great city trading centers, but the effects of the changes there were ramified over the whole country. Though no adequate historical study of these changes has yet been made, some of the outstanding developments, in most of which the trend toward greater specialization was prominent, can be noted.

In cities the growth of population and wealth and the increased purchases by visitors so augmented the volume of retail trade that great specialization was possible. Large retail districts developed in the sections most accessible, and here were located not only the stores selling common necessities, including the great department stores, but the most highly specialized stores dealing in expensive luxuries. In the larger cities, outside of this central retail district, minor retailing centers arose selling goods widely used and of a type adapted to the wants of the district.

In contrast to the specialty store is the department store, which is practically a development of this period and illustrates the trend toward large-scale retailing through what may be called a form of integration. Generally developing out of the dry-goods business, these stores have added one department after another until the largest now supply nearly everything that the family uses, not to mention a wide variety of services. Occasionally, integration is carried further by acquiring control of the

manufacture of some of the goods dealt in or entering the wholesale trade as well.

More recent is the rapid rise of the chain store. This represents an effort to combine some degree of specialization with large-scale retailing; where the chain is controlled by the manufacturer of the goods sold, it is the product of integration. The chain store deals in lines of goods in general demand, sometimes in a wide range of low-priced goods but usually in a specialized class such as drugs, groceries, notions, and dry goods; those controlled by manufacturers cover a narrower field. Some chains are small and confined to one locality, others to one general section, and some have stores in cities scattered over most of the country. Very recently, the supermarket has appeared centering about the sale of food products and seeking to lower prices by a large volume of sales and eliminating the less essential forms of service.

A fourth important development in the retailing field, also designed to secure the economies of large-scale business, is the mail-order house. Though started about 1870, the great growth of this mode of retailing has occurred since about 1900. Most sales were made to the rural population, but of late retail outlets have been established in some large cities. The larger mail-order houses supply an endless variety of goods, and sometimes own the factories where they are made; others confine themselves to one general line. In the effort to eliminate the middleman, some specialty manufacturers rely largely on mail orders.

In the wholesale trade of the cities, considerable progress was made in extending produce exchanges. As successful operation depended on standardization of the products sold as well as upon a large volume of trade, the advances made in fixing grades and standards promoted this growth. The grain exchanges existing in 1860 were augmented by others formed at primary markets in the Middle West. The first cotton exchange was started in New York in 1870 and the second in New Orleans in 1871. Since then, numerous other commodities have been added to the list, in some cases by organizing a new exchange, in others by providing new facilities in the existing exchanges. Such exchanges provide the freest and most sensitive markets for the working out of the forces of demand and supply and thus tend to stabilize prices. Through the device of future sales they afford a form of insurance against losses from price fluctuations by the transfer of this risk to specialists. Yet they have not been free from abuses incident to speculative manipulation or unfair practices and have recently been put under stricter legal control.

One or another form of the city wholesaling organizations was the medium through which the great bulk of raw materials passed to the manufacturer and the finished products in turn were distributed to others.

Wholesale houses, manufacturers' outlets, jobbers, sales agents, brokers, and commission men became the most common types of middlemen. The channels followed by different commodities varied greatly and often in the case of a single commodity. Agricultural products used as raw materials gathered from many small producers typically passed through the hands of one or more buyers before shipment in quantity to the city wholesaler who sold direct or through commission men to the manufacturer. Farm produce practically ready for consumption, such as garden truck, fruit, or poultry products, was shipped to city wholesalers or commission men, sometimes sold at auction, and frequently passed through the hands of a jobber before reaching the retailer. In the case of minerals, where production was relatively concentrated, it became common for the producer to sell direct to the user through his own city agent, and it was seldom that more than one middleman was employed.

In the case of manufactured products, such as were used in other processes of production, like machinery or semifinished goods, where sales were less scattered, direct sales were common, perhaps through an agent; where an independent middleman was resorted to, one was commonly sufficient. Where the product was one for household consumption and commonly sold through retail stores, the services of more than one middleman were likely to be employed, except in the case of very large buyers. Thus such staples as groceries, dry goods, and hardware might be sold through a broker or agent to a wholesaler or perhaps a jobber before reaching the retailer; if sold in small quantities, another jobber handling a general line might intervene. Many manufacturers found it advantageous to have a sales office or agent in one or more of the great metropolitan centers where buyers tended to congregate.

Competition and the desire to cut the costs of distribution provided pressure to eliminate the middleman or at least to shorten the distributive process, and better communicating facilities, notably the growth of advertising, greatly facilitated the move, which was most marked among manufactures destined for household consumption. One result was a marked decline in the use of traveling salesmen. Another phase appeared in the effort of some producers to get control of a portion if not all of the distributing process. This same purpose, together with the advantages of large-scale buying, is seen in the organizations of retailers or consumers to buy direct from the producers.

Other developments in the distributive process included a marked expansion of warehousing, furthered by the introduction of efficient cold-storage methods. In the case of certain products, standardization of grades, aided by government action, careful measures for control of the business, and the growing use of warehouse receipts greatly facilitated trading and its

financing. The great expansion of advertising led to specialization in the growing advertising and sales-promotion agencies. Various producers' or distributors' trade associations improved marketing methods by their activities in establishing standards and grades, gathering information as to market conditions, promoting fair-trade practices, and in some instances, notably foreign trade, undertook the actual marketing of goods. The use of the auction system tended to decline in importance. It is now most widely employed for the sale of certain classes of farm produce in large city markets and is also important in the sale of cheese, butter, leaf tobacco, furs, and floor covering.

The Distributive Process at Present. The Census of 1930 was the first to cover the field of distribution, and we now have, therefore, comprehensive data as to the general character of domestic commodity trade and the structure of the distributive system that handles it. Those census figures, which are for the year 1929 before the effects of the depression became marked, show total retail sales of $49 billion of which over a fifth was made by the food group, almost a fifth by the automotive group including filling stations, and nearly a seventh by the general merchandise group including department, dry-goods, and variety stores; next in rank came the apparel group with about one-eleventh of total sales. This business was handled by 1,543,158 stores, of which less than 16 per cent were corporate-owned though these had almost half of the total sales. Classified by types of operation, single store independents had nearly two-thirds of all sales, sectional and national chains one-eighth, and local chains one-fifteenth. Over two-fifths of the stores had annual sales of less than $10,000; three-quarters of them less than $30,000, though the total for this group was less than a quarter of all retail sales. The stores with annual sales of over $1 million—0.14 per cent of all retail stores—had an eighth of all retail sales.

The wholesale trade, as classified by the census, was carried on by 169,702 establishments with total net sales of over $69 billion. A little over half were corporate-owned, and these had three-quarters of all sales. Of the various types of wholesalers those confining themselves to wholesaling made over two-fifths of all sales; manufacturers' sales branches and agents or brokers each made about a fifth; the rest was scattered among different types of which the assemblers and country buyers with nearly 7 per cent of all sales were the most important. The marked tendency toward concentration in certain localities is seen in the fact that almost half of all sales were made in four states, New York having a quarter of the total, Illinois a tenth, and Pennsylvania and California about one-fifteenth each. Among the cities, New York was far in the lead with Chicago a poor second, but still way above Boston, Philadelphia, San Francisco, Detroit, Pittsburgh, St. Louis, and Kansas City, which ranked next in order.

Much the best general survey of the flow of the main classes of goods through the different channels of distribution as shown by the 1930 census is provided by a Twentieth Century Fund study [1] the results of which are depicted in the chart on page 634. Starting, as there indicated, with goods valued at $21.7 billion obtained from agriculture, the other extractive industries, and imports, $9.7 billion of this went direct to some type of intermediary distributor, transport costs being added on the way, and $7.2 billion direct to manufacturers; only a small portion went direct to retailers or to the group of terminal buyers consisting of consumers, institutions, utilities, and exporters, or was used by the extractive industries themselves. Of the goods used by manufacturers, nearly one-half was bought direct from other manufacturers and almost two-fifths from intermediary distributors. The goods sold by manufacturers had a total value of $69.6 billion of which over one-third was sold to other manufacturers, almost one-half was disposed of through some intermediary wholesaler, about one-sixth went direct to terminal buyers, and less than one-tenth direct to retailers. Of the $69.3 billion of sales by intermediary distributors, two-fifths went to retailers, less than a quarter each to manufacturers and other intermediary distributors, and the rest to terminal buyers. Of the total retail sales of $49.2 billion, nine-tenths went to consumers, and most of the balance was sold for use in agriculture.

The result of all these sales, including $8.7 billion paid for transportation, totaled $218.6 billion; while the total of purchases by all producing and selling agencies was $153 billion. The difference of $65.6 billion represented the cost of producing and distributing goods and equaled the total outlay of terminal buyers for finished goods. It is significant of the importance of distribution in our economic order of today that the total of all sales was over three times the value of the finished goods purchased by terminal buyers. The fact that retailers' sales made up less than a quarter and those of the intermediary wholesaler group less than a third of total sales suggests the relative importance of these two groups of distributors.

Of the $65.6 billion representing the total cost of producing and distributing goods, it is roughly estimated that 59 per cent, or $38.5 billion, represented the total cost of distribution. This was made up of $12.6 billion for retailers' costs, over $9 billion for manufacturers' distributing costs, almost as much for transportation charges, $7 billion for the various intermediary distributors' costs, and a few minor items. This means that, in general, it cost the country about 50 per cent more to get goods distributed than it did to get the same goods produced. This suggests why there often seems to be such a wide spread between retail prices and the

[1] "Does Distribution Cost Too Much?" The Twentieth Century Fund, New York, 1939. This section of the chapter is based on that study.

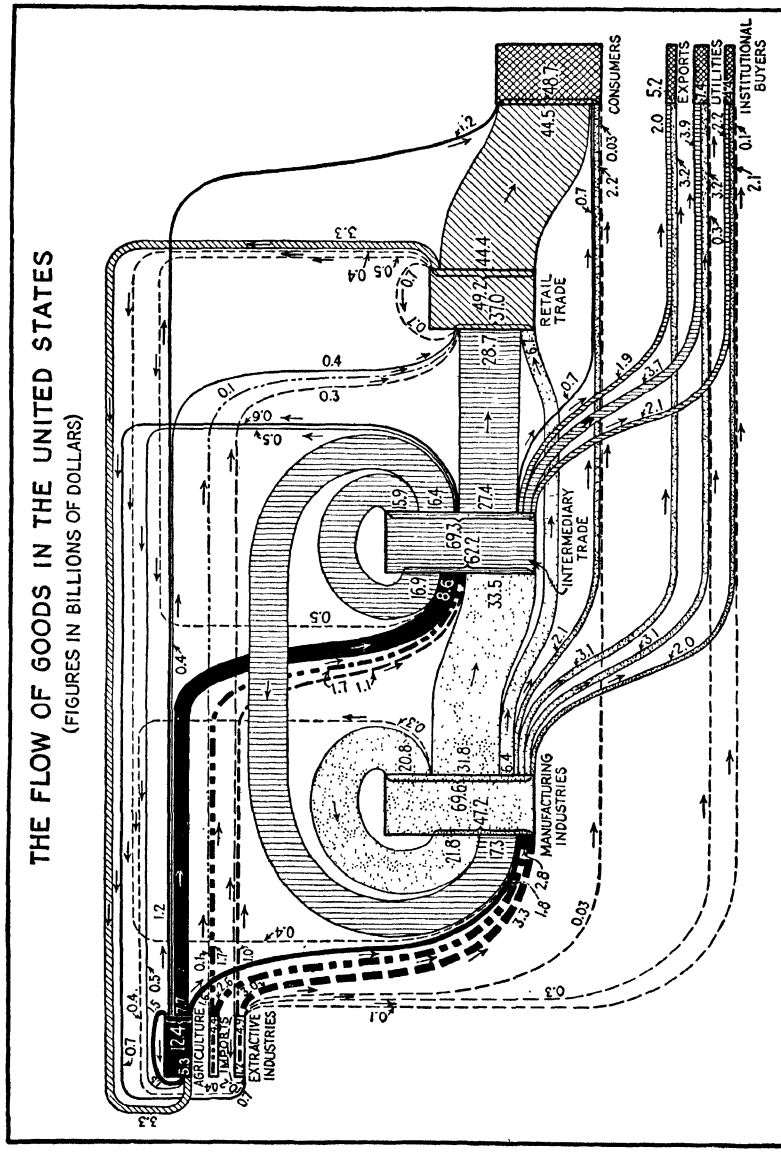


FIG. 57. The flow of goods in the United States. (*Reproduced by permission of The Twentieth Century Fund from "Does Distribution Cost Too Much?"*)

prices received by the producers. It also suggests the opportunities open in the field of distribution for lowering costs and thus raising the standard of living, provided means can be found to introduce more efficient methods.

The decade of the 1930's witnessed no very significant changes in wholesaling; in retailing the changes largely reflected the current trends. By 1939, despite hostile legislation, chain stores showed a small gain in their percentage of total retail sales, aided by an extension of their control over department and combined grocery and meat stores. The latter type of store experienced an unusual expansion with the growth of supermarkets, but there was a decrease of around two-thirds in the number and the sales of general stores, partly because of a shift toward concentration on either foods or general merchandise.

Criticisms of the Marketing Organization. It is frequently charged that marketing methods are inefficient and wasteful, that goods pass through the hands of too many middlemen, and that there is an unnecessarily large gap between the price received by the producer and that paid by the consumer. How far this is justified is not as yet determined, but the success attained by the various means adopted to reduce this gap indicates that the criticism is well grounded in some cases. Additional evidence is afforded by the growth of organized efforts to check more direct selling by the groups fearing to lose thereby, as reflected in the opposition to chain stores, mail-order houses, or cooperatives, and by the activities of associations of retailers, wholesalers, and manufacturers designed to prevent more direct sales and to keep trade in the old channels.

On the other hand, it is too often assumed that, since all the functions performed in the process of distribution commonly result in little visible or tangible alteration in goods, therefore the services rendered must have cost little and, if there is a large gap between the price received by the producer and that paid by the consumer, it must be due to inefficiency or excessive profits in distribution. This overlooks the trend to increase the amount and the variety of services performed by distributors. Also it must be remembered that, except in the case of transportation, the processes of distribution have afforded far less opportunity for the introduction of machine methods than many lines of production. The costs of distribution must be considered as a necessary outlay to secure the advantages of specialization in production. They could be completely eliminated if each family would produce all it consumed, as the early frontiersmen nearly did. But one of the most dominant and widespread features in the evolution of industrial society has been the trend toward specialization, clearly indicating that the greater distributing costs which this commonly involved were more than offset by the resulting economies in production. That the costs of distribution would absorb a growing proportion of the total outlay

for goods was to be expected, though this does not imply that the existing distributive system involves no waste.

That excessive middlemen's profits are in any appreciable degree responsible for the high cost of distribution, unless it is in a period of rapidly rising prices, is highly improbable. In general, wholesaling and retailing, particularly the former, are highly competitive lines of business; with few exceptions, the general trend of our economic development has been to make them more keenly competitive than ever before. The chief exceptions include the recent legislation, previously described, tending to check competition among distributors and the activities of trade associations directed toward the same end. It has recently been estimated that the average net profit of all retailers is under 2 per cent, and possibly 1 per cent, of their net sales; that of wholesalers or other intermediary distributors is probably under 1 per cent of their sales. Although this is no measure of the rate of profit that distributors make on their investment—that also depends on the rate of turnover of stock and other things—it does indicate that, whatever the rate may be, it cannot be charged with much responsibility for high prices or costs of distribution if it takes on the average less than 3 cents of the consumer's dollar.

The Main Courses of Domestic Trade. The courses followed by domestic trade were determined mainly by the territorial specialization of production that developed with the growth of population, the opening up of new regions, and the improved means of transportation. In the case of commodities entering into foreign trade, the courses followed in internal trade were shaped by the ports through which they were exported or imported and the locality where they were produced or consumed.

The North Atlantic states specialized in manufacturing and also handled most of the import trade and a goodly portion of the exports. From this section, manufactured goods and imports, partly raw materials and partly finished goods, went out to the rest of the country. From other sections, it received most of the raw materials worked up in its factories, most of the foodstuffs consumed, nearly all of the oil, a portion of the soft coal, and some domestic manufactures.

The group of states north of the Ohio and east of the Mississippi rivers was the most evenly balanced in its lines of economic activities of all the sections in the country. It developed during this period a considerable volume of manufacturing, based mainly on easily accessible raw materials, and typically turned out less highly finished products than did the East. A large amount of the output was sent to other sections or exported. It also raised a considerable portion of its food supply and shipped out large quantities of meat and dairy products. Its output of soft coal practically met its needs and, up to about 1900, this was also true of its oil and lumber

production; since then, increasing quantities of both, and more recently of natural gas, have been brought in from the South or the West.

The South concentrated on the extractive industries but made substantial progress in developing several lines of manufacturing based on its raw products, such as cotton, cottonseed, iron and steel, lumber, petroleum, tobacco, and bauxite. Until recently, one-half to two-thirds of its great staple, cotton, was exported, and such of the balance as was not used locally was shipped north. Most of the surplus of the other extractive products including both raw materials and foodstuffs, such as fruits, vegetables, and nuts, went to the Northeastern or North Central states together with a portion of its output of manufactures. The flow of goods into the South consisted mainly of manufactures, both domestic and foreign, coming from the North, and a portion of its food supply coming from the North Central or Western states.

The West concentrated even more on the extractive industries and manufactured only a few products based chiefly upon such of its staples as livestock, grain, beet sugar, lumber, and oil. Such products with the addition of copper, lead, zinc, gold, silver, wool, fruits, and vegetables constituted the chief shipments to other sections or abroad. Imports from the Far East through Pacific ports were generally forwarded to the East, silk being the most important item. Manufactured goods made up the greater portion of the commodities obtained from elsewhere, though certain foods and some coal were also brought in.

As this summary indicates, the great volume of the country's trade moves along east and west lines, manufactured goods predominating in the westbound traffic, though coal is important in bulk; products of the extractive industries, a portion of which have been manufactured, make up most of the eastbound traffic. Much the greatest trade channel is that running east and west in the northern portion of the country between the Atlantic and the Missouri River, the portion having the highest density of population and the most wealth. The movement of goods between the North and the South is much smaller in volume, the southbound traffic consisting largely of manufactures and the northbound of raw products of the extractive industries.

Within the different sections, though sometimes overlapping their boundaries, there developed channels of trade that centered in the large commercial cities. Such cities became the main gathering place for the surplus products of a large hinterland, some of which were distributed to other portions of the district and the balance shipped out, perhaps after being manufactured, to other districts. The wholesale trade in goods brought in from other sections centered in these cities, from which these goods were redistributed through the tributary hinterland. The hauling, warehousing,

and other facilities used in carrying on the trade of the district also tended to centralize in these cities. Such a city with its tributary hinterland has been called a "metropolitan economy" and is illustrated by such places as Boston, New York, Atlanta, Chicago, the Twin Cities, Kansas City, Denver, and San Francisco. An appreciable, though ordinarily a minor, portion of the volume of goods originating in such a metropolitan district is consumed within the district. Trade with the rest of the world tends to center in the dominating commercial city which commonly makes its contacts with other regions through similar cities elsewhere.

Barriers to Internal Trade. One of the great economic advantages enjoyed by the United States as compared with other countries is the almost complete freedom of trade that prevailed in what has come to be by far the richest market provided by any nation in the world. Hence recent efforts on the part of the states or other groups to erect barriers to this trade may well be viewed with concern. Though in evidence before the depression of the 1930's, that event gave a decided impetus to the movement, which was based largely on the desire of various state interests to secure protection from outside competition. Since the control of interstate commerce is vested in the Federal authority and the Supreme Court has of late substantially expanded the scope of that authority, the power of the states to erect barriers is severely circumscribed; yet means have been found through various forms of taxation, health, sanitation, marketing, and other regulations to create obstacles to interstate trade in various goods and services. Often there has been a sound reason for the restriction, as in the case of laws needed to protect health, prevent the spread of disease and insect pests, or to check the evasion of local taxes; but only too frequently these objectives have simply been used as a device to lessen competition from outside the state, and the administration of the laws, where any leeway is permitted, has often been directed to the same end.

The barriers thus erected have taken a variety of forms. In the field of farm products, where many cases are found, they may be imposed under health, sanitary, and quarantine measures or under regulations regarding grades, standards, and labeling, which, however desirable, may be so lacking in uniformity among different states as to cause needless trouble and expense. Similar variations exist in the regulations governing motor vehicles; license charges may be made excessive and a vexatious system of state ports of entry may lead to retaliatory action by neighboring states. Within a state, city ordinances, often combined with union activities, may be used to protect local interests. The numerous laws requiring that various supplies purchased for use by the state shall have been produced, or at least bought, within the state reflect the same desire to protect "home industry" that

lies back of the various campaigns to "buy at home" regardless of whether "home" is a city, a state, or a nation.

Foreign Trade; Changes in Organization. The developments in the organization of foreign trade during this period were similar in general character to those in the field of domestic trade. The most conspicuous were the trends toward specialization of functions and toward integration, the latter being often associated with concentration of control.

Greater specialization is seen in the tendency of exporters or importers to confine themselves to one great staple, or a small general class of goods, or the products of one country. An increasing number engaged in wholesaling exclusively and left retailing to others. Specialized brokers and commission men increased in number. Various services once frequently undertaken by the merchant were assumed by specialized groups, except where integration occurred. Aside from a few producer-exporters the merchant ceased to own ships and generally depended on brokers to secure cargo space; he relied more on warehouses provided by others; he found financial institutions prepared to supply more and better facilities for financing his transactions, and brokers to secure insurance and see his imports through the customhouse.

The form taken by integration varied with different trades. Big manufacturing concerns might engage directly in the export trade, often organizing a subsidiary corporation for the purpose, and set up branches with warehouses and a distributing system in foreign countries. Occasionally, they owned a fleet of ships as in the case of the Steel Corporation or the oil companies. Similarly, manufacturers importing large quantities of raw materials and large-scale retailers of foreign finished products often established their own agencies for handling this trade. In such integration there was specialization in the functions of different groups under one control instead of under independent concerns.

Most attempts at combination to control goods entering foreign trade are based on cartels or other forms of agreement among monopolistic groups in different countries, such as have previously been noted. In some cases, foreign buyers of American raw products have united so as to bargain more effectively, and this example has occasionally been followed by importers in this country. In the last two decades, an increasing volume of trading has been negotiated through governmental channels, notably in the case of Russia. In the United States, exporters of certain products have joined in associations authorized by the Webb Export Combination Act to promote foreign sales and reduce the distributing cost through the larger volume thus secured. This has proved most advantageous to those whose foreign business was not extensive; those already having a well-developed export trade commonly preferred to retain their own organization.

The Merchant Marine; Technological Developments. Before 1860, the ocean steamships had not been able to compete with sailing vessels in carrying anything except passengers, the mail, and the most valuable cargo. It was only in the course of the next half century that the revolutionary effects of the introduction of the steamship spread over most of the ocean-borne carrying trade. The ultimate success of the steamship in securing the bulky and less valuable freight was chiefly a product of improvements in the marine engines, reducing the space required for fuel, and the introduction of cheap steel, both lighter and stronger than iron, which made possible the construction of much larger ships.

Steel began to be used in the construction of the hull about 1880; triple- and quadruple-expansion engines soon followed; twin screws were introduced about 1888, followed in the twentieth century by triple and quadruple screws, the turbine engine, the internal-combustion engine, and engines using oil instead of coal. By reducing by more than three-quarters the amount of coal required to produce a unit of power, the cost of fuel was cut and increased cargo space obtained. Replacing coal with oil saved still more cargo space, as did also the establishment of stations throughout the world where supplies of coal or oil were obtainable. As the volume of freight grew, vessels designed for specialized cargo began to be built; refrigerator ships were introduced about 1880, followed by tankers for transporting oil, and others for carrying ore. As these improvements increased the advantages of the steamship in lowered costs of transport, greater speed, and less risk, the sailing vessel was gradually displaced, but it was not until the 1890's that the steam surpassed the sailing tonnage in the world's merchant shipping. The really rapid displacement of the sailing vessel took place thereafter. By 1920, the sailing tonnage had fallen to a twentieth of the total, and now it has almost disappeared. Meanwhile the airplane had been developed to the point where, before 1945, it was competing with the steamship in the transport of passengers, some mail, and a little cargo.

Developments in the Organization of Shipping. As the cost of cargo vessels rose to several hundred thousand dollars and that of transatlantic passenger ships to many millions, a general shift from individual or partnership to corporate ownership became necessary, all the more so when a regular line of ships was organized. The growing volume of traffic made it worth while to establish more regular lines of ships that followed fixed routes at frequent intervals. Such lines took over an increasing proportion of the traffic so that the tramp vessels, following irregular routes and going from port to port wherever cargo was momentarily available, steadily declined in importance. As the larger companies established new routes or acquired independent lines, concentration of control increased. In the coastwise trade also, railroads sought control over shipping lines, in some cases to

check competition, in others to increase their traffic by securing connections with important ports not reached by rail.

In ocean transport, as elsewhere, the period is marked by an extensive development of combinations taking the form of pools and commonly known as shipping rings or conferences. Ocean shipping is subject to extreme fluctuations between periods of prosperity and depression. During a trade boom or a war, shipbuilding may be actively pushed; when the abnormal demand disappears, the large excess supply remains for a long time since the modern cargo ship can be kept in service around 20 years. The loss involved, even when a ship is tied up in port, may well lead to its operation if anything above direct costs can be covered, so competition is very keen. The maladjustment is often aggravated by governmental aid designed to build up a nation's shipping regardless of the world's needs. Another difficulty is that there are very few ports where the outbound cargo approximates the inbound cargo in volume of space and character of service required, so there is generally a surplus of cargo space one way or the other. The establishment of regular lines between ports with fixed sailing dates hampered adjustment, and there was always the competition of the tramp vessel. Such conditions along with the trend toward concentration explain the rise of combinations.

The formation of shipping rings began in England about 1875 and from the 1890's on spread rapidly among the ocean steamship lines. By 1913, at least eighty agreements or informal understandings existed affecting transport over different routes to or from the United States. As the cargo space required for exports exceeded that for imports, competition was keener for the inbound traffic and agreements covering it more common, though fear of the antitrust laws was a minor factor. In the conferences, the competition among members was checked by agreements as to rates and other points; that from outsiders was checked largely by the use of "fighting ships" or the payment of a deferred rebate to those using conference ships exclusively. After the rule-of-reason interpretation of the antitrust law in 1911, several lower court decisions, though condemning certain practices, upheld shipping conferences as reasonable; in 1916, the Shipping Board Act authorized shipping agreements subject to the approval of the board, though discriminatory rates were prohibited. Based on the belief that in this industry competition did not invariably produce the best results, this law marked the beginning of the trend to modify the indiscriminate condemnation of all combinations that had theretofore prevailed.

The Growth of the Merchant Marine. The chart on page 642 shows the changes in the two branches of the merchant marine during this period. Since the factors affecting the growth of each were very different, they must

be separately considered. In 1860, the licensed tonnage engaged in the domestic coastwise, lakes, and river trade was 2.8 million gross tons. This was not permanently surpassed until after 1881 when a steady growth began which raised the total to nearly 6.9 million tons in 1913. A slight decline during the First World War was followed by a sharp rise to nearly 11 million tons in 1932, about which point it fluctuated until the next war.

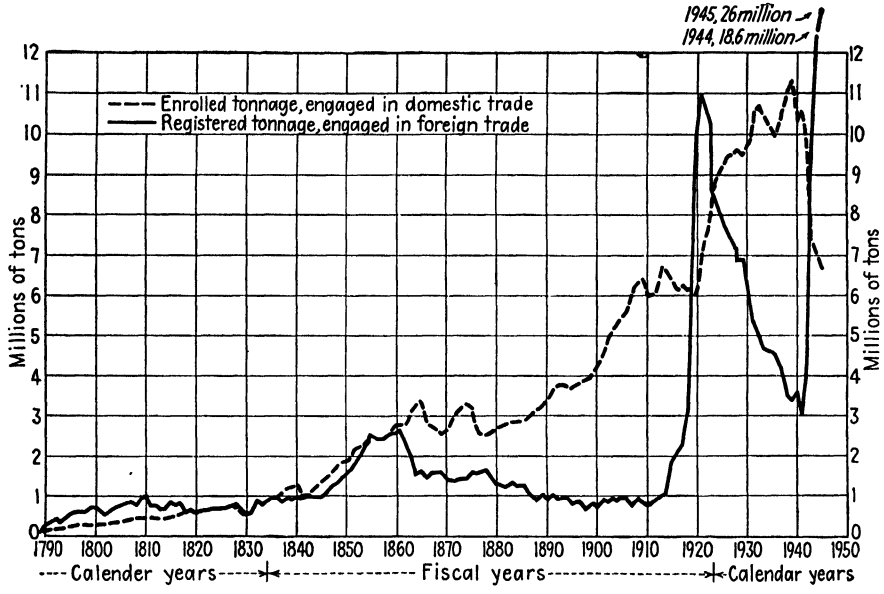


FIG. 58. Tonnage of the merchant marine of the United States since 1789.

As our navigation laws excluded foreign ships from this trade, this growth was entirely dependent upon the expansion of domestic trade and the success attained by the water carriers in competing with the railroads and others for its transport. The greatest success was secured on the Great Lakes, chiefly in carrying iron ore, a traffic that grew very rapidly after the middle 1880's. The lakes' tonnage rose from less than one-sixth of the total domestic tonnage in 1860 to over two-fifths of the total in 1913; since then it has declined to about a sixth, chiefly because of the great expansion of the coastwise traffic, a growth due partly to the opening of the Panama Canal stimulating intercoastal traffic and partly to the growth of traffic along both coasts. The tonnage on the Middle Western rivers declined to an insignificant figure.

The registered tonnage engaged in foreign trade was subject to far greater vicissitudes. Beginning with 2.5 million gross tons in 1860, it was reduced to 1.6 million tons in 1865, chiefly by transfer to a foreign flag to escape

capture or destruction during the war. In 1866, a law denied transferred vessels the right to reregister under the American flag. There was little change in the tonnage until after 1878 when a steady decline set in reducing it to a low point of 737,000 tons in 1898, following which there was a moderate recovery to 1,076,000 tons in 1914. The needs during the First World War led to an enormous expansion, to be described later, and by 1921 over 11 million tons was on the registered list. The subsequent renewal of keen competition and reduction of traffic brought a rapid decline to 3

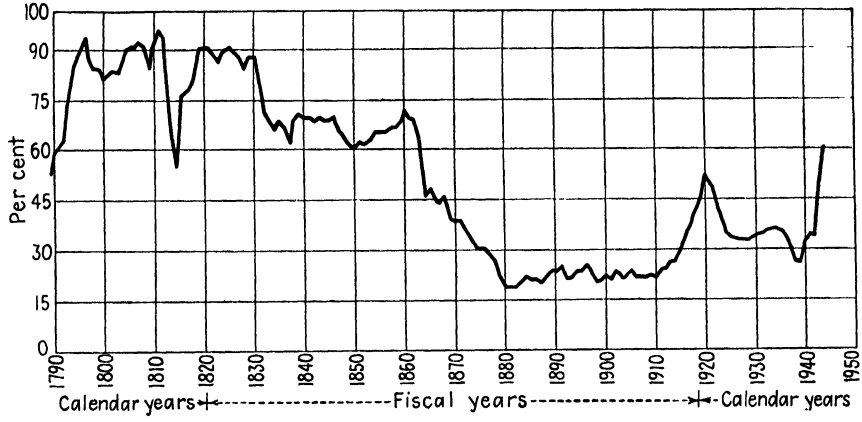


FIG. 59. Percentage of American tonnage in total tonnage of vessels entering and clearing from United States ports in the foreign trade since 1789.

million tons in December, 1940, many ships being transferred to the domestic trade, sold abroad, or junked. The enormous increase during the Second World War will be described later; it raised the figure to over 26 million tons by 1945, or about half the world's merchant shipping, though subsequent scrapping and sales to foreign countries substantially reduced this figure.

The decline in the registered tonnage up to 1898, combined with the growth of foreign trade, resulted in a marked decrease in the proportion of that trade carried in American ships. Though the decline had started after 1830, our ships still carried in 1860 about two-thirds of the value of our foreign trade. After 1865, it was barely a third, and soon a steady decline reduced it to about a tenth in the period 1890–1914. In 1913, American ships carried only 9 per cent of the value of our foreign trade; British ships carried 53 per cent, and German 14 per cent. It was this heavy dependence on foreign shipping, much of which ceased to be available after the outbreak of war, that created such a serious situation at that time. The resulting shipbuilding program raised the proportion to 43 per cent in 1920, but

renewed foreign competition reduced it to around 35 per cent in the 1930's. A similar trend is indicated by the decline in the percentage of the total tonnage entering and clearing United States ports in the foreign trade that was made up of American ships, as shown by the chart on page 643. The fact that this percentage averaged somewhat above that of the value carried suggests that foreign shipping got the bulk of the most valuable cargo or sailed in ballast less often.

The Navigation Laws. In the history of the registered tonnage, the navigation laws played a vital part. The policy of reciprocity underlying these laws which had been adopted after 1814 was continued after 1860. By this date, the reciprocal arrangements for equal treatment of domestic and foreign shipping engaged in the foreign trade applied to every country of any importance in ocean transport so that American ships faced world competition on the basis of efficiency, except as subsidies were employed. It was soon found, however, that conditions had so altered that our navigation laws placed American ships in this trade at a disadvantage as compared with foreign ships.

In the first place, only American-built ships were permitted to register under the American flag, a provision adopted in 1789 and continued substantially unchanged down to 1912. As long as the cost of building ships in this country was below, or did not greatly exceed, the cost of ships built elsewhere, this was not a handicap, especially as Americans showed superior efficiency in handling sailing vessels. But when iron and steel steamships were introduced, the United States found itself at a great disadvantage in their cost of construction as compared with England. Both nautical engineering and the iron and steel industry were more advanced there; wages were lower, and the labor cost was a big item—often from a third to a half the total—in ship construction. The much greater volume of construction attained in England also secured the advantages of large-scale production and standardization. Around 1900, other rivals in steel shipbuilding appeared in Germany and then in Japan, and throughout the period the Scandinavian countries were active in the construction of wooden or steel ships. Furthermore, the American advantage enjoyed through more efficient handling of wooden sailing vessels does not appear to have continued in the operation of steamships.

In addition, the navigation laws imposed certain requirements that tended to increase the cost of operating American ships. Most of the officers had to be Americans, and the higher wage level prevailing increased this item of expense. The ordinary seamen hired in American ports also received a relatively high wage. Furthermore, the laws set requirements as to food, quarters, and other things that increased the costs of operation relative to ships sailing under foreign flags.

The loss of shipping after 1860 led to a second resort to ship subsidies, 1864–1877. These were granted to only a few steamship lines carrying mail, chiefly to lines running to the West Indies, South America, and Asia. The subsidies totaled about $6.5 million, of which the Pacific Mail received over two-thirds. The disclosure of efforts to bribe Congress to increase the grant led to a reaction that ended the subsidy. The third resort to subsidies occurred under the Postal Aid law of 1891. This also was confined to lines carrying the mail, but the terms were such that few lines found it profitable to operate under them for any length of time. Renewed efforts to secure a more general form of subsidy after 1900 failed, due partly to conflicting sectional interests and partly to fear the public would regard it as a form of favoritism.

The chief explanation for the decline of shipping engaged in foreign trade in the half century after 1865 is thus to be found in the changed conditions in shipbuilding and certain provisions of our nagivation laws both of which proved disadvantageous. Combined with the greater opportunities available in other fields, there was little inducement for American capital to enter this field. Still some did venture in, though it is to be noted that, in the years before 1914, various American-owned corporations chose to register their ships under a foreign flag. Even when the Panama Canal Act of 1912 admitted foreign-built ships not over 5 years old to American registry few took advantage of it until war broke out, since it involved greater operating costs.

Shipping Legislation since 1914. Fortunately, when war broke out in 1914, Great Britain, possessing nearly half the world's shipping and customarily carrying over half of our ocean-borne trade, soon gained substantial control over the seas. But much of her shipping had to be diverted to war purposes, and such of the German shipping as was not seized disappeared, so the abnormal war demand for cargo space sent freight rates skyrocketing. The first relief measure in 1914 admitted foreign-built ships over 5 years old to American registry and authorized the President to suspend, temporarily, certain hampering requirements of the navigation laws. By 1916, over 400,000 tons of shipping was so transferred, mostly vessels already controlled by American concerns, but England then prohibited further transfers of her ships. The same year the government undertook to provide the needed marine insurance against war risks which private companies would not assume. Although passed in 1915, the Seamen's Act was not a war measure but sought to provide greater safety and better conditions for the crew, though this tended to increase operating costs.

In September, 1916, as German submarines were sinking ships faster than they were being built and it became clear that, if the United States entered the war, it could exercise little influence on the outcome unless far

more ships were available to transport troops and supplies, the Ship Purchase Act, in addition to creating the Shipping Board previously mentioned, authorized an unprecedented program of shipbuilding, which will be described in the chapter devoted to the war. As most of the construction then started was not finished until some time after the war was over, the new peak in the merchant marine was not reached until 1922 when the total was nearly 18.5 million gross tons, which placed it second in the world and only a little below that of Great Britain. Of this total the government owned 8 million tons; its fleet of 2,300 vessels included nearly two-thirds of the tonnage suitable for deep-sea trade and represented an outlay of nearly $3 billion. With this white elephant on its hands, the government for years to come faced a world market completely demoralized by the efforts of various nations to increase their shipping, despite the existing surplus.

The first attempt to meet the problem was the hastily drawn Jones Act of 1920 designed to maintain the fleet but to get the government out of ownership and operation. Private shipowners were relieved of certain taxes and allowed to buy the ships on very favorable terms, but sales dragged on for years till in 1938 it was announced that the 100-odd ships still remaining would be removed from the market. Sales yielded about 10 per cent of the original cost. Some vessels continued to be operated by the government or for its account, often at a loss, and many remained idle. As few new ships were built for this trade, the registered tonnage not only steadily declined but became more obsolete.

To provide greater aid, an act of 1928 granted a large increase in the subsidies for carrying the mail. Up till then, the subsidies paid under the act of 1891 had been about $31 million; under this new law, until such contracts were ended in 1937, some $176 million was paid out. This stimulus, supplemented by an increase in the revolving loan fund for construction to $250 million, gave a brief spurt to shipbuilding until the depression and added another chapter to the unsavory history of ship subsidy scandals. As the President later said and a report of 1937 made clear, this law was a failure. The report showed that, although the American merchant marine was second in volume among the chief carrying nations, it ranked fourth in speed and last in age. A quarter of the registered tonnage was practically obsolete, and by 1942 seven-eighths of it would be so. During the preceding decade, out of 9 million gross tons of new world construction, only 5 per cent had been registered in the United States, which continued to depend on its aging war-built fleet. It was also reported that the labor situation was bad, both employers and employees being to blame. Wages and working conditions were poor, strikes and friction among rival unions constantly tied up ships, and discipline was lacking.

To meet these problems, the Merchant Marine Act of 1936 and later

amendments were passed involving a radical change in subsidy policy. In place of the old mail contracts, three forms of subsidy were authorized. The first, designed to offset the high cost of American-built ships, authorized the government, under specified conditions, to pay up to one-third, and in cases one-half, the cost of a ship where there was that much excess over the cost if built abroad. Such ships were to be built on government contract and then sold at cost, less the subsidy, on terms of long-time payment with low interest rates. The second form of subsidy was given vessels (practically only those of American build) operating in essential trade routes, and was to be sufficient to offset the higher operating costs as compared with those of foreign competitors. The third form provided for an additional grant, if necessary, to offset governmental aid given to foreign rivals. In practical operation, this subsidy system reverted to the policy of excluding foreign-built ships from any branch of the merchant marine.

The administration of the law, upon which much depended, was vested in the United States Maritime Commission, which succeeded also to the functions of the old Shipping Board. In case the subsidies did not secure under private ownership the quantity and character of shipping deemed desirable for national defense and foreign trade, government ownership and operation were authorized. The commission also received power to fix minimum crews' wages and working conditions on subsidized vessels, and 90 per cent of the crew including all officers on passenger vessels must be Americans. Subsequently, the Maritime Labor Board was created to mediate in labor disputes.

The first plans of the commission involved the construction of fifty ships a year for 10 years, and the annual outlay for subsidies was estimated at $25 to $30 million. But at the opening of 1939 contracts had been let for building only fifty-two vessels and thirteen companies with over a million tons of shipping were receiving operating subsidies or about half the total engaged in the dry cargo and passenger foreign carrying trade. How the law would succeed still remained to be seen when the Second World War, repeating on a far larger scale the problems of its predecessor, led to a program of shipbuilding unparalleled in history, as will be described later. Whether the resulting postwar problems will resemble those after 1918 also remains to be seen.

The Merchant Marine Problem. The history of our shipping engaged in foreign trade since 1860 shows that the combination of underlying economic conditions and the policies reflected in our navigation laws make it impossible to compete successfully with foreign shipping without some form of aid. Relief could be obtained by modifying our navigation laws so as to admit foreign-built ships to registry on the same terms as American-built ships and eliminating the requirements tending to increase operating

costs, but whether this would prove successful is uncertain. We could also abandon the policy of reciprocity adopted after 1815 and revert to the earlier policy of discriminations against foreign shipping, particularly in the form of tonnage and tariff duties, but the results would be dubious. Undoubtedly this would lead to retaliation by other countries; it would increase shipping costs, tend to check foreign trade, and consumers would foot a portion of the bill. Short of such measures only a very large subsidy seems likely to succeed.

In view of these obstacles, the question is raised whether the country should try to maintain a large merchant marine. The strongest supporting argument is essentially noneconomic: a large merchant marine may be vital in time of war as an auxiliary to the navy, for transporting army troops and supplies, and to carry on essential foreign trade. The mechanization of warfare has made these services vastly more important than ever before, as was made only too clear in the recent world wars. In fact, the need for shipping in such a war has become so great that the maintenance of a peacetime fleet sufficient to meet it is doubtless impracticable, yet to possess a substantial fleet at the outbreak of a war and to be able to expand it rapidly are great advantages. How far the use of the atomic bomb may alter the situation cannot now be determined.

The chief economic reason advanced for maintaining a large merchant marine is that it will develop foreign trade, particularly exports. It is asserted that "trade will follow the flag"; that is, if ships sail to foreign ports, they will develop trade there. The importance of this argument has been grossly exaggerated. It would be far more accurate to say that "the flag follows trade," for ships will go wherever trade creates a sufficient demand for their service. Admittedly there may be combinations of circumstances where the existence of good shipping facilities is the determining factor in shifting an order from one nation to another, but such cases will apply to only a slight fraction of the world's trade. The existence and the course of trade depend fundamentally upon the underlying economic conditions causing differences in comparative costs of production, though limited by transport costs, tariff barriers, etc.

Chapter XXXVIII

MARKETING AND TRADE, DOMESTIC AND FOREIGN, SINCE 1860 (*Continued*)

The Growth of Foreign Trade. The growth of the country's exports and imports during this period is shown on the two charts on page 650. To judge of changes in the physical volume, allowances must be made for variations in the price level. Measured by value, foreign trade grew steadily up to about 1898, despite declining prices; a more rapid expansion followed up to 1914 and during the war a still greater rise occurred, in both cases aided by advancing prices; by the depression of the 1930's, it had fallen back to around the 1914 level. Until after 1920, the value of the exports rose faster than that of imports, resulting in a shift from an unfavorable to a favorable balance of trade about 1874, and a continued growth in this favorable balance thereafter till an abnormal peak was reached during the war.

This expansion reflected a growing importance of foreign trade in the economic life of the country, particularly as compared with the period 1815–1845. No satisfactory measure of this importance is available, but the per capita figures of value shown on the chart on page 357, when allowance is made for variations in the price level, are suggestive of the change taking place involving a moderate rise in the per capita volume of our foreign trade. It is necessary to realize, however, that the country remained far less dependent upon foreign trade than the leading nations of western Europe; in 1914 when the per capita value of our total foreign trade was $43, that of France was estimated at $54, that of Germany at $73, and that of the United Kingdom at $108. Obviously the United States was much more self-sufficient economically than those other nations. It is estimated that during the period 1900–1930 the United States exported normally about 10 per cent of the exportable goods that it produced, but in the 1930's it was around 8 per cent. The available figures suggest that by the 1930's the per capita foreign trade of the country, corrected for changes in the price level, was about twice that in the 1850's.

In this growth of foreign trade, the part played by the government was a very minor one. In fact, the chief action taken—raising the level of tariff duties—tended to restrict such trade, and this was supplemented by similar action in many other countries. From 1934 on, however, the reciprocal

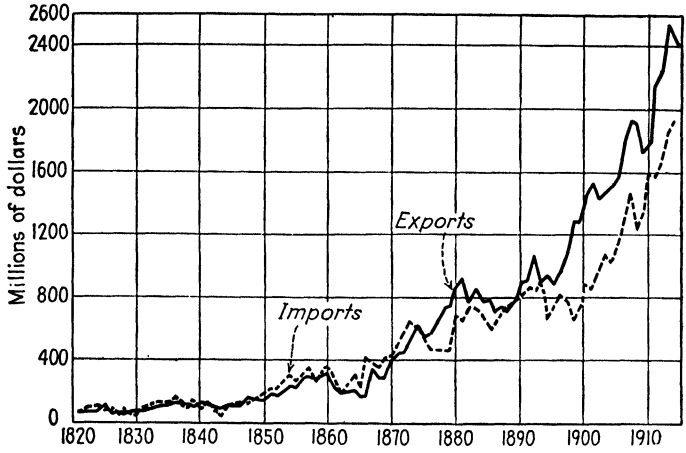


FIG. 60. Annual merchandise exports and imports of the United States, 1821–1914.

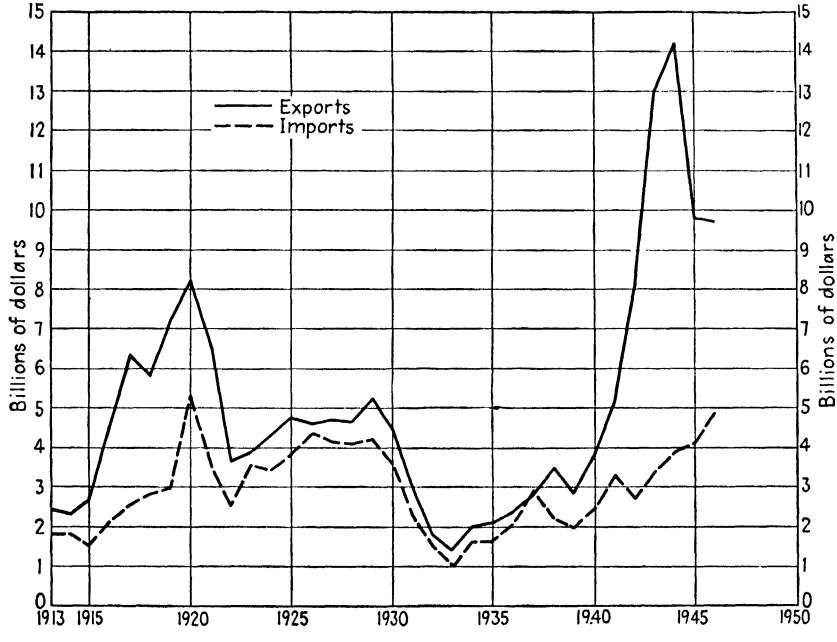


FIG. 61. Annual merchandise exports and imports of the United States since 1913 (fiscal years).

trade agreements substantially reduced these barriers. Owing to the common tendency to assume that exports are generally more important for the nation's economy than imports, such government aid as was provided usually sought to stimulate the former rather than the latter. Since the creation of the Department of Commerce and Labor in 1903 and the separate Department of Commerce in 1912, more has been done to provide information of value to both exporters and importers, and the work of the improved consular service, notably that of the commercial attachés, has proved very useful. At times such control over foreign loans as has been exercised had some effects on foreign trade. Recently subsidies have increased the exports of certain farm products.

Commodities Entering into Foreign Trade. Such changes as occurred in the commodities entering into foreign trade were fundamentally due to all the conditions shaping the course of economic development both in this country and elsewhere, more particularly as they reacted upon the relative costs of production of exportable goods. Also important were all the improvements in transportation, communication, and marketing tending to make markets more nearly world-wide; of rather less significance were the various artificial restrictions on the freedom of trade. Consequently, the history of our foreign trade during this period reflects chiefly the expansion of agriculture and the mineral industries and the great growth of manufacturing in the United States on one side and the industrialization of Europe and the opening up of the resources of other continents on the other side.

The changes in the relative importance of the main classes of exports are shown in the chart on page 652. The outstanding features are the rise of finished manufactures from less than one-eighth of the value of all exports in 1860 to over one-half in 1936–1940 and the decline in crude materials for manufacturing from two-thirds to under one-fifth of the total. The export of foodstuffs in either crude or manufactured form rose to a peak of half the total in the late 1870's and continued above two-fifths until after 1900, but had fallen to less than a tenth by the latter 1930's.

Among individual commodities exported, raw cotton held the lead in value until 1937 when it was surpassed by petroleum and its products. Yet there was a drastic decline in its relative importance from nearly two-thirds of the value of all exports in 1860 to around one-twelfth just before 1940. The physical volume rose fairly steadily up to about 1914, and that level was almost sustained until 1935, though the proportion of the crop exported fell from over four-fifths just before 1861 to two-fifths in 1935–1939. Since such heavy dependence of a country on a single export as prevailed when cotton was "king" is undesirable, the decline in its relative importance was in certain ways advantageous.

Next in importance to cotton during most of this period were the exports of meat and meat products. These mounted up to 1906, but after the abnormal war shipments, underwent a drastic decline, especially after 1930. Lard, hams, and bacon easily led all other items in this group. The exports of wheat and wheat flour fluctuated in value around those of meat and its products and underwent a similar decline. Up to about 1930 between a

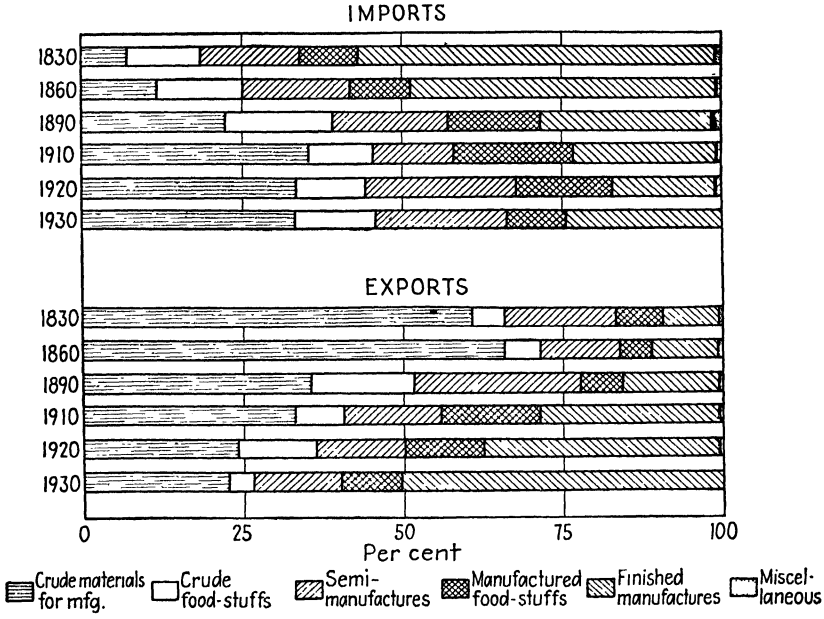


FIG. 62. Percentage distribution of imports and exports of merchandise by economic classes since 1830.

fifth and a third of the crop was exported, but in the 1930's barely a tenth. The quantity of leaf tobacco exported rose steadily up to 1930 when it was more than three times that about 1860 and, unlike most farm products, the decline in the 1930's was very moderate, so that the value of this export came to exceed that of any other farm product except cotton. By this decade, the export of fruits and nuts had risen to the point where it ranked third in value among this group.

Among mineral product exports there were three prominent items all of which were practically new since 1860. Most spectacular was the rise in the export of petroleum and its products from nothing in 1860 to an annual value averaging $525 million in 1926–1930. From then on it made up over a tenth of the value of all exports and after 1936 surpassed raw cotton in value. Exports of copper also rose very rapidly reaching a peak

in quantity and also, except for the war years, in value just before 1930, but remaining far below petroleum. Coal was the third mineral export to enjoy a substantial rise and generally remained somewhat below copper in value. Among other extractive industries, the sawmill products from lumbering contributed some $100 million to exports just before 1930, though subsequently this was more than cut in half.

The dominant position among exports attained by finished manufactured goods was due largely to the rapid growth starting in the late 1890's, though there had previously been a rather steady advance. Much the most important group in this class consists of machinery, electrical, industrial, and agricultural. Its value rose from only $7 million in 1865 and $22 million around 1892 to nearly $500 million in 1926–1930 and even higher in 1937–1940 when it surpassed petroleum and its products in importance. Next in rank among manufactures, though important only after 1914, came automobiles with their parts and accessories with a value averaging over $400 million just before 1930, though a substantial drop followed. The sudden rise of aircraft exports to $300 million in 1940 put them in second place. The only other manufactures with annual exports averaging over $100 million in value during the 1930's were the two groups classed as iron and steel mill products and chemicals.

Considering the exports in recent times as a whole, we may see that they are based largely upon the country's abundant natural resources. No export of great importance is based on imported raw materials, though the last few decades show a rising use of such imports for products later exported, as in the case of rubber, petroleum, and copper ore. Also the greater portion of the exports, though a declining one, consists of products which, if not still in the raw state, cannot be classed as highly finished manufactures. Finally, such highly finished manufactures as are exported are ordinarily products where American ingenuity, machine methods, and efficient organization of mass production have been applied in working up some relatively abundant natural resource. These characteristics of our exports in recent times are to be explained in terms of the changes occurring both here and abroad in the comparative costs of production in the extractive and the manufacturing industries as described in earlier chapters.

Imports. In the case of imports, the reverse situation existed; since conditions favoring the export of certain goods lessen the likelihood of their being imported and tend to favor the import of those not extensively exported. The chart on page 652 indicates the changes that occurred among the chief classes of imports. Outstanding is the growth in the imports of crude materials other than foodstuffs from a tenth of the value of all imports in 1860 to a third or more after 1900. The only other marked change

is the decline in finished manufactures from half of all imports in 1860 to around a fifth since 1920. Both of these changes obviously reflect the growth of domestic manufactures as does also the growth in imports of semi-manufactured goods from an eighth to between a fifth and a sixth of the total after 1900.

Among individual commodities imported, raw sugar led in value until after 1920 when raw silk jumped to an easy lead, but only for a decade. Next to sugar in value down to 1911 and regularly ahead of it after 1924, was coffee. During the 1930's the annual imports of coffee, sugar, rubber, raw silk, and paper and its manufactures each averaged between $100 and $150 million; no other import averaged $70 million in this decade, though woodpulp, vegetable oils and fats, furs and manufactures thereof, and tin each averaged over $50 million.

The striking feature about the leading imports of today, particularly as contrasted with the situation in 1860, is the absence in the list of all but one finished manufacture. That exception, consisting chiefly of newsprint imported largely from Canada, is of very recent origin and reflects the depletion of our natural resources. All the other leading imports are raw materials or foodstuffs which the country does not produce at all or only in a limited quantity, most of them being obtained from semitropical or tropical regions. There were also smaller quantities of imports of products of a different grade from that produced in this country or not produced in sufficient quantity, such as Turkish and Cuban tobacco, long-staple cotton, coarse carpet wool, and long-staple combing wool. Significant, too, were the rising imports of copper ore and petroleum, despite the large domestic output.

Of the classes of manufactures that dominated imports during the nineteenth century none remained important by the 1930's; cotton manufactures followed by those of wool led all others, but the former were not much above and the latter far below the figures in 1860; imports of manufactures of iron and steel or of silk ranked still lower. A more detailed study of these and other imported manufactures would show that, generally speaking, they are highly finished goods, involving a considerable amount of labor, often of a skilled character, to produce. A smaller group consists of products, the raw materials for which are not found in this country or only in insufficient quantities and which for various reasons are manufactured abroad. To summarize: the chief explanation for our imports is the lack of certain foods or raw materials for our expanding manufactures and our high labor cost where this is an important element in total costs.

The Course of Foreign Trade. The changes in the proportions of our export and import trade with different continents during this period are

shown by the chart on this page.[1] For our exports, Europe, despite the decline in the proportion of her purchases to less than half the total after 1925, still remains by far the best customer. Next in importance throughout the period were the exports to the rest of North America which rose to around a quarter of the total after 1920. Asia and Oceania ranked third with a fifth of the total during the 1930's and show by far the most rapid rate of increase since 1860 when the proportion was only 4 per cent. Despite

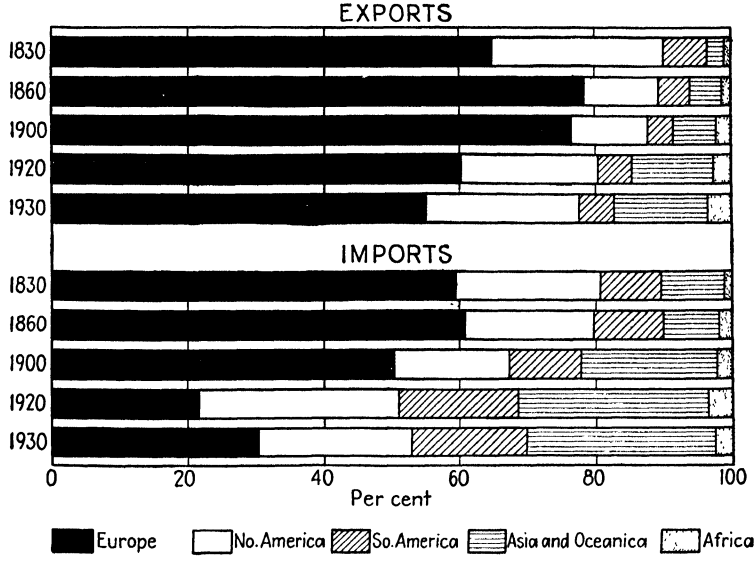


FIG. 63. Percentage of total exports to and imports from each continent since 1830.

much talk about expanding exports to South America, the proportion sent there rose only from under 5 per cent in 1860 to less than 10 per cent in the 1930's.

In our import trade, the outstanding change is the great decline in the proportion obtained from Europe which provided over half the total down to 1911 but little more than a quarter in the 1930's. More spectacular is the rise in the proportion of imports from Asia and Oceania from 9 per cent in 1860 to about 30 per cent in the 1930's when they slightly exceeded those from Europe. In this same decade, the rest of North America provided a quarter of the imports as against a fifth in 1860, and South America less than 15 per cent as against 10 per cent in 1860. Thus, considering foreign trade as a whole, the striking development of this period, especially marked in the twentieth century, was the shift away from Europe and toward the

[1] It should be noted that the final destination of exports may not be the country to which they are shipped and that imports do not necessarily originate in the country from which they are directly received.

less highly industrialized regions of the world. Obviously this reflected the rapid industrialization of the United States and the resulting need both for more raw materials and for foreign markets for the rising output. It also reflected the decreased proportion of the more slowly growing output of foodstuffs available for export and the need for more imports of food as the industrial population rose in importance. The previous customary excess of food exports over food imports was reversed in the years 1925–1941.

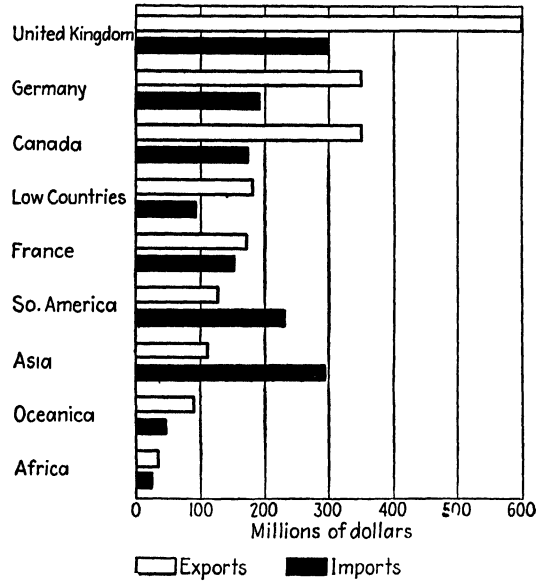


FIG. 64. Imports from and exports to chief countries or continents, 1914.

A somewhat more detailed view of the direction followed by our foreign commerce in 1914 is given by the chart just above. Among individual nations, the United Kingdom then still led in both exports and imports, Germany stood second, and Canada a close third. The total trade with each exceeded that with all of Asia or all of South America. Also it may be noted that there was no European country of any importance, and only a few minor ones, where the balance of trade was not favorable to the United States. This was also true of the trade with Canada, but in the rest of North America and in Asia and South America, each taken as a whole, the balance was decidedly unfavorable.

The situation in the period 1936–1940, though somewhat distorted by war conditions abroad, reflects the more significant trends since the First World War. Outstanding is the decline in the importance of the trade with Europe and the growth of that with Asia and the rest of North America, as already noted. As a result, Canada had then surpassed the United

Kingdom in the total value of our foreign trade, Japan had risen to third place, and the trade with Germany had fallen to a low level. The balances of trade, though altered in amount, generally remained on the same side as in 1914, except for the shift in the case of Germany.

The relative importance of the different ports through which this foreign trade passed underwent appreciable changes during this period. These changes were due mainly to alterations in the volume of the trade with different countries, shifts in the location of the production of commodities within the United States, or developments in transport facilities. In the case of exports, by 1936–1940 New York was far in the lead, averaging two-fifths of the total as against one-quarter in 1860. Next in rank but far below came Galveston-Houston with about 8 per cent of all exports. The remarkable advance of this port was due chiefly to the westward movement in the cotton, wheat, and oil-producing regions together with the development of rail and pipe-line connections with these regions and its port facilities. New Orleans, first in 1860, was in third place, and the decline in relative rank of Mobile, Charleston, and Savannah was much greater due to the westward shift in cotton growing and the decreased importance of cotton in the export trade. New Orleans also suffered from the decline in Mississippi River traffic.

The rising exports to Canada and down the St. Lawrence to other countries gave the customs districts of Michigan and Buffalo fourth and sixth place, respectively, and the growth of transpacific trade put the San Francisco district in the fifth place and that of Puget Sound in the eighth. Even when obtaining better rail connections with the West and some favors in rates, Philadelphia, Baltimore, and Newport News had less than 4 per cent each of the exports and Boston less than 1 per cent. What New York lost by the decline of the Erie Canal traffic was more than made up by its railroad connections and its advantages in harbor facilities for large ships.

In the import trade, New York was even more predominant, receiving nearly half the total, 1936–1940; yet this reflected a loss as compared with its two-thirds in 1860. Next in rank but far below, came Boston and then Philadelphia, New Orleans, and Baltimore. The rise of the trade with Canada put Buffalo and the Michigan district on about the same level as San Francisco to constitute the next lower group.

The International Balance of Trade and Payments and the Movement of the Precious Metals. The rather complicated situation arising from the changes in the items making up the balance of international payments, which finally determine the direction of flow of the precious metals, can best be explained by dividing the period since 1860 into shorter periods each characterized by some marked change in one or

more of the main factors involved. These subdivisions can be summarized as follows: (1) 1850–1873, marked by a rising unfavorable trade balance and a large outflow of specie, though previously specie had been flowing in, (2) 1874–1895, marked by a permanent shift to a favorable trade balance of moderate size and a decreased export of gold,[1] (3) 1896–1914, marked by a rise in the favorable trade balance to an annual average of nearly $500 million and a slight net inflow of gold, (4) 1915–1921, when the First World War reactions raised the favorable trade balance to a level of almost $3 billion a year, unparalleled in all previous history, and caused an enormous

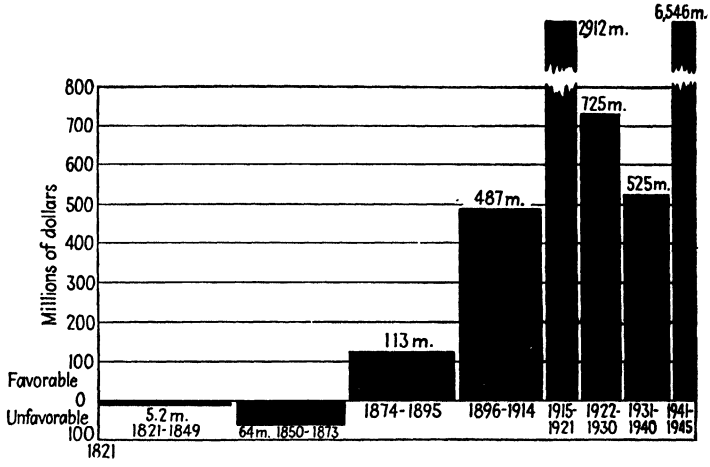


FIG. 65. Balance of commodity trade, 1821–1945. Annual average by periods.

net inflow of specie, (5) 1922–1940, marked by a declining favorable trade balance and a large net inflow of specie (see the chart above).

The changes in the balance of trade just noted, being particularly important in their reaction upon the balance of international payments, require some explanation. As is indicated on the chart on page 650, the balance of trade between 1821 and 1873 had almost invariably been unfavorable and had shown a decided increase after 1850. The balance then suddenly shifted to the favorable side and, except for 3 years, has remained on that side ever since and with a rising level during peacetimes until the 1930's. Immediately, this sudden shift can be attributed to the effects of the panic of 1873. Prices in this country were then readjusted to a level more nearly in line with that in world markets, thus stimulating exports and at the same time causing the reduction in imports which in this country has always

[1] From 1874 to 1933, silver is classified as a commodity and specie includes gold only. The movement to demonetize silver started in the 1870's, following the decline in its value, so that outside of a few silver-using countries it ceased to be used in settling international debts.

accompanied a business depression. There has always been a much closer correlation between our imports and the fluctuations in the business cycle than in the case of our exports. This is in part because imports are naturally more responsive to changes in domestic conditions than are exports, and in part because of the character of a large proportion of our imports, until recently semiluxury or luxury goods and more recently raw materials which fluctuate with the prosperity of manufacturing. In the case of exports, those consisting of foodstuffs represented a necessity, but they fluctuated with vagaries of the weather and world-market conditions; those consisting of raw materials and finished manufactures varied chiefly with the business situation abroad. Thus, the marked but brief rise in the favorable trade balance in the late 1870's was due to large crops here and a shortage in Europe.

The endurance of the shift in the balance of trade in the 1870's can be explained only by more fundamental trends in economic developments both here and abroad. The chief factor tending to increase exports until about 1900 was the rapid growth in the output of farm products, especially foodstuffs and cotton, as the trans-Mississippi region was opened up and secured cheap rail and ocean transport to Europe, where the growing industrial population created a demand for these products. At this period, the competition from other newly developing countries which these products had to face in the European market, although growing, was far less than after 1900. Subsequently the rise in the volume of this class of exports, except in the war years, was relatively slight, though higher prices substantially increased their value; the great growth in exports then came from the rapidly rising success of American manufactures in invading foreign markets.

The failure of imports to rise as rapidly as exports, which resulted in the upward trend in the favorable trade balance, was due chiefly to the great expansion of domestic manufactures, aided by the high tariff duties that prevailed after 1864, which so decreased the former proportion of imports of this class of goods. Later, as imports of raw materials mounted and more foodstuffs were brought in from outside, these additions failed to keep pace with the rising export of manufactures. It must, however, be added that the continued growth in the favorable balance of trade up to the 1930's was contingent upon changes in other items entering into the balance of international payments which made it possible for the rest of the world to pay for this excess of exports. It remains to explain what the main changes in these invisible items were.[1]

[1] For the period down to 1914, the following figures are based upon the study of Bullock, Williams, and Tucker, *Review of Economic Statistics*, I, p. 215. As many items are estimates and some minor items are omitted, an accurate balance is not to be expected.

The Period from 1850 to 1914. For the full period 1850–1873, the unfavorable balance of trade totaled some $1.54 billion. To this there was added on the debit side of the balance $904 million estimated interest on the growing foreign investments in the United States and $576 million for expenses of Americans traveling abroad. Offsetting these debts, on the credit side of the account, the chief item was an estimated net inflow of $1 billion in foreign investments, mostly put into government bonds and railroad securities after the war. Another credit item was $265 million representing the sale of ships, chiefly during the war, and a favorable balance of freight charges piled up during the 1850's. It was to meet the deficit on the credit side, as compared with the total of debit items, that some $1 billion of specie, mostly gold, was shipped out of the country during these years.

For the period 1874–1895, the balance of trade becomes favorable, so that this item, totaling $2.5 billion, shifted to the credit side of the account. The net growth of $1 billion in foreign investments in the country was the only other large credit item. On the debit side, much the largest item was the interest on foreign investments totaling $1.87 billion for the period; second in amount was the outlay of $770 million by American tourists abroad. The marked decline in the proportion of the foreign trade carried in American ships after 1861 shifted the balance of payments on freight charges, some $560 million, to the debit side of the account, and immigrant remittances home rose to $440 million. The small excess of debits over credits for the period was settled by exporting $112 million of gold. It is obvious that the debit items could not have risen as they did during this period had not the trade balance become favorable or far greater foreign loans been obtained, and the latter would only have postponed the day of reckoning.

The period 1896–1914 witnessed a great increase in the favorable balance of trade to a total of over $9 billion; also there was a net addition of $1 billion to the foreign investments in this country. Largely offsetting these credits, there was a substantial rise in the items on the debit side; interest on foreign investments, tourists' expenses abroad, and immigrant remittances each mounted to between $2.8 and $3.4 billion, shipping charges to $640 million, and miscellaneous items to $570 million. But, since these increases did not equal the growth in the credit items, $173 million in gold was sent to the country to settle the balance.

War's Reactions from 1914 to 1921. The abnormal conditions arising out of the First World War and its immediate aftermath resulted in raising the favorable balance of trade for the years 1915–1921 to the prodigious total of over $20 billion, something unparalleled in previous history. The effort to find means for meeting the resulting debt to this country continued

to be a seriously complicating factor in the economic relations of the United States with all the countries involved until the Second World War. Thus a knowledge of the consequences is essential for an understanding of many problems of the interwar period. However, the means employed varied sharply in different parts of this period.

Until the United States entered the war in April, 1917, the debt due this country was met by borrowing about $2.4 billion from private American sources, by resale to this country of some $2 billion American securities held abroad, by the use of some of the usual debit balance items, and by sending over $1 billion gold to this country, thus increasing our monetary stock of gold more than 50 per cent. When the United States ceased to be a neutral by entering the war, the problem was temporarily met by government loans to the Allies for such sums as were needed for this and certain other purposes. These loans together with others made just after the peace totaled about $10 billion. European needs for American supplies sustained the high favorable balance of trade for the first 3 peace years at about the war level and additional loans or short-term credits from private sources plus a net inflow of $500 million more of gold helped to meet the balance due this country.

Two important results of these methods for paying for American supplies must be noted, for they greatly added to the difficulties of economic readjustment, both in the United States and abroad, throughout the succeeding interwar period. The first was the unduly large proportion of the world's monetary stock of gold acquired by the United States, which threatened trouble here and greatly aggravated the problems of gold-using countries in Europe (see the chart on page 772). The second was the shift in the position of the United States from a moderate debtor nation to a great creditor nation, since its loans and investments abroad, public and private, now far exceeded the remaining foreign investments in this country. This meant that the net balance of interest charges had been shifted from the debit to the credit side of our general balance of international payments, which would make it increasingly difficult for the rest of the world to continue purchasing our exports in amounts far exceeding what we bought of it in the form of imports. The situation necessitated decreasing American exports, or increasing imports, or adding to some other American debit item; perhaps all three. Consequently many expected that the United States' balance of trade would shift to the unfavorable side, as was common in great creditor nations.

The Period from 1922 to 1940. For the period 1922–1930, exports did decline and imports tended to rise, so that the favorable balance of trade fell to an annual average of $725 million, but this was still about 40 per cent above the prewar level. In addition, the balance of interest on foreign

investments and loans, now shifted to the credit side, averaged $426 million a year and war-debt payments, though scaled down to afford relief, averaged $200 million a year. On the debit side there was a balance of over $500 million yearly for expenses of American travelers abroad and over $300 million for immigrant remittances, but that for shipping charges fell to only $41 million. Even the annual net outflow of American capital for foreign loans and investments of $325 million proved insufficient to balance the credits, and this was achieved only by shipping an average of nearly $100 million a year in gold to this country, thus adding to our excessive stock and draining the metal from countries where it was sorely needed.

The depression of the 1930's led to substantial changes in most of the important items in the balance of payments. On the credit side, the favorable balance of trade was cut to an annual average for 1931–1940 of about $500 million, and after 1932 practically all repayments on the war debt owed the country ceased. These credit item losses were far more than offset by a complete reversal in the net movement of capital after 1932 which resulted in a large net inflow into the United States, due partly to the reduction of our loans abroad and partly to foreign investments in this country. There was also a decided cut in the outlay of American travelers abroad and immigrant remittances (see the chart on page 663).

The large resulting net indebtedness of the world to the United States was met by enormous shipments of gold and silver to this country; in fact without these the debt could scarcely have been incurred. This was greatly stimulated by the devaluation of the gold dollar in 1934 and the raising of the price of gold to $35 an ounce, which it was the government's policy to pay for all gold offered, thus greatly increasing world production. Also the flight of capital and gold from Europe just before and after the outbreak of war greatly augmented this movement. The result was a net inflow of over $15 billion in gold, 1931–1940, a movement unprecedented in history, which gave the country over $20 billion or nearly three-quarters of the world's monetary stock of this metal. In addition the silver purchasing policy adopted at this time brought in $1 billion of this metal. Thus the large, though decreasing, favorable balance of trade was made possible chiefly by the outflow of capital in the 1920's and the importation of gold and silver in the 1930's.

The Second World War brought a repetition on a far larger scale of the demand for American supplies experienced in the preceding war. As it became obvious, even before the United States entered the war, that the other nations' means for paying for these supplies were utterly inadequate, the government again assumed the immediate burden under the system of Lend-Lease. In this way up to September, 1946, over $46 billion was paid out, against which over $6 billion in reverse Lend-Lease was received from

other countries. In view of the experience after the First World War and the rather general belief that these advances could never be fully repaid, the terms for repayment, if any, were left indefinite. On the return of peace when Lend-Lease ceased, the United States was also looked to as the nation best able to advance the great loans required abroad for economic rehabil-

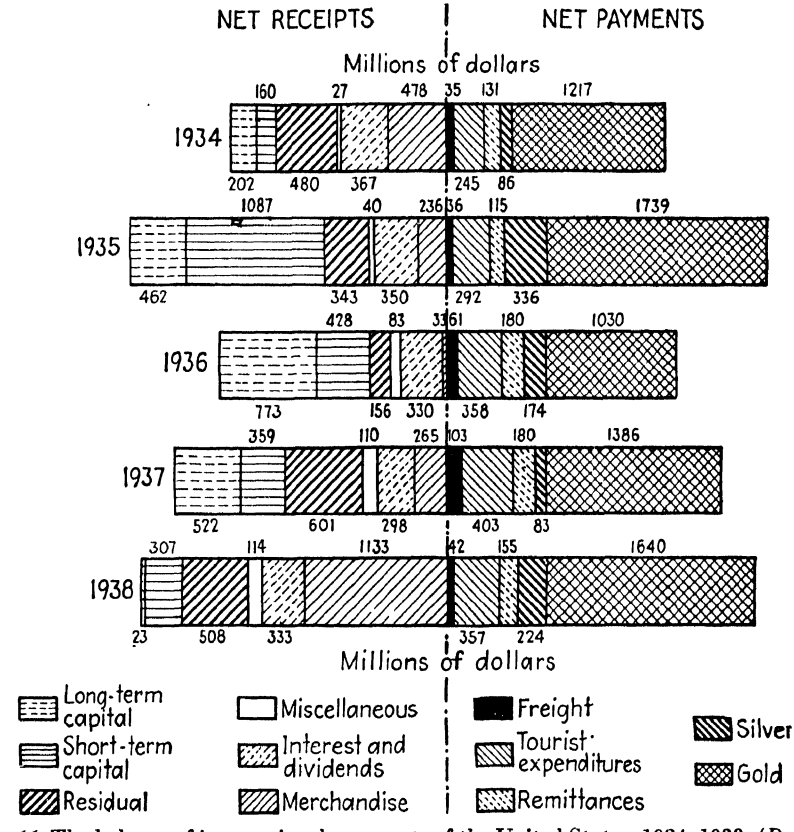


FIG. 66. The balance of international payments of the United States, 1934–1938. (*Department of Commerce.*)

itation such as the Marshall Plan involved, as is later described in the chapter on the war. It is obvious that such loans would help to sustain temporarily a higher level of American exports. In the long run, however, assuming interest and principal payments are met, they will increase the likelihood of a shift to an unfavorable balance of trade. Should this occur, it is not to be feared, for the term "unfavorable" used in this connection is a relic of the erroneous ideas of the early mercantilists.

Chapter XXXIX

FINANCIAL INSTITUTIONS SINCE 1860

Introduction. The continued rapid economic growth of the country necessitated a corresponding expansion of its financial institutions. This need was increased by the growing importance of capital as a factor of production and the greater size of business enterprises. Financial institutions able to accumulate and loan capital funds on a large scale and to help direct the flow of such funds to the uses where they would prove the most productive became essential. To ensure a more efficient functioning of the monetary and banking system, various defects which still existed in 1860, despite the earlier improvements, had to be minimized if not eliminated.

Particularly important was the problem created by the great expansion of devices by which credit in its multifarious forms was being extended. Increasingly, credit was displacing money in the settlement of financial transactions; a credit economy prevailed, and the dangers and abuses to which the use of credit is subject were seldom adequately controlled or even recognized. Immediately these may be considered the most important factors aggravating the fluctuations in the business cycle of this period. The relative scarcity of capital, which continued until the First World War, tended to increase these evils. Finally, the Civil War wrought marked changes in both monetary and banking systems, and the way in which temporary wartime needs, both then and after the First World War, led to important and enduring alterations in these systems affords valuable lessons in the problem of historical causation.

The Circulating Medium; the Greenbacks. By 1865, the circulating medium of the country had been greatly altered from that of 1860. (1) The amount of money in circulation had increased nearly two-thirds. (2) All specie had disappeared from general circulation, and only paper remained in common use. Some $400 million of this paper consisted of United States notes, or greenbacks, and a somewhat smaller remainder of national or state bank notes and scrip. In July, 1865, redemption of this paper in specie was still suspended, and the paper dollar was worth only about 70 cents in gold. To eliminate this depreciation it was proposed to retire the greenbacks. This led to a violent controversy lasting over a decade.

Secretary of the Treasury McCulloch favored gradual retirement, and

at first there was little opposition to such action, so the Funding Act of April, 1866, gave him discretionary power to retire a limited amount of greenbacks monthly. But the business reaction of 1866–1867 greatly increased those opposed to retirement for fear prices would be lowered, and led Congress in February, 1868, to stop further contraction after $44 million had been retired. When a series of more prosperous years ended in the panic of 1873 the monetary stringency led the Treasury to reissue some of these notes, raising the amount outstanding to $382 million, and in 1874 a bill to increase this to $400 million was defeated only by President Grant's veto (see the chart on page 441).

Early in 1875, facing loss of control of the House, the Republicans passed the Resumption Act. Though a compromise measure, it provided for reduction of the greenbacks, in proportion as national bank notes were increased, to $300 million, for the resumption of specie payments on Jan. 1, 1879, and for the replacement of the fractional paper money with silver coin. In preparation for resumption, the Treasury accumulated gold, chiefly by selling bonds; the greenbacks steadily rose in value, reaching par in December, 1878, and the next month specie payment was quietly resumed. Once restored to par, there was little incentive to present the greenbacks for redemption, especially as the shift to a favorable balance of trade after 1873 reduced the likelihood of a serious demand for gold for export. Meanwhile, in May, 1878, the inflationist groups were able to pass an act stopping further destruction of the greenbacks and providing that any notes redeemed could later be paid out again by the Treasury. The amount then outstanding, $346 million, has remained unchanged ever since, a relic of Civil War finance.

After this substantial victory of the inflationists, the greenbacks ceased to be a political issue. But even when the decline in prices incident to the restoration of the circulating medium to a gold basis had ceased and the depression had passed, the general price level continued to fall for nearly two decades (see frontispiece). This intensified the demand for cheap money, and a combination of circumstances resulted in a shift in the cry for more greenbacks to one for a greater coinage of silver, which led to the free-silver movement.

The Free-silver Movement. This combination of circumstances is found in four groups of developments each one of which reacted upon the supply (1) of silver or (2) of gold, or on the demand (3) for silver or (4) for gold, and all of which brought a sudden and marked decline in the value of silver relative to gold. As shown on the chart on page 666, the world's output of gold slowly declined after 1860 until 1885. On the other hand, the output of silver rose very rapidly after 1860, chiefly as a result of the opening up of the Western mines in the United States. Consequently, the

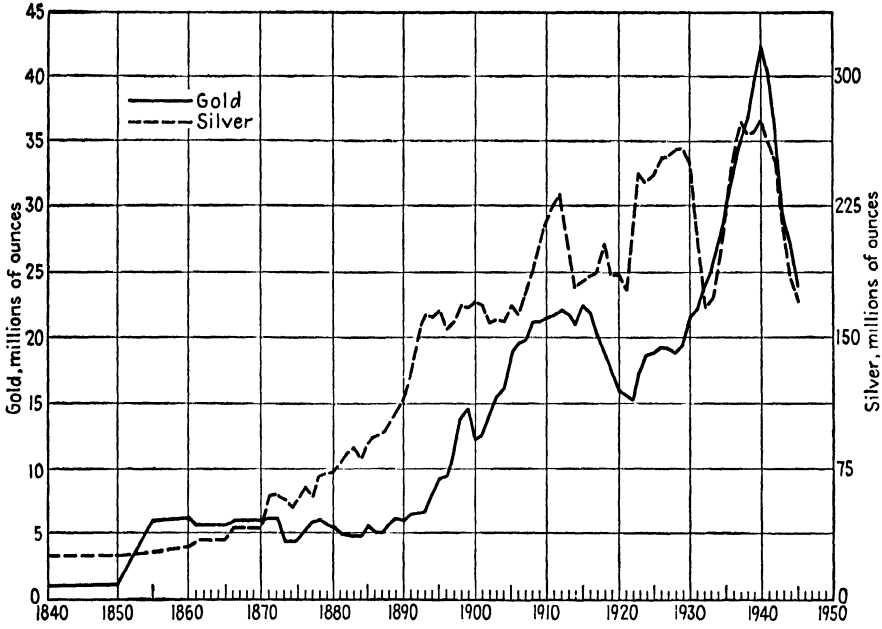


FIG. 67. World's production of gold and silver since 1840.

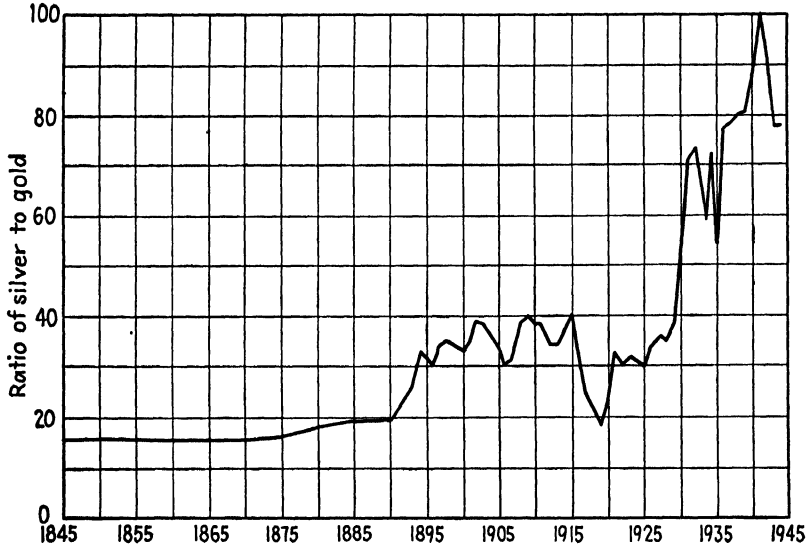


FIG. 68. Commercial ratio of silver to gold, 1845–1944.

commercial ratio of silver to gold, which had fluctuated within very narrow limits around 15½ to 1 since early in the century, after 1873 rose to over 16 to 1 and soon was fluctuating around 18 to 1, a change greater than had occurred for over 200 years (see the chart on page 666).

The existing coinage ratio for silver and gold dollars, fixed by the Act of 1837, was substantially 16 to 1. This law had provided for the free coinage of both metals, but in 1873, when the laws were being revised, the silver

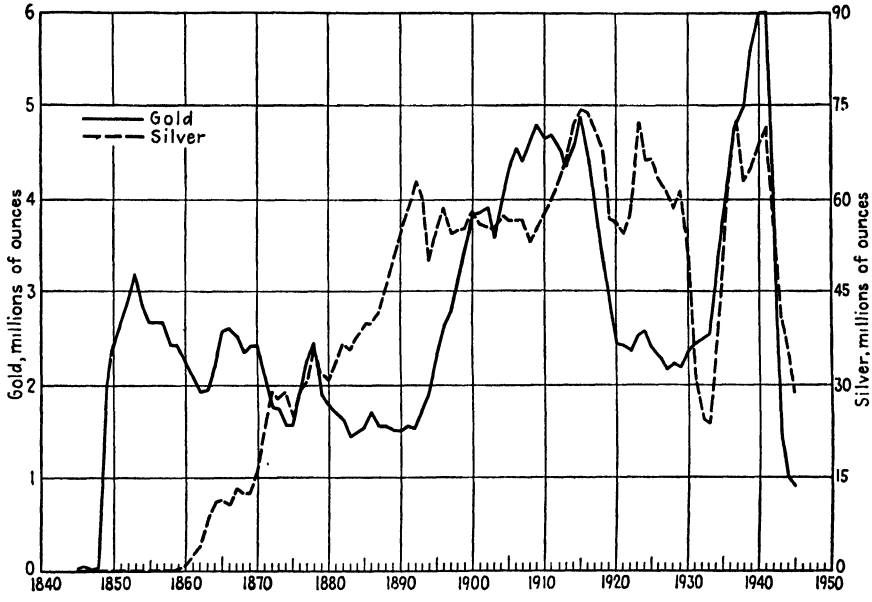


FIG. 69. Production of gold and silver in the United States since 1845.

dollar was dropped from the list of coins to be freely minted. There was little objection at the time, since the coinage ratio undervalued silver as coin and little was taken to the mint. Thus when, in 1874, the commercial ratio of silver to gold most unexpectedly rose above 16 to 1 so that the coinage of silver into dollars would have been profitable, it was no longer legal. Thereupon, those wanting the free coinage of silver began to call this law "the crime of 1873." Free coinage of silver then became the medium through which the cheap-money group sought to secure their objective, and they were vigorously supported by the Western silver producers.

The first resulting law was the Bland-Allison Act of 1878, passed over the President's veto. It was a compromise measure which, although not granting free coinage, did require the Treasury to buy not less than $2 million nor more than $4 million of silver a month to be coined into dollars. It also authorized the issue of silver certificates on the deposit of silver dol-

lars in the Treasury, since the bulk of the dollar made it unpopular for general use. Lack of sufficient power in Congress prevented further action until the Republicans gained full control in the election of 1888. Then, in return for their support of the McKinley Tariff, a small group from the silver states who held the balance of power in the Senate were able to force the party to pass the Sherman Silver Act of 1890, an example only too typical of the manner in which much legislation is determined. This law required the government to buy 4.5 million ounces of silver monthly, about the country's total output at the time; to pay for this, a new form of paper money was to be issued known as the Treasury Notes of 1890, redeemable in either gold or silver at the discretion of the Secretary of the Treasury and enjoying full legal-tender rights. This law practically doubled the monthly purchases of silver, and its passage led many to fear that the currency might soon be on a silver basis. This apprehension was soon greatly increased by other developments.

The Culmination of the Free-silver Movement. First in importance was an abrupt drop in the price of silver after 1890, by which date the output was nearly double that in 1875, though the output of gold showed little change. Also marked alterations in the monetary demand for the two metals had been taking place. The rising demand for gold from countries on a gold standard was augmented when Germany shifted to that standard, 1871–1873, and when in 1874 the Latin Monetary Union, including France, Italy, and several smaller nations with a bimetallic currency system, suspended the free coinage of silver. The resulting decline in the monetary demand for silver was greatly accentuated when in 1893 India, one of the chief silver-using countries, stopped the free coinage of the silver rupee. In consequence, the next year the commercial ratio of silver to gold fell to 32.5 to 1, which meant that the silver bullion in a dollar was worth about 50 cents.

The second factor bringing the free-silver movement to a climax was the outbreak of the panic of 1893 followed by a prolonged period of depression. Since uncertainty concerning the currency was one cause of the trouble, President Cleveland called a special session of Congress which repealed the Sherman Silver Law. The depression accentuated the downward trend in prices till in 1896 the lowest level in half a century was reached. The government was also having trouble in carrying out its announced policy of redeeming the greenbacks and the Treasury Notes of 1890 in either gold or silver as desired by the owner. Gold was being demanded, partly for hoarding, partly for export. As the Treasury faced a deficit, redeemed notes had to be paid out again for current expenses, thus creating an endless drain on its gold supply. Finally, it was forced to go out and buy over $200 million of gold, 1894–1896, by means of bond issues. It was in the midst of

all the resulting social unrest that the free-silver movement came to a climax in the presidential election of 1896, one that probably aroused greater popular excitement than any other since 1860.

Led by William J. Bryan, the Democratic party declared for the free and unlimited coinage of silver at the ratio of 16 to 1. They asserted that the steady decline in the general price level was due to the scarcity of gold and that free coinage of silver at 16 to 1, by increasing the supply of money, would ensure a rise in prices. Pointing to wheat, then selling in the West at

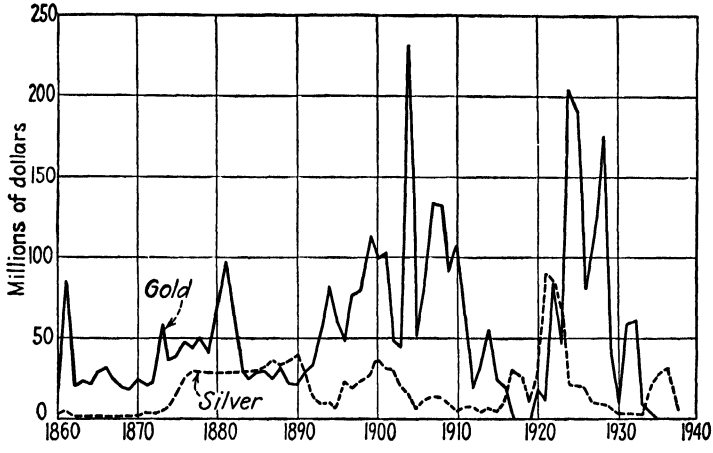


FIG. 70. Gold and silver coinage of the United States, 1860–1938.

around 50 cents a bushel, and other farm products at correspondingly low prices, Bryan argued that with free silver the price might again rise to $1, in which case it would require but half as many bushels to pay the farmers' debts. To the great debtor class, so numerous throughout the West, this naturally made a strong appeal. The suggestion that the free coinage ratio be placed at some point above 16 to 1 that would correspond to the probable commercial ratio after the change met with little support, partly because that point could not be determined accurately but chiefly because it would have meant less inflation.

The Republicans, with William McKinley as their nominee, opposed the free coinage of silver except by international agreement with the chief commercial nations, which they undertook to promote. As all international efforts since 1873 to secure such an agreement had failed, the proposal was felt to mean indefinite postponement of any action. Consequently, the party was regarded as really favoring the maintenance of the gold standard, and all the interests who believed that any other action meant a debasement of the currency, partial repudiation of debts, and financial chaos

rallied to its support. By election time, party lines were badly shattered. A group of Democrats favoring gold set up an independent ticket, and many silverites among the Western Republicans supported Bryan who was also the nominee of the Populist party. Though McKinley secured a good majority of the electoral vote, his margin in the popular vote was very narrow.

The Disappearance of the Movement. With the danger of free silver removed, confidence began to return, and it became evident that the long

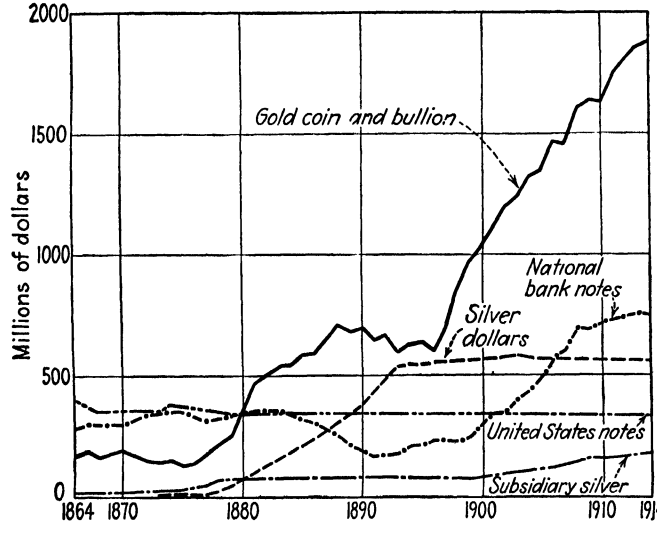


FIG. 71. Stock of money in the United States by kinds, 1864–1914.

depression was over. Yet it was not until 1900 that the gold supporters won sufficient strength in the Senate to consolidate their victory by the Currency Act of that year. This made gold the country's standard, required the Treasury to keep other forms of currency on a parity with it, and established a gold reserve of $150 million with provisions for its maintenance for this purpose. This marked the last step in the legal establishment of the gold standard, though the first step had been taken in the Coinage Act of 1834 and practically, except in periods of inflated paper, the currency had long been on a gold basis. Yet, as events soon turned out, the victory of those who supported gold to prevent depreciation proved far from substantial, and the inflationists were still to have their inning.

As the chart on page 666 indicates, a rapid rise in the world's output of gold had started in the middle 1890's; by 1899 it was valued at over $300 million or nearly three times the average for the 1880's; after 1905 it rose to over $400 million a year. This was due mainly to the opening up of the

rich mines of South Africa; those in the Yukon and Alaska contributed a portion, chiefly around 1900, and the new cyanide process for extraction made it possible to work many deposits previously unprofitable. By 1914, the world's monetary stock of gold was over $8 billion or about twice that of 1896.

Along with this and chiefly, as most believe, as a result of it, came a world-wide advance in the general price level. In the United States, wholesale prices in 1910 were about 50 per cent above the low point of 1896 and the rise of farm products was generally greater (see the chart on page 442). Thus, except for the silver mine owners, the advocates of free silver actually got substantially what they wanted—cheap money—but through the medium of gold instead of silver. Bryan could logically say that free silver was no longer necessary, and the movement quickly disappeared. It might be added that by 1920, as a result of the war, the money of the country, measured by the price level, had become cheaper than even the most dire predictions had asserted would result from free silver. All of this history suggests the urgent need of a monetary system that will eliminate the many evils attendant upon a fluctuating standard of value.

The changes in the circulating medium after 1914, being closely related to changes in the national banking system, necessitate a prior account of the development of that system and this will include a history of its note issues, the only element in the circulating medium prior to 1914 which remains to be considered.

The Provisions of the National Banking System. Though the laws establishing the national banking system were partly shaped by the war-time fiscal needs, they were designed primarily to set up a system in which the numerous evils still prevalent among state banks would be eliminated. There were hopes that the prohibitive tax on state bank notes would drive these banks out of existence, but the reduction in their number proved relatively brief and eventually they flourished as never before. The result was a new era in the history of banking where a dual system prevailed with keen competition between the two groups, and control was divided between the Federal authority and that of all the different states. To appreciate the improvements secured under national banks, the practices necessary for the efficient performance of banking functions noted in Chap. XXIV must be kept in mind. As the national banking act of 1863, owing to various defects, was replaced by a new act in 1864, the provisions of the former can be passed over.

Since the unsound note issues of many state banks had caused the public the greatest suffering, the national banking law took particular care to remedy this evil. Adopting the old free-banking system device of notes backed by a deposit of securities, it avoided that system's defect of unsound

securities by requiring a deposit with the Treasury of United States bonds only, against which notes could be issued up to 90 per cent of their market value but not over that percentage of their par value. The notes were not made legal tender but were to be accepted in payment by all national banks and by the government in all cases where specie was not required by law. They were redeemable on presentation at the bank of issue and also at agencies in the chief cities until in 1874 the Treasury was made the sole redeeming agency and the banks were required to maintain there a redemption fund equal to 5 per cent of their outstanding issue. Originally, the total issue was limited to $300 million, then raised to $354 million in 1870, and there was soon an attempt to secure a sectional apportionment, but in 1875 these restrictions were repealed, thus allowing real freedom of issue. As these national bank notes proved absolutely safe and circulated freely throughout the country, they were a great improvement over the state bank notes which they replaced. Their only real defect was lack of elasticity, as will be explained later.

To help safeguard depositors, national banks were required to maintain certain reserves. Those in central reserve cities, which included New York and later Chicago and for a while St. Louis, had to keep a reserve of 25 per cent of their deposits. Outside of the 5 per cent note redemption fund and clearinghouse certificates, this had to be made up of "lawful money" and be kept in the bank's own vaults. Banks in reserve cities, eventually including about two dozen other large cities, also had to have a 25 per cent reserve, but half of this could be kept on deposit in banks in central reserve cities. All others had to maintain a reserve of 15 per cent, of which three-fifths could be on deposit in either class of reserve cities. These requirements also served as a check on overexpansion of loans. The importance of this was greatly enhanced because from this time on there was a marked growth in the practice of making loans in the form of a deposit credit instead of by the issue of bank notes, as had been common, at least outside the larger cities, before 1860.

The permission to count deposits in reserve cities as a part of the required reserves tended to weaken the situation. Banks in smaller places wished to have deposits in the large financial centers against which they could draw to meet the needs of customers requiring funds payable in those centers. When the large city banks began to pay interest on such deposits, the country banks tended to shift any funds that they could not immediately use to the large cities, chiefly to New York, to secure this interest. Such deposits, being subject to sudden and heavy withdrawals, compelled the New York banks to maintain a large proportion of very liquid assets, and lending on call in the stock market became the favored means for so doing. The result was to pyramid the volume of deposits based on the actual cash

reserve of the whole system, to concentrate the ultimate reserve in New York, and to accentuate the fluctuation in the money market, especially in times of financial stress.

To secure greater publicity as to banking conditions and effective administration of the law, control of the system was vested in the Comptroller of the Currency. Five times a year, on his call, each bank was to send him a report of its condition, and he was to make periodic examinations of the banks and in general enforce the law. Other safeguards imposed a double liability on the stockholders in case of failure and required the accumulation of a surplus. Loans to any single individual or concern in excess of 10 per cent of the paid-in capital were prohibited and also loans on the security of real estate, a practice that had proved disastrous to many state banks.

Certain features of the system as a whole require emphasis. Unlike the earlier United States banks, it did not set up a single and dominating central bank; rather it provided for a large number of relatively small banks scattered throughout the country. Its highly individualistic and decentralized character reflected the general opposition to any concentration of banking power. The law required a minimum capital, rising from $50,000 in places of less than 3,000 inhabitants to $200,000 in places of over 50,000. Branch banks, with a very minor exception, were not permitted, and the prohibition against investing in stock of any other corporation checked any extension of control in this manner. Decentralization of control resulted in the management of many banks falling into the hands of less experienced bankers, and it was impossible to secure the unity of action in bank policies so essential either in coping with a financial crisis or in helping to check the development of such a crisis in the first place. The continued existence of the state banks only aggravated these difficulties. Thus when trouble arose, there was a tendency for each bank to try and save itself and let the devil take the hindmost; the results were distress and losses that might have been avoided had more unity of action prevailed.

Although the independent treasury remained, the Secretary of the Treasury was authorized to deposit some of the public funds in selected national banks known as "depository banks," which had to provide special security for such deposits. In the earlier years, such deposits were small, but later they tended to grow, particularly in times of monetary stringency. As the banks came to believe that they could count on such deposits for aid in an emergency, they were less cautious in extending credit and maintaining adequate reserves. Another difficulty due to the independent treasury arose when large payments to the Treasury fell due with no corresponding increase in government expenses, thus tending to create a stringency in the money market, unless the Treasury transferred some of its funds to

the depository banks. These difficulties largely explain the ultimate abandonment of the independent treasury system after the adoption of the Federal Reserve System.

The Growth of the National Banking System. At first, the hope that most state banks would choose to become national banks seemed likely to be realized. The Federal laws, especially the prohibitive tax on state bank notes, were designed to induce the shift, but it took time to secure the state legislation required to facilitate it. By the autumn of 1865, over 1,500 national banks with some $450 million of capital, surplus, and undivided

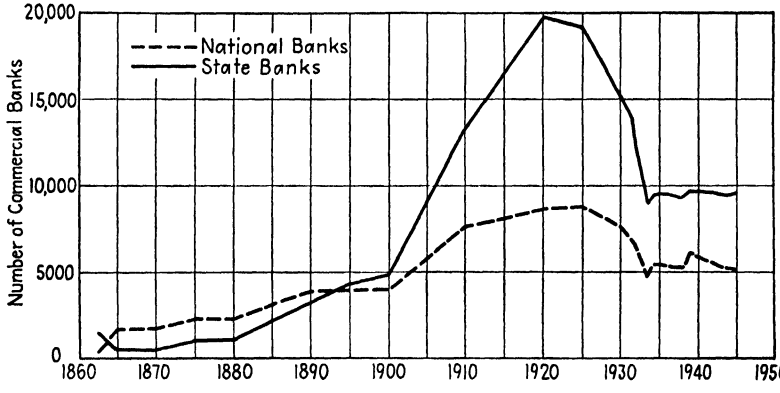


FIG. 72. Number of commercial banks in the United States since 1863.

profits had been organized, about equal to the number of state banks in 1860; by 1868, barely 250 state banks remained. The system was thus early established in a dominating position, but it soon became evident that the state banks were not to be eliminated (see the chart on this page).

After 1865, there was a fairly steady growth in the number of national banks to some 3,700 in 1900 with over $1 billion of capital, surplus, and undivided profits. It is significant that the item of loans and discounts, with which individual deposits tended to keep pace, showed a much higher rate of growth, the total of $2,600 million in 1900 being nearly five times that for 1866, thus reflecting the marked development of the use of deposit currency. The note circulation rose from $268 million in 1866 to $339 million in 1873 but, despite the removal of the limitation in 1875, there was little change till after 1884 and then a sudden decline to $129 million in 1889. It was not until 1900 that it rose above $200 million (see the chart on page 670). The difficulty with the notes which this indicated led to a change of the law in 1900.

The chief defect in these notes was their lack of elasticity. The amount in circulation, instead of fluctuating with the needs of business, tended rather to vary with the price of government bonds that were required to

secure them, since this substantially affected the profit obtainable from their issue. When these bonds were low in price during the 1870's, note issue had been reasonably profitable; during the 1880's, as many bonds were redeemed, their price rose rapidly, thus causing the drop in the note cir-

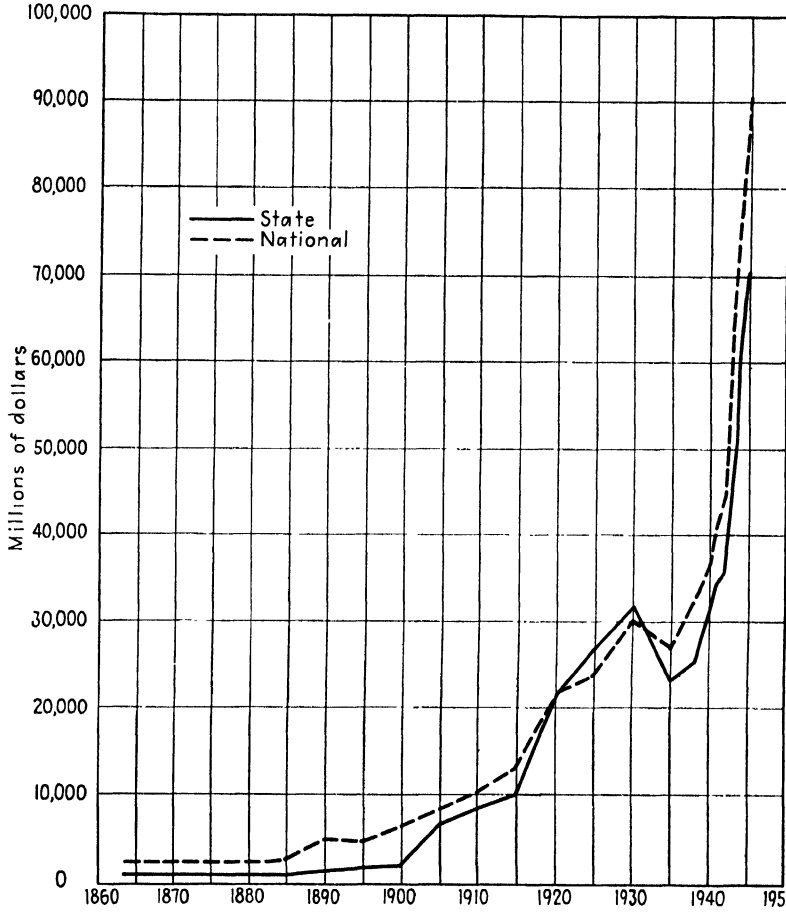


FIG. 73. Resources of commercial banks in the United States since 1873.

culation. Elasticity in these notes was made the more important because it was lacking in all the other elements in the circulating medium. This condition would have caused more trouble had it not been for the growing use of deposit currency, for that served as a substitute for money in most cases and it did possess a certain elasticity. The difficulty with it arose from the fact that, although it proved fairly satisfactory in ordinary times, it completely failed in times of panic. Then, when the chance to get needed loans was all the more necessary to allay the panicky feeling, every bank

to protect itself sought to contract its loans and the situation was only aggravated.

An amendment to the law in the Currency Act of 1900 sought to make the issue of bank notes more profitable. Notes could be issued up to 100 per cent of the market value of the deposited government bonds but not above their par value; new issues of bonds bearing a lower rate of interest were authorized so as to reduce their price; and the tax upon the notes secured by these bonds was cut. Another amendment lowered the minimum capital required of banks in places of 3,000 or less population to $25,000, mainly in the hope that more small banks would enter the system. A marked expansion both in the number of national banks and in their note issue resulted; the former rose to over 7,500 by 1914 and the latter to over $700 million.

However, the lack of real elasticity in the note issue still remained and, as has so often been the case, it required the devastating experiences of another panic to secure the needed reforms. This was supplied by the panic of 1907 which, though brief, was marked by an acute financial stringency. Immediately this led to the Aldrich-Vreeland Act of 1908, which provided for an emergency note issue secured by certain bank assets other than government bonds and subject to a tax that would ensure retirement after a monetary stringency ended. A quick increase in notes was thus possible, as was shown in the brief panic on the outbreak of war in 1914. This law was considered a purely temporary measure to meet any emergency until Congress had time to formulate a general revision of the whole national banking system.

Sad experience had at last produced a general conviction that such a revision was necessary. It was realized that the existing system was antiquated, that certain features had been shaped by conditions arising out of the Civil War which had long ceased to exist, and that others had been due to old prejudices now outgrown. To study the problem, Congress created a Monetary Commission of its members headed by Senator Aldrich. After some 3 years of work, involving a far more thorough and scientific study than is accorded most important legislation, the commission reported in 1912. Owing to the long debate and a shift in the party in power following Wilson's election, it was not until 1913 that the resulting Federal Reserve Act, involving less concentration of control than was originally proposed, became a law. As many of its provisions were shaped by developments in state banking during this period, these must be described before explaining this law.

The New Era of State Banks. The state banks, which by 1868, following their loss of note issues, seemed on the verge of extinction, were after all destined to stage a great revival. In time, they regained a position equal

to that of the national banks, thus perpetuating the dual system of banking and the difficulties incident to effective control of the system as a whole. Among the state institutions, however, there developed different types with a specialization of functions that did not exist among the national banks, all of which were essentially commercial banks in character. There were three main groups of state institutions: commercial banks, trust companies, and savings banks, either stock or mutual. Actually the line between the institutions performing these specialized functions was not sharply drawn. As a rule, the savings banks were more definitely specialized in their activity and the trust companies came to engage in nearly every form of banking service. As the state commercial banks and trust companies became the chief competitors of the national banks, both groups are combined in the following figures of growth.

In 1875, there were probably between 600 and 700 state banks and trust companies with over $100 million of capital and surplus, or about a sixth that of the national banks. A moderate growth up to 1886 raised the number to some 1,250 of which only about 40 were trust companies. By 1893, state commercial banks outnumbered the national banks, though their resources were much smaller; then the rapid growth after 1900 raised the number of commercial banks to 14,600 by 1915 and that of trust companies to 1,600, the former having $700 million capital and surplus and the latter $900 million; combined, only a little below the total of $1.8 billion of the national banks. Besides perpetuating the dual system, this growth indicated that the national banking system did not meet all the needs of the country. The reasons for this are found in the character of the institutions developed under state regulation.

The Character of the State Commercial Banks. Since state banking legislation varied greatly, only the more general tendencies in regulation can be noted here. Eventually they tended to eliminate most of the worst abuses of the ante-bellum period and thus mark a new era in state banking history. Until the 1880's, however, there was relatively little state banking legislation. As state bank notes disappeared, the need to protect them ceased, and protection of depositors had never been considered equally important. At first the number of state banks declined; some states had no provision for chartering new banks or required a special act of the legislature; others allowed their organization under general incorporation laws. Barnett [1] concludes that between 1865 and 1875 most were incorporated under special acts and between 1875 and 1887 under general business incorporation laws. As the demand for state banks revived, more states

[1] BARNETT, G. E., "State Banks and Trust Companies Since the Passage of the National Banking Act," Washington, 1911. Much of what follows is based on this authority.

adopted general banking laws, and since 1887 most state banks have been organized under these laws which brought a marked improvement in their regulation.

The general tendency in this legislation was to approach, though seldom to equal, the standards set up by the national banking system. Most states set a minimum capital requirement, commonly varying with the population and usually from $10,000 to $25,000 in the smallest places as against the $50,000 required for national banks up to 1900. More, if not all, of the capital had to be paid in before opening, and accumulation of a surplus was stressed. Provisions for assessment of stockholders to make up impaired capital and for imposing greater liability upon them, generally double, in case of a bank's failure, became common, though often ineffective in practice.

To improve the character of the assets, the amount of loans to individuals or concerns was limited, though less strictly than in national banks; loans to directors and officers were also limited. In marked contrast to the national system, almost all states permitted loans on the security of real estate, sometimes with minor limitations. Recognition of the importance of reserve requirements came slowly but, as the growing use of deposit currency increased the need for this safeguard, most states adopted such requirements. Usually they were appreciably below those set for national banks and, unlike the latter, set a lower percentage against time and savings than against demand deposits. Deposits in larger city banks up to a certain amount could be counted as a part of the reserve, thus adding to the danger created by this practice in the national system.

The states also took steps to ensure stricter enforcement of the laws, chiefly after 1887. More detailed and frequent public reports were required as well as a regular examination by state officials and often by the directors. More efficient methods for handling the affairs of banks in financial difficulties were adopted. Most states either prohibited branch banks or made no provision for them. In some, the right to hold stock in other corporations was used to build up a chain; elsewhere the same result was occasionally secured through common ownership of stock by groups of individuals. The net result was a state banking system which was even more individualistic than before 1860. The decentralization characteristic of both state and national systems was in marked contrast to the tendencies prevailing in most foreign countries.

The Causes for the Revival of State Commercial Banks. As is suggested by the preceding account of state banking legislation, the revival of state banks was due to the advantages that these laws gave the state institutions over the national banks in carrying on certain lines of business. As summarized by Barnett, there were four main factors determining their

relative profitableness: (1) The superior credit and confidence enjoyed by the national banks, which attracted both deposits and capital. This was especially marked in the earlier years before more effective regulation of the state banks became common, but still remains appreciable. (2) The right to issue notes given to the national banks and practically denied to the state banks. This advantage also became far less important after the early 1880's, due partly to the growing use of deposit currency in place of bank notes, but mainly to the lower profit from the issue of notes, though this rose somewhat after 1900. (3) The greater freedom of choice allowed state banks in making loans, especially the right to make loans on the security of real estate, so important for banks in the agricultural districts. (4) The low reserve requirements for state banks, especially those against time and savings deposits.

The importance of these four factors for a given bank varied greatly according to its size, the economic activities dominant about its location, and the class of banking business emphasized. Other advantages were available to either state or national institutions, but they were of minor importance. Of the four main factors listed, only the first two would lead to a choice of a national rather than a state charter, and their importance greatly declined after the early 1880's; hence the chief explanation for the subsequent rapid growth of state banks. Even the changes in the law in 1900 to aid national banks did not prevent a still more rapid growth of state commercial banks down to 1914.

State Trust Company Development. The remarkable growth of the trust companies after about 1890 can be attributed to two main causes: (1) In so far as they carried on the same lines of business as did national banks, the state laws controlling them were commonly more lenient than the national banking law, notably as regards reserve requirements and limitations on the character of investments. (2) The trust companies had the right to engage in a great variety of financial activities not open to national banks, and there was a steadily growing demand for these services, particularly in the large cities. These advantages were such that the larger national banks often secured some affiliation with a trust company to benefit through the mutual exchange of business.

The demand for the special services which the trust companies provided arose chiefly from the growth of corporations with their varied security issues, the rise of large personal fortunes with the increasingly complex problem of their management, and the growth in volume and size of real estate transactions; however, numerous other developments contributed to the outcome. Thus the trust companies acted as trustee for issues of corporation bonds, they registered and transferred stocks, and were useful in various receivership operations. For the private individual they were

prepared to manage his financial affairs, accept various forms of trusts, and settle estates. When, in addition to these and other services, they took savings accounts and also carried on all the functions of a commercial bank it is clear how they came to be called the "department stores of finance."

Although most of these specialized activities were developed by the trust companies during the second half of the nineteenth century, the last quarter of the century also saw them increasingly active in the general banking field. By the middle 1880's, the regular commercial banks were complaining of this competition as unfair, since there was then little regulation of the trust companies. Stricter control soon spread to all the states, but the competition faced by the national banks still remained such that, when the Federal Reserve System was adopted, these banks were allowed to assume some of the special trust company activities to put them on a less uneven competitive basis.

State Savings Banks. Though savings deposits were accepted by most commercial banks, both national and state, there was also a group of state institutions that practically confined itself to this business. Previous to 1850, the growth of this group had been slow, and in 1860 there were probably less than 300 with around $150 million of deposits, but a rapid increase at this period raised the deposits to over $900 million in 1875. By 1913, the deposits in the mutual savings banks, much the more important class in this group but mainly confined to the North Atlantic states with a few in the North Central states and California, had deposits of around $4 billion. The other class, the stock savings banks, though more widely scattered, were much less numerous. Many localities had no specialized savings banks and depended on commercial banks, trust companies, or the post office for savings depositories. In 1913 of the total savings deposits (including time certificates of deposit and postal savings) of over $8.5 billion, the mutuals held less than half, the other state banks a slightly smaller proportion, and the national banks around one-sixth.

During this period, the private banks, fairly numerous before 1860, steadily declined in importance, though adequate statistics are lacking. One state after another prohibited them; apparently the decline was slow until 1930, since when they have been almost eliminated.

The Provisions of the Federal Reserve Act. The two reforms in the national banking system generally accepted as being most urgent were (1) a more centralized system, into which it was desirable to draw more of the state institutions, with greater control by the government, and (2) a more elastic note issue. To promote the first, there was created the Federal Reserve Board and a group of Federal reserve banks each serving one of the twelve districts into which the country was divided. The board had seven members, and was vested with the general supervision of the Federal reserve banks and the issue of Federal reserve notes. It could require these

banks to rediscount the discounted notes of one another at rates that it fixed and could temporarily suspend the reserve requirements subject to certain taxes.

The Federal reserve banks were designed to function exclusively as bankers' banks. Each was to receive deposits, hold reserves, issue notes, make rediscounts, and clear checks for the member banks in its district. It could also deal directly with others in the open market by buying and selling certain classes of paper. Furthermore it was to serve as a depository and fiscal agent of the government, thus ending these functions of the independent treasury. Each bank had a board of nine directors, three being chosen by the Federal Reserve Board and two each by three groups of large, medium-sized, and small member banks in its district; a majority was to represent the government, the public, and economic interests other than banking. The decision to create twelve of these regional banks, rather than the eight which the law permitted or a single central bank such as was common in Europe, reflected the still prevalent fear of too much centralization, though the powers given the Federal Reserve Board did mark an appreciable step in that direction. It was also argued that the United States was far too large and the economic activities of different sections far too diverse to make a central bank practicable, quite regardless of any democratic ideals.

Underlying the Federal reserve banks were the member banks made up of two groups: (1) all national banks and (2) such state banks as chose to become, and were accepted as, members. The law required all national banks to join the system or give up their Federal charter; it also included provisions to facilitate the shifting of state banks to national banks. State banks still desiring to exercise the powers granted by their charters were allowed to become members of the Federal Reserve System, provided they complied with the reserve, capital, and certain other requirements established for national banks. Every member bank had to subscribe to stock in the Federal reserve bank of its district an amount equal to one-sixth of the member bank's capital and surplus, and dividends on this stock were limited to 6 per cent.

To strengthen the system by inducing more state banks to take out Federal charters, national banks were given certain advantages which they had previously lacked in their competition with state institutions. They were allowed to act in various fiduciary capacities where competing state banks existed, the prohibition of loans on real estate was modified, and reserve requirements were reduced. Unfortunately some of these modifications to meet the competition of state institutions led to later trouble—one more illustration of the difficulties arising from a dual banking system.

As the law was amended in 1917, a reserve of 3 per cent was required against time deposits payable after 30 days' notice in the case of all banks;

against demand deposits, central reserve city banks had to have a reserve of 13 per cent, reserve city banks 10 per cent, and country banks 7 per cent. This involved a considerable reduction as compared with the old national banking law, especially on time deposits where the desire to meet competition from state institutions was obvious. All this legal reserve now had to be kept on deposit in the Federal reserve banks of the district. It did not include money kept on hand to meet withdrawals, or deposits in banks elsewhere kept to meet customers' needs; these were left to the discretion of each bank, but such funds added to the actual, if not the legal, reserves. The Federal reserve banks in their turn were required to maintain a legal reserve of lawful money of 35 per cent of their deposits; in an emergency, this limit could be temporarily suspended by the board, subject to a tax on the deficiency. In 1945, the requirement was cut to 25 per cent.

The main devices of the new system for securing greater concentration of control were the powers granted the Board and the reserve banks to influence the expansion or contraction of bank credit and the money market. These were chiefly exerted through two means: (1) the open-market operations of the reserve banks and (2) the control over rediscount rates. By selling or buying certain classes of paper in the open market anywhere in the country, the reserve banks could withdraw from, or add to, the supply of funds available in any region, as well as shift them from region to region, and thus influence in some measure the money market rates. The same purpose could be served by the rediscounting of discounted paper at another reserve bank. Thus, through the concentration of reserves in the reserve banks and the means for shifting them among these banks, greater efficiency in the use of the reserves was secured, which was vital in time of stress, and also at all times a greater mobility of funds that promoted their most economical use.

The reserve banks by fixing the rate at which they would rediscount eligible paper for the member banks could largely determine the minimum rate that those banks must charge their customers for loans, as long at least as their position was such that they had to rediscount at the reserve bank to extend their loans. Above this, and more important, was the power of the Federal Reserve Board to fix the rate in any district where it saw fit to intervene. Typically, it is the individual bank that gives way to local pressure for greater credit. It was hoped that the district reserve banks would be less subject to such pressure and that the Federal Reserve Board's actions would be governed solely by nation-wide interests; even so, success depended much on human judgment which, as events proved, was not infallible. In fact an outstanding feature of the whole Federal Reserve System was the greater reliance upon human wisdom in its administration, as contrasted with the inelastic, cut-and-dried provisions of the old national

banking law. In this lay much of its hope, but also possibilities of serious weakness.

The objective of greater elasticity in the note issue was secured by authorizing what was called "asset currency," that is, notes secured by certain classes of short-time paper arising out of transactions in trade, industry, and agriculture, in place of the notes secured by government bonds under the old law. These notes were issued by the Federal reserve banks and were secured by specific classes of short-time paper or by deposit of gold or gold certificates. Against its issue, each bank had to maintain a gold reserve of 40 per cent, though in emergency this limit could be temporarily suspended by the Board, subject to a graduated tax on the deficiency. This was cut to 25 per cent in 1945. Additional provisions, supplemented by more effective action in 1935, were designed to secure the gradual retirement of the bond-secured national bank notes; there was also authorization for the issue of Federal reserve bank notes to be similarly secured, but this was withdrawn after the Second World War. Elasticity in the Federal reserve notes was expected to come from the rise and decline with business conditions of the supply of short-time self-liquidating paper on which they were based. Prompt retirement was furthered by prohibiting each reserve bank from paying out the notes of other reserve banks which it received and requiring that they be sent back to the bank of issue; the fact that these notes were not made legal tender and could not be counted as part of the legal reserve of a bank had the same result.

It is to be noted that the Federal Reserve System also sought to provide for greater elasticity in the deposit currency, particularly so as to facilitate expansion in time of panic and avoid the contraction common under the old system on such occasions. The provisions permitting a suspension of the reserve requirements and a more effective mobilization and control of all the banking resources of the system served this end, while others were designed to secure contraction once the emergency had passed. Yet the greater elasticity provided only created the greater need for wise control.

Among other progressive features of the new law, mention should be made of the extensive system set up by the reserve banks for the clearing and collection of checks, which was much more efficient and economical than prevailed before, though opposed by many banks that lost revenue through the insistence on par collection. A service of a similar character was provided by the creation of a Gold Settlement Fund under which the reserve banks kept a large gold deposit in the Treasury which could be counted as a part of their legal reserve. By settling daily balances between the reserve banks through book transfers of these deposits, considerable expense in the actual shipment of money is saved. The use of the reserve banks as fiscal agents of the government led to more efficient handling of

the funds and, under a law of 1920, these banks took over much of the remaining work of the subtreasuries, which were then abolished, thus ending the independent treasury system and its attendant difficulties.

Another set of the law's provisions was designed to aid the financing of foreign trade and other international transactions. The reserve banks were empowered to establish agencies, and the larger national banks, branches, abroad. In 1919, the formation of corporations to engage in international banking and other international operations was authorized. A more effectively organized market for foreign bills was also created.

The Development and Work of the Federal Reserve System. Actual operations under the Federal Reserve System started in November, 1914, and for the next 5 years were dominated by conditions arising out of the war. When the country entered the war, the fiscal needs of the government so completely controlled the banking development that the latter can be explained only in connection with the history of wartime financing, which will be covered in the chapter devoted to the war period. Here it must suffice to note that the method adopted for financing the war would scarcely have been possible under the old national banking law, but was greatly aided by the Federal Reserve System. The more effective mobilization and control of the country's banking resources provided by this system better ensured their conservation and use for the nation's chief needs. The system's possibilities for a great expansion of note issue and deposit currency, extended by amendments during the war, proved essential in carrying out the financial plans adopted. That the result was such an expansion as to produce great inflation with all its attendant evils must be charged to the plan of financing chosen, though it was made possible by the new system. Another result was that the later development of the system was vitally influenced by the abnormal strain placed upon it during these formative years.

In the sudden and sharp reaction of 1920–1921 which followed the postwar boom, the new system showed its superiority over the old system in at least one respect. Despite the great drop in prices and the business setback, the country was able to pass through these difficulties without developing such panicky conditions, with the unnecessary losses attendant thereupon, as had marked earlier business revulsions.

A better opportunity for judging the new system was provided in the following decade when, for the first time, the Federal Reserve Board was freed from domination by the government's fiscal needs, though still faced with many postwar reactions. The system's advantages became evident in the extension of its check clearing and collection service, in the economy of the Gold Settlement Fund, and in the efficiency of its work as a fiscal agency. In addition the bank acceptance was developed, a wider discount

market was provided, the handling of international transactions was facilitated, and the mobility of capital funds was increased.

Yet in one important respect the system failed to justify the hopes of its advocates, at least those of the more optimistic. It did not prove equal to checking those forces generating the unprecedented speculative activities that culminated in the stock-market crash and the great depression starting in 1929. The question how far the administration of the system or how far the limit of powers inherent in the system can reasonably be held in some measure responsible for this failure has aroused much controversy. That some of the underlying causes of the prolonged depression, including many arising out of the war and most originating abroad, were beyond any control of the Federal reserve authorities is obvious. Yet it is clear that the lower standards set for banks in the system with the possibilities for expansion of credit had unfortunate consequences and certainly aggravated the subsequent distress, notably that due to stock-market speculation. The weakness of the system inherent in the dependence on human judgment was shown in the failure of its authorities to use their full powers to check dangerous developments.

An unanticipated development aggravating the banking problems of these years was the large net inflow of gold. As it reached the banks, it was increasingly used as backing for Federal reserve notes instead of the eligible short-term paper, and the amount outstanding thus became less responsive to the needs of trade. Also, as it added to the reserves, it greatly increased the potential expansion of bank credit. This put pressure on the banks to increase their loans or investments, thus ensuring an easy money market, and impaired the power of the reserve banks to check the expansion of credit.

As the demand for commercial loans increased very little between 1921 and 1929, the funds of member banks were diverted to other channels; their loans on securities more than doubled and those upon real estate more than tripled during these years, the latter being stimulated by a further modification of the law in 1927. These trends greatly altered the general character of the banks' assets; a much larger proportion came to consist of a type that was neither liquid nor readily shiftable without serious losses in any substantial reaction. It was commonly the large percentage of such assets, too often based on speculative valuations, that proved disastrous for so many banks after 1929.

Another disquieting development of these years was the large number of bank failures, even before the wholesale collapse after 1929. Though the sharp drop in prices had ended in 1921, in the 6 years following 1923 nearly 4,300 banks failed, of which 550 were national banks. The average for the latter group of 91 failures a year offers a sad comparison with the average

of 11 a year for the period 1863–1913 under the old national system. Most of the failures were among small banks, a group severely hit by the continued agricultural depression as well as by the loss of business to the cities as the use of automobiles spread. One result was to cut the total number of banks one-sixth below the peak of 1922, though consolidations played a minor part in this. Another outcome was a decided increase in the average size of banks for, despite the loss in numbers, total bank assets rose nearly 50 per cent.

Another hope concerning the Reserve System was destined to disappointment: few state institutions chose to become national banks and some national banks shifted to a state charter. Thus such increased centralization of control as had been anticipated from this source failed to materialize. On the other hand, a substantial number of those that preferred to operate under a state charter did eventually seek to become members of the Reserve System, and this entailed somewhat greater centralization. The growth in this class of members was stimulated by amendments of the law in 1917 and by state laws designed to make such membership easier as well as more attractive; this was followed during the war by urging membership as a patriotic duty to help conserve banking resources. As a result, by 1922 the membership of state institutions, typically the larger ones, had risen to a peak of over 1,600 with resources of $11 billion, but there still remained nearly 9,700 eligible nonmembers with slightly greater resources. At this time there were over 8,000 national banks in the system with $20.7 billion of resources. Thus the total membership of the system included less than a third of all the banks, but possessed nearly two-thirds of the total banking resources. By 1940, out of over 14,000 banks 8,000 still remained outside of the system, but their proportion of total bank assets had fallen to less than one-sixth. This situation had altered little by 1945.

A minor type of concentration appeared in the revival of branch banking. In striking contrast with the trend in many countries, branch banking had practically disappeared in the few states where it had existed before 1860 and, even when it began to reappear after about 1900, its growth was very limited. It has been confined chiefly to state institutions in the few states that authorize it, notably California, New York, Michigan, and Ohio. In 1927, national banks in such states were authorized to open branches in their own town or city, and a few converted state banks already had them. By 1938, some 200 national banks had nearly 1,600 branches. Very few found it profitable to maintain the foreign branches authorized in 1913 and by 1940 less than a dozen had a total of about 200. Despite the claim that branch banking ensures greater strength and better management, it faces the traditional dislike of concentrated banking power and the strong opposition of the small banks.

The Banking System and the Depression. The continued decline in the prices of commodities and in security values for 3 years after the stock-market crash in the autumn of 1929 left the banks in a desperate situation. Over 5,000 failed during these years, and in 1933 another 1,000 went under before the bank holiday was declared on March 5; 2,600 more did not reopen at the end of the holiday. These failures involved over $5 billion of deposits and reduced the total number of banks to 15,000 or about half that in 1922. As failures mounted and deposits were withdrawn for hoarding, the government sought to provide assistance.

The Reconstruction Finance Corporation, organized in 1932, advanced money to distressed banks, either as loans or by purchase of newly created preferred stock; the Banking Act of 1932, subsequently extended till made permanent in 1945, allowed Federal securities to be used as collateral for Federal reserve notes and made possible an expansion of bank credit and the circulating medium as well as large purchases of government securities by the reserve banks to help relieve the money market. Yet it proved impossible to allay the growing alarm of depositors; when Michigan's governor in February, 1933, declared an 8-day bank holiday to check withdrawals, depositors everywhere became panic-stricken, and similar action had to be taken in other states. When President Roosevelt took office on March 4, scarcely any banks remained in full operation; the banking system was practically paralyzed. No system could stand such a strain, but the basic fault was in allowing the banks to get into a condition such as to create a general fear as to their solvency.

No administration had ever come into office in this country at the moment of such an acute economic crisis. The action taken was prompt, vigorous, and on the whole remarkably successful. The President immediately proclaimed a bank holiday which lasted for most until March 15, when all solvent banks, about 13,000, were licensed to reopen under restrictions; some 4,200 with $4 billion of deposits were placed under Federal conservators or state receivers. The Emergency Banking Act was quickly passed which ratified the bank holiday, authorized the issue of Federal reserve bank notes against government obligations and certain other assets, allowed the Treasury to call in gold, and provided for aid to banks by loans or the purchase of their preferred stock, and for the reorganization or liquidation of closed banks.

These measures undoubtedly prevented enormous needless losses. Public confidence in the banks allowed to reopen was quickly restored, and the money withdrawn for hoarding—estimated at from $1 to $2 billion—was redeposited. The restrictions on the business of the reopened banks were soon removed, and the closed banks either reorganized or liquidated in a manner to minimize the losses involved. The thoroughness of the banking

purge is shown by the small number of failures in the following years, the annual average for all banks through 1940 being forty-five, and for members of the reserve system only three.

The weaknesses in the banking system disclosed by sad experience led to new efforts at reform. The Banking Act of June, 1933, sought to divorce commercial and investment banking by forbidding member banks to engage in investment banking or trust operations, either directly or through affiliates. It prohibited the payment of interest on demand deposits, and allowed the board to limit that on time and savings deposits, opened membership in the system to industrial and savings banks, authorized branches in states where such were allowed, set up checks on loans for speculation in securities, commodities, or real estate, abolished the double liability on future issues of national bank stock, and initiated a system for a limited guarantee of deposits. The later Banking Act of 1935 was devoted largely to detailed regulations for carrying out the previous legislation.

In place of the Federal Reserve Board a new Board of Governors was put at the head of the reserve system, an Open Market Committee subject to it was given control of the open-market operations of the banks, and the purchase of government securities by the reserve banks was limited to open-market operations. Especially important in strengthening the control over credit was the power granted the new board to raise the reserve requirements up to double the existing percentages. A more questionable change increased the power of national banks to make real-estate loans.

As finally determined under the Act of 1935, all member banks in the Reserve System were required to join in the Federal Deposit Insurance Corporation and qualified nonmember banks might do so, except after July 1, 1942, those with deposits exceeding $1 million. By that time over nine-tenths of all banks were insured. The maximum insurance provided for any one depositor was $5,000, and the insurance fund was to be built up by assessing the banks on the basis of their deposits. The supervisory rights of the corporation over the practices of the banks having insurance status, together with its power to admit or to expel, may be a powerful instrument for enforcing a high standard of banking. Forceful administration will be essential, for the chief argument against guarantee of deposits is that it tends to encourage lax banking practices.

After 1933, the great influx of gold and the resultant rise in the excess reserves of the banks created a danger of unwise credit expansion on any revival of prosperity. To check this, the new power to double the reserve requirements was used to the limit by January, 1937. As gold continued to flow in, it then became necessary to sterilize the influx by keeping it out of the reserves, at least for the time being. Meanwhile, the banks found the chief outlet for their new funds in the purchase of government securities

issued to meet the large annual deficits. Even this outlet was not sufficient to prevent interest rates from falling to the lowest level in the country's history. Thus when war came again, the nation, with its abnormal stock of gold and low interest rates, was in an unusually strong position to meet the tremendous financial strain involved; but the weaknesses inherent in its dual banking system had only been modified rather than eliminated. How the system passed through the ordeal will be described in the chapter devoted to the war.

Chapter XL

FINANCIAL INSTITUTIONS SINCE 1860 (*Continued*)

Agricultural Credit Institutions. The Federal enactments between 1913 and 1923 designed to overcome the previous deficiencies in meeting the financial needs of agriculture by providing for short-, intermediate-, and long-term credits were described in Chap. XXXI. The fact that by far the greater portion of the loans obtained from the Federal and the Joint-Stock Land Banks was used to pay off existing mortgages shows that the farmers thus secured a chance to borrow on more favorable terms than would otherwise have been possible. This helped relieve the situation during agriculture's difficult decade of readjustment after 1920, but when the prices of farm products underwent another sharp decline after 1929, additional financial aid was urgently required. As the attempts to provide this under the acts of 1929 and 1932 proved hopelessly inadequate, the Roosevelt administration in 1933 promptly passed laws making possible a great increase in agricultural credits and securing a more effective coordination of the various lending agencies.

This legislation set up the Farm Credit Administration as the head of a coordinated system under which four groups of lending institutions were to operate: the former Federal Land Banks and the Federal Intermediate Credit Banks, together with the newly created Production Credit Corporations, and the Banks for Cooperatives. (As many of the former Joint-Stock Land Banks had failed, partly because of poor management, provision was made to wind up the affairs of all of them.) One institution of each type was located in each of the twelve districts into which the country was divided. The new Production Credit Corporations were to lend to and supervise local discounting agencies known as "production credit associations" making loans for current production needs; the new Banks for Cooperatives were to extend commodity, operating capital, and facility loans to farmers' cooperatives. In 1933, to provide more risky mortgage loans than the Land Banks would make, Land Bank Commissioner loans were authorized, and $200 million was appropriated for this purpose. Since this sum was totally inadequate to meet the demand and the Land Banks were having trouble selling their bonds, additional financial support was provided by the creation of the Federal Farm Mortgage Corporation in 1934. It was authorized to issue up to $2 billion of government guaranteed

bonds and to use the proceeds to buy Land Bank bonds or for Land Bank Commissioner loans. Other forms of farm credits provided at this time for special purposes are described elsewhere.

The rapidity with which farmers took advantage of the new Federal credit legislation is ample evidence of the benefits it offered them, particularly in the distress of the depression but also in the long run. By 1936, the outstanding advances of the Farm Credit Administration totaled $3.5 billion of which $2.9 billion was farm mortgage loans, and the figures for 1940 were not much lower. One result was the transfer to Federal agencies of about 40 per cent of the farm mortgage debt; probably four-fifths of the loans were used to pay off existing mortgages. Also the terms of the new loans were much better. The rate on Land Bank loans, usually 5 to 6 per cent from 1917 through 1934, was later cut to 4 per cent and repayment of the principal was made easier. This Federal competition also forced easier terms on loans secured from private sources.

Undoubtedly the series of acts from 1913 on, whatever their defects of detail, did end the long period of neglect in providing for the particular financial needs of agriculture. For the first time, there was a group of large banks with the definitely specialized function of serving these needs, and they largely overcame the typical farmer's disadvantageous borrowing position due to his isolation, his lack of resources, and his individualistic small-scale enterprise. The increased mobility in the flow of capital to this activity obtained by organizing the market on a basis that was national in scope was of advantage to the whole economy as well as to the farmer. That the new credit facilities were misused and that there were many cases where farmers would have been better off in the long run if credit had not been so freely available is true, but this means that the new credit institutions were susceptible to abuse and more care was needed in the details of the laws and in their administration, not that they were undesirable. Whether the laws went so far as to provide a public subsidy to agriculture, and if so were still justified, involves issues of social policy that cannot be settled on purely economic grounds.

The Growth of Dealers in Securities. As capital increased in volume and importance and as the corporation grew in popularity, the business of dealing in the rapidly mounting volume of security issues—by 1929 this had risen to over $10 billion—expanded accordingly. This made possible much greater specialization in this business and thus a more efficient security marketing organization.

Although there is still much to be learned about the history of security dealers, it seems clear that the bond house was at first the chief specialized institution. Its growth was greatly stimulated by the large sales of Federal and state bonds during the Civil War and then by the mounting issues of

municipal and minor political units and the great volume of new railroad bonds. Starting a little before 1900, the bonds of industrial, public-utility, and other companies, previously relatively few in number and with rather localized sales, began to be issued in vastly greater quantities and soon secured a national market. At this period too, when the high price of urban land and the great skyscrapers erected thereon required an investment much larger than could be easily financed by a simple real estate mortgage, the loan was divided into small units through the issue of bonds secured by a mortgage. By 1931, following the building boom of the middle 1920's, some $10 billion of such bonds were outstanding. Though the market for most of these issues was rather localized, a specialized group of dealers arose for handling them.

After 1860, just as previously, private banking concerns doing a heterogeneous financial business, handled many of the bond issues. Among these were the foreign banking houses or those with foreign connections through which American securities were sold abroad—a small but important group whose activities were considerably expanded after 1865. Although some of these concerns came to specialize in one class of bonds, such as government and municipal, railroad, or public utility, others broadened their activities to include the handling of a wide range of stocks, especially after the rapid growth of such issues starting in the late 1890's. Such concerns became the great investment bankers to which the large corporations turned to dispose of their security issues. Individually or, if the issue was large, in groups organized as a syndicate, these bankers were prepared to underwrite an issue so that a corporation could be certain of having the needed funds when required. Through an extensive clientele, often augmented by branches or correspondents all over the country, the bankers provided the desirable broad market, often nation-wide, in which to dispose of such issues.

A somewhat hierarchical system of investment bankers was thus evolved. At the top stood a few powerful groups which individually or as syndicate managers controlled the marketing of most large issues and were likely to be represented on the directorate of the issuing corporation. The origination of smaller issues might be undertaken by less important houses; a host of others, seldom or never originating issues, engaged chiefly in their distribution. The growth and profits of this business were such that the larger commercial banks often organized, or affiliated with, an investment house to obtain a share of it. In time, certain investors, notably the big insurance companies, were buying on such a scale that, either individually or as a group, they were prepared to buy the whole of a large issue direct, thus saving the middlemen's costs.

The investment banking house also performed various functions besides that of distributing securities. Originating houses could give valuable

advice to the issuers as to the provisions of a security and the conditions under which the sale would be most successful. Specializing in the business and possessing a large clientele, they can ordinarily distribute a large issue more widely and efficiently than anybody else. Their investigation into the business and the legal problems involved to determine the probable soundness of an issue, being made by experts, though subject to errors of judgment, tends to provide some protection for the investor and also to direct the flow of capital into the most productive lines. Because the lure of profits led too many to fail in the adequate performance of this function, more governmental regulation of the business was found necessary.

Evolving out of the note brokers of earlier years, the commercial-paper house became another specialized type of distributor. Through it large concerns making much use of short-term paper could secure a wide distribution, chiefly among banks. It reached the height of its importance around the middle of this period, for after 1920 many concerns borrowed less working capital. With the recent expansion of installment selling, specialized financial corporations have arisen to take over paper thus arising. A similar service is offered by concerns advancing loans on business accounts receivable. An entirely separate group was made up of the promoters of highly speculative, if not purely fraudulent, enterprises that found their own clientele in the ignorant or "sucker" classes and mulcted this credulous public of sums estimated at several hundred millions annually.

The Expansion of Stock Exchanges. With the rapidly rising volume of securities that sought a wide and constant market, the business of the stock exchanges expanded accordingly. Government, state, or municipal bonds and railroad stocks and bonds continued to be the chief classes of securities dealt in until about 1900; but in time industrial and public-utility issues took the lead. Other classes also appeared including, mainly since 1914, various foreign issues both public and private. New exchanges were organized in all the important financial centers, though their dealings were chiefly in local issues. The New York Stock Exchange, however, easily retained its predominance with a volume of business far exceeding the total of all others combined. At the peak in 1931, nearly 3,000 issues of stocks and bonds were listed there with a total market value of about $100 billion. During the peak year of its activity, 1929, over a billion shares of stock and nearly $3 billion worth of bonds were sold there. In scale of operations, elaborateness, and technical efficiency no other organized market in the world can compare with it.

By maintaining a large and ever-open market for securities, the stock exchange increases the mobility and liquidity of capital; it offers facilities for shifting risks by hedging, and furthers the quick adjustment of values to changing conditions. Though its operations have not been free from the

disturbing effects of speculative manipulation, the regulations of the exchange have reflected a growing sense of social responsibility, yet they fell short of what was needed.

Aids and Safeguards for Investors. The growing group of investors and the greater variety of securities available have accentuated the problem of safeguarding the investor and guiding him to select such investments as best fit his individual needs. Banking institutions, long one of the common investors' most widely used sources of advice, have greatly expanded their services both in providing advice and in handling investments. Recently the new profession of investment councilor has arisen to specialize in guidance. Equally recent in this country is the investment trust of various types, first widely used in the speculative boom that ended in 1929. Organized at such a period, lacking experience, too often employed only to get control of other people's money to be used for some promoter's gain, and not then subject to adequate control, many proved unsound. Yet, with their defects eliminated, such trusts can prove very serviceable. To secure such reforms was the purpose of the Federal Investment Company Act of 1940.

The investor has been aided by sounder accounting practices and the mass of factual data and analytical studies provided by newspapers, journals, manuals, and special services. The basic task is still to educate the ignorant investor, at least to the point where he will secure competent advice. To provide this class with some safeguards against the output of highly speculative or fraudulent securities, most states have passed so-called "blue-sky" laws, though with only moderately successful results. An attack upon the lax corporation laws that provide the legal basis for most such schemes might prove more fruitful. Lacking such an attack, which would have to be general to be effective, the work of the Securities and Exchange Commission (the SEC) has been useful in regulating the better class of issues that sought a listing on the exchanges. In such ways, the waste of capital due to its diversion into unsound enterprises can be lessened and, in the case of fraudulent schemes, the suffering caused by the loss of the ignorant investor's hard-earned wealth can be prevented.

Building and Loan Associations. Though the first of the building and loan associations dates back to 1831, even a moderate growth began only in the 1880's and the era of great expansion did not set in until the 1920's. At the peak in 1930, total assets of nearly $9 billion were owned by almost 12,000 associations with 12 million members, but the hard times had cut these figures about two-fifths by 1940. In the meantime Federal efforts to extend aid to the debt-burdened homeowner radically altered the situation.

Under the Federal Home Loan Bank Act of 1932 twelve regional banks were established to extend aid to duly qualified associations. In 1933, the

Home Owners Loan Act offered Federal charters with attractive advantages but required membership in the Home Loan Bank System. To attract funds for home building, the National Housing Act of 1934 provided for insurance of specified home mortgages and of accounts in savings and loan associations by the Federal Savings and Loan Insurance Corporation. Then in 1937 the United States Housing Authority was created to promote through loans and, if necessary, subsidies the construction of low-rent urban housing projects some of which had already been started by the PWA. To secure needed coordination general supervision of all these activities was given to the Home Loan Bank Board. By 1940, 94 per cent of the counties in the country had access to Federal home loan and savings associations and over three-quarters of the assets of all associations had been brought under the influence of the Home Loan Banking system, resulting in a marked improvement in management and in making home loans on easy terms far more generally available.

Developments in Insurance; Life Insurance. In 1860, though fire and marine insurance were widely used, very few people carried life insurance, and other forms of insurance were seldom available. The expansion, not only in its forms but also in the variety of risks against which insurance could be procured, along with the increased resort to insurance, are among the striking developments in financial institutions during the period.

In the case of life insurance, the growth ultimately assumed phenomenal proportions. The first impetus came in the 1860's during which the outstanding insurance rose twelvefold to over $2 billion. For the first time, life insurance seemed to be making a general appeal, one doubtless stimulated by the more attractive policies offered, the aggressive methods of many new companies, and especially the high remuneration to agents introduced at this date. The resulting financially unsound and often fraudulent practices led to many failures, setting back the business and showing that this was a field where keen unregulated competition was unusually dangerous to the public interest. There followed a wave of reforms in actuarial and other practices, aided by stricter state regulation.

Thereupon a steadier growth ensued, for in each of the three decades after 1880 the amount of outstanding ordinary life policies practically doubled. As few new companies entered the field until after 1900, some of the older companies attained great size. When a New York investigation in 1905 disclosed serious financial abuses in some of these, stricter state regulation followed. The remarkable growth of life insurance, 1910 to 1930 (see the two charts on page 696), was followed by a decade of little advance during the depression, but a rapid rise during the war. By the end of 1945, some 71 million policyholders carried over $154 billion of some form of life insurance. This amounted to about $1,100 per capita in striking con-

trast with the estimate of under $6 per capita for 1860. By 1948, the amount in force was near the $200 billion mark.

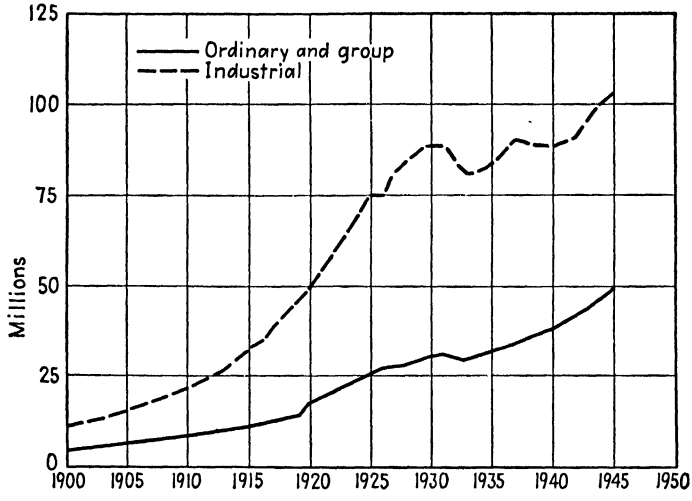


FIG. 74. Number of life-insurance policies in force since 1900.

Life-insurance policies were greatly improved not only by the measures to ensure greater safety but also by the greater variety in their forms and the types of insurance offered, thus better serving the particular needs of different individuals. Significant because of the large number concerned was

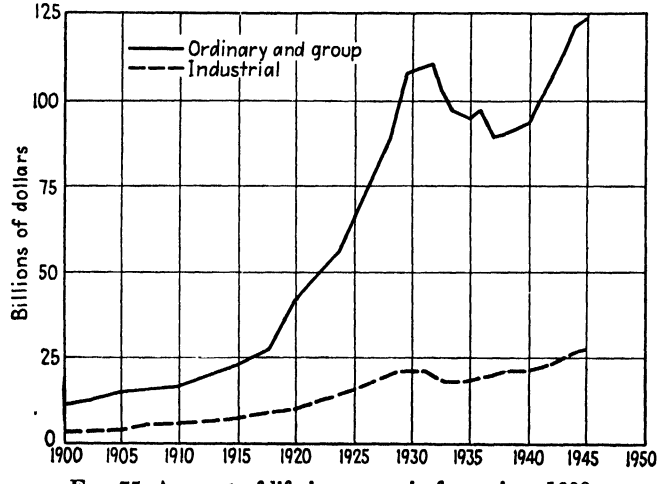


FIG. 75. Amount of life insurance in force since 1900.

the rise of industrial insurance, designed primarily to provide the wage-earning class with funds to meet expenses of the last illness and burial.

First made available in 1875, the greatest increase occurred between 1910 and 1930 when 90 million policies carrying $18 billion of insurance were outstanding; the losses during the depression were more than recovered during the war. Numerous fraternal orders sought to meet somewhat similar needs of a slightly higher income group. Their history has been a checkered one, for many suffered from poor management; after 1910, when they had 8.5 million certificates outstanding for $9.5 billion, they experienced no enduring gain and since 1930 have distinctly lost ground. The recent rapid rise of group insurance, where an employing concern secures a blanket policy covering large groups or all of its employees, has also benefited the masses. In 1947, with policies covering 17.5 million people for $33 billion, this class surpassed the outstanding industrial insurance. The insurance may be against accident or disability as well as death, and the amount is generally from $250 to $5,000. The mass sales help to make the cost, which is borne by the employer or in part by the employee, very low.

The development of insurance against accident and sickness all occurred after 1860. Although some life-insurance companies accept such risks, most are carried by specialized companies. The first American company organized to sell accident insurance was formed in 1863, but it was several decades before this business attained large proportions. The more specialized insurance against industrial accidents, as previously indicated, is largely a twentieth-century growth, spurred on by state requirements. Provision for health insurance really began at the same time. At first confined to illness from only a few diseases, its scope was later greatly enlarged. Also many life-insurance policies began to include general disability clauses. The little old-age and unemployment insurance provided before the previously described Social Security Act was mostly through the pension systems of individual employers or governmental units. Outside of a very few private concerns there was no provision against unemployment.

Property Insurance. The need for fire insurance being generally recognized before 1860, the growth of such insurance since then has been uneventful and steady, largely determined by the constant increase in the amount of insurable property. Generally, the amount of risks covered somewhat less than doubled each decade. As the number of companies grew much more slowly, the average size increased markedly and this ensured greater strength. In this field, foreign companies, though of minor importance, have been more of a factor than in the life field. In the other well-established field, that of marine insurance, the reverse tendencies prevailed. After 1860, with the decline of American ocean shipping and the keen competition of strong British companies, the domestic companies, mostly primarily interested in fire insurance, lost ground relatively to the foreign concerns.

The period was marked by the great increase in the variety of risks against which property insurance was made available, mostly by specialized concerns. The first to engage in the fidelity field was formed in 1875. As only a few classes of such risks were accepted at the start, growth was slow, but the later broadening of the classes insured led to a marked expansion of the business. The substitution of strong well-managed corporations for the rather uncertain individuals who had previously provided fidelity bonds was a decided gain. The rise of title insurance companies greatly added to the security of real-estate operations in the larger cities. For the farmer, hail, tornado, and livestock insurance were made available, and recently by government action insurance on certain crops. Other property risks now insurable are too numerous to list but mention of burglary, credit, bank deposits, home mortgage loans, automobile, plate glass, explosion, steam boiler, riot, and rain will suggest the variety of types.

Through these developments in insurance, the losses arising from a great variety of risks were distributed over large groups in an equitable manner; greater security and increased stability, both for the home and for business, were ensured; new possibilities for obtaining credit on the basis of life and property insurance were provided; and, through life insurance, thrift was so fostered that this became an important source of the additions to capital and wealth. Through the far greater activities of insurance companies in setting up higher standards for protection or by instructing the policy holders, the actual losses in many fields of risk were reduced. Finally, by the development of a better actuarial basis and sounder financial methods, furthered by more adequate state regulation, a more efficient performance of the function of insurance was obtained.

Capital and Its Accumulation. How the growth of the basic factor in the accumulation of capital, the savable fund, was promoted by the innumerable improvements in technological methods and the more efficient organization of industrial society must already be apparent, for this theme has constantly been stressed in preceding chapters. Never before had the application of the achievements in science and inventions yielded such results in the production of wealth as were attained in the United States during this period. The gain from the new, and the better control of the old, institutional components of the economic order was also great, though partly offset by slowness in adaptation, by mistakes in the use of new devices, and by difficulties arising from the complexity of the economic mechanism, notably that group of maladjustments which underlies the business cycle.

It has been estimated that between 1900 and 1929 alone the per capita national income, corrected for price changes, increased 38 per cent; another estimate puts the figure for 1929 at more than twice that for 1860. Out of

this, the people deducted an increasing amount for purposes of consumption—an amount sufficient to provide the highest standard of living for any great nation that the world has ever known. Yet the amount that remained from the savable fund rose to sums also unequaled in the history of nations, whether measured by the absolute or the per capita figure.

Figures giving an approximately correct impression of the annual savings are available only for recent years. The National Resources Committee estimated that for 1935–1936 the net savings of all consumers was nearly $6 billion or 10 per cent of the income received. This was a product of $7.5 billion of savings by the group receiving $1,250 or more income less the expenditures over income of $1.5 billion in the group with a lower income. The former group contained only 41 per cent of all individual or family consumer units, but did all the consumer saving. Of this group's savings, over $3.5 billion was saved by consumer units having an income of $10,000 or more and something over $1 billion each by the three classes with incomes of $2,000 to $3,000, $3,000 to $5,000, and $5,000 to $10,000. Thus most individual saving is made by the higher income groups.[1]

In recent decades, the earnings that corporations chose to retain in their business rather than distribute have become a substantial element in the nation's savings. For the prosperous years 1922–1929, according to income tax returns, these averaged over $2 billion a year, though during the next 6 years of depression the losses averaged more than twice this sum. Still another form of saving, rising to prominence during the depression, is that made by government agencies represented by the net addition to durable public works and ultimately chiefly paid for out of taxes, though some of these works took the form of consumer goods.[2]

The most careful estimate of the volume of capital formation is that of Dr. Kuznets covering the years 1919–1935.[3] This showed a yearly average gross capital formation during the period, including changes in business inventories, of $14 billion out of which $8.7 billion offset capital consumption, leaving $5.3 billion as the annual net capital formation or 8.3 per cent of the gross national income. Of this net, over 43 per cent went into business, over 38 per cent was used by public agencies mostly for construction, and 8 per cent went into foreign investments. In addition, 10 per cent was used for residential construction, a form that might be more strictly classified as durable consumer goods. The cumulative effects over a long

[1] The Brookings Institution estimated individual and family savings for the boom year 1929 at nearly $18 billion, of which two-thirds was saved by those with incomes of $10,000 or more.

[2] Some individual savings also went into durable consumer goods, particularly homes, rather than capital goods.

[3] KUZNETS, S., "National Income and Capital Formation 1919–1935," National Bureau of Economic Research, New York, 1937.

period of such additions to the stock of capital goods upon the productive capacity of the country will be obvious.

Among the many factors contributing to this accumulation of capital, a few of particular significance during this period may be noted. The great advance in popular education and the desire to raise the standard of living, in part a product of the former, spread the spirit of thrift and also enhanced the amount people wished to save. The various developments providing greater security and far better facilities for the investment of savings strengthened the willingness to save. As previously noted, two sources of savings rose to marked importance during this period: the corporations and the life-insurance companies. The corporate savings, though subject to marked fluctuations, have been estimated at a fifth of the country's total; the net savings from life insurance, measured by the premiums paid less the cost of running the companies, averaged $2.6 billion for the years 1935–1936.

On the other hand, this period, unlike the preceding, was marked by the vast destruction of property incident to three great wars. In the Civil War, besides the diversion of economic resources to destructive purposes, there was the terrible devastation of the South. Though the country fortunately practically escaped domestic destruction during the two world wars, the diversion of its economic resources to destructive purposes elsewhere was on an unparalleled scale. The resulting loss, not only of existing but also of potential capital, though not determinable, was undoubtedly great. A similar source of loss, largely escaped up to 1898, is the peacetime outlay for defense, which mounted rapidly thereafter. Yet, relative to our resources, this burden was light compared with that under which the powers of Europe staggered.

The International Movement of Capital. Another addition to the growth of capital was the inflow of funds from Europe, which mounted rapidly up to 1914. Owing chiefly to a heavy influx between 1865 and 1873, most of which went into railroad and government bonds, the estimated foreign capital in the country rose from $400 million in 1860 to $1.5 billion in 1873. By 1890 it had about doubled, railroad securities being the favored purchase, and by 1914 was between $5 and $7 billion, much of the increase going into industrial and public-utility investments. These latter years also saw the first appreciable outflow of American capital abroad, chiefly into Canada and Latin America. The estimated total rose from $600 million in 1900 to some $2 billion by 1914, thus somewhat offsetting the foreign investments here, but still leaving the United States a large debtor country.

Developments during the First World War, as explained in Chap. XXXVIII, completely reversed this situation and the country emerged from that conflict as a large creditor nation. Moreover, following the peace,

foreign countries turned to the United States for loans as never before; New York became the great rival of London as the marketing place for such loans. Though most of this capital went to the less developed countries, chiefly Latin America and Canada, it is significant that European countries from which we had previously borrowed obtained a generous share. By the close of 1930, the total of private American foreign investments, including short-term credits, had risen to around $17 billion, and the government's war loans had a par value of about $11 billion; the total was then unequaled in the history of any nation. By the close of 1940, however, between the reduction of American investments abroad (exclusive of government loans) to over $11 billion and the flight of foreign funds to the United States, raising the total to $9.7 billion, the net capital balance of this country had been reduced to $1.5 billion as compared with $8 billion in 1934. The United States then received $525 million a year from its foreign investments, about two-thirds of which was in business enterprises; seven-tenths of the total was divided about equally between Canada and Latin America, and two-tenths was in Europe. The reactions of the Second World War on the situation, to be described later, were similar to those of its predecessor, but on a far larger scale, and will accordingly aggravate the postwar problems of settling balances of international payments.

The shift since 1914 from the previous position as a debtor country to that of the leading creditor country is significant of an important change in underlying economic conditions. It meant that the long period when capital had been costly and scarce, as compared with the situation in the countries of western Europe, had ended; it meant that the manifold reactions upon the country's economic life and development arising from this scarcity would cease; it meant that for the foreseeable future, instead of facing this handicap, the country could expect to obtain its capital on as favorable terms as any great nation and probably on better terms than any other. Because of the growing importance of capital as a factor of production, this change is all the more significant.

The Control over Capital. This same rising importance of capital has meant that those who owned, or could control the flow of, loanable funds came to exercise a greater power over the economic development of the country than ever before—a power not without reactions on political and social life as well. The growing number of bankers on the directorates of large corporations and the rising influence of international bankers reflect this tendency.

It has been stated sometimes that concentration of control has gone so far as to create a "money trust"; this led to a congressional report on the subject in 1912. Probably there have been instances, when a very large amount of capital was required, where the combination of circumstances

was such as to enable some big banking group to dictate the decision made, just as there are cases where those seeking a small loan but with limited access to lenders may be at the mercy of an individual's decision. In recent years, governmental action has greatly decreased the chances of such cases arising, by the efforts of the SEC to ensure competition for large security issues in the first type and by making loans easily available to farmers, homeowners, and other groups of the second type. The great volume and the mobility of loanable funds appear to provide an effective check on any effort to monopolize the supply of capital.

Previous to 1860, there had been a marked concentration of the ownership of capital in the Atlantic coast region, chiefly in the North Atlantic states, and the rest of the country stood in the relation of a debtor to this region. Since 1860, though the North Atlantic states still lead in the concentration of wealth, the most marked change has occurred in the group of states that made up the old Northwest where the accumulation of capital was such as to meet most regional needs and also permit some lending elsewhere. Southern developments since reconstruction have appreciably modified that section's dependence on outside capital. Even in the trans-Mississippi region, as the period of abnormal demand for capital incident to the opening up of the region passed and local accumulations rose, the heavy reliance on loans from the East was diminished.

Thus, slowly but steadily, the old debtor situation, characteristic of a rapidly developing new region and creating a conflict of interest between it and the creditor region, is passing away. Debtor and creditor groups still remain; but the cleavage between the two is increasingly along class rather than sectional lines. Thus the sectional conflicts based on this cleavage, which left many a mark on our history, are slowly disappearing along with other effects of frontier conditions.

Panics and the Business Cycle. In the period after 1860, the cyclical swings of business continued with unabated frequency and force. The most severe panics followed by several years of depression occurred in 1873, 1893, and 1929. Acute financial panics followed by quick recovery took place in 1884 and 1907, and brief depressions succeeded the wars ending in 1865 and 1918. Obviously little if any progress was being made in lessening this serious evil of the economic order.

That the business cycle is primarily a product of certain characteristics of modern capitalistic industry is generally agreed. Preceding chapters have shown how rapidly the economic life of the country was being transformed during this period so that by the twentieth century capitalistic industry had attained full bloom. Among its characteristics of especial significance in relation to the business cycle was the extensive use of credit. How various devices for expanding the use of credit were introduced during this period,

especially that of deposit currency, has already been explained. Similarly it has been shown that a rapidly increasing proportion of industries came to be conducted on a large scale with extensive use of fixed and specialized capital with the consequent tendencies to overinvestment, excess production, cutthroat competition, and monopoly, which aggravated the maladjustments in the economic order.

There were also, as previously, other factors that tended to aggravate the cyclical swings, notably war and certain characteristics of our own economic development. Two great wars were chiefly responsible for the wartime booms and the depressions that followed in the decade and a half succeeding each conflict. Of the characteristics peculiar to the country, the rapidity of development, particularly in the opening up of the West, aided by the great influx of immigrants, and the accompanying optimism and speculative spirit were the most important. Thus, the rapid construction of railroads in the sparsely populated West and the speculation in Western lands were prominent factors in the panics from 1873 to 1893. Finally, the predominant position of agriculture in the country's economy up to about 1900 made the difficulties from which that pursuit suffered a more serious matter for business in general. From that date on, however, with the passing of the frontier and the growth of nonagricultural activities, the influence of all these particular domestic conditions on the business cycle rapidly dwindled.

The Panic of 1873. Nearly a decade passed before the postwar problems of readjustment came to a climax in the panic of 1873. Wholesale prices dropped precipitately in 1865 and then fell more slowly to 1871 when they were still over a third above the 1860 level. Yet the business reaction during 1865–1867, though aggravated by financial trouble in England in 1866, was not extreme. Then 3 years of fairly good business were followed by nearly 3 years of great activity and general prosperity. The doubling of the railroad mileage of the country during these years, aided by a heavy inflow of foreign capital and a good foreign demand for the growing farm output, greatly aided in sustaining these conditions. Though the outflow of gold to meet the payments due on the greatly increased imports and other debts betokened danger, the panic of September, 1873, came as a surprise (see the charts on pages 442 and 481).

The failure of some small firms engaged in railroad financing culminated in the failure of Jay Cooke and Co., which was overinvolved in the effort to finance the Northern Pacific. Brokerage houses and banks followed, and the New York Stock Exchange closed for 10 days. When resort to clearinghouse loan certificates and a pooling of cash reserves proved inadequate, the banks were forced to a practical suspension of cash payments, and this example was followed in most of the secondary money centers. The Treas-

ury, besought for aid, released about $13 million in currency by the purchase of government bonds, but refused to pay out more greenbacks as it had done, with doubtful legality, earlier in the year. Before the end of October, as money flowed to New York, both from abroad and from the interior, the money panic was over and cash payments were resumed. But

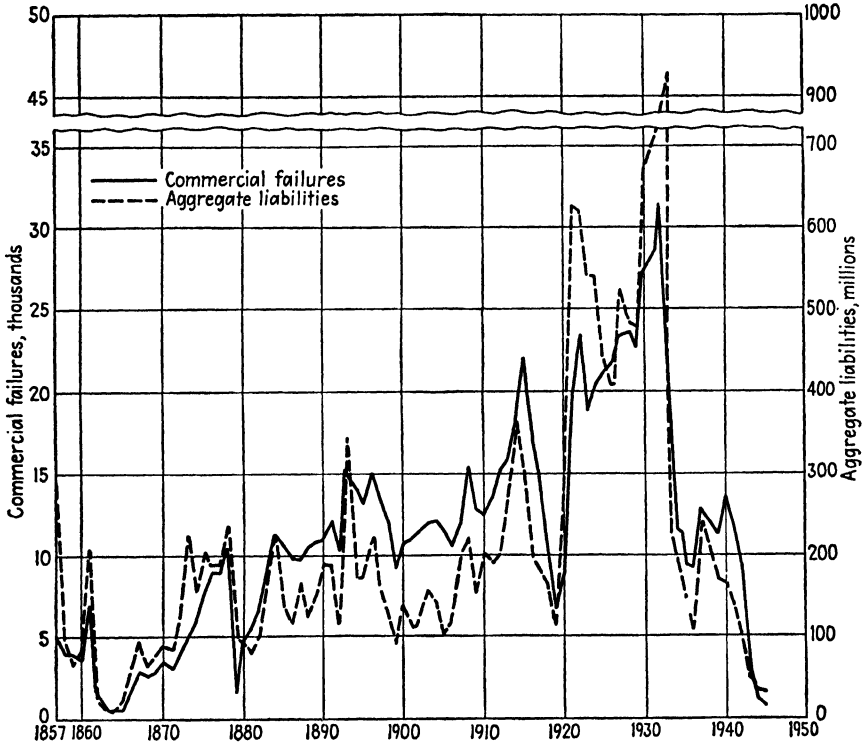


FIG. 76. Number of commercial failures and aggregate liabilities since 1857.

the speculative boom had collapsed, and what may be considered the final readjustment to peacetime conditions came in the prolonged depression that ensued.

Between the effects of the depression and the appreciation of the greenbacks, prices fell so that by January, 1879, when specie payment was resumed, they were back to the prewar level. This readjustment, tending to check imports and increase exports, brought a shift in the balance of trade to the favorable side. Unsound financing combined with desperate rate wars put many railroads into bankruptcy, and a fifth of the railway investment was sold under foreclosure, 1876–1880. Many lines of manufacturing, especially the iron and steel industry and also coal mining, suffered severely; wages were cut, unemployment rose, and strikes of a more general and

violent character than the country had ever experienced followed. As the prices of farm products fell, great unrest spread through the more heavily indebted sections of the South and the West, giving rise to demands for cheap money and control of the railroads. The severity of the depression is reflected in the annual average of $200 million of total liabilities for commercial failures in the years 1873–1878, practically the same as the average after the panic of 1893, despite the country's growth.

From 1878 to 1893. From the latter part of 1878 up to 1883, there was a marked recovery. Crop failures abroad in 1879 and 1880 combined with unprecedented wheat and corn crops here, by greatly increasing exports, led to a heavy inflow of gold and assured the successful resumption of specie payments. Railroad construction was resumed on a large scale, manufacturing quickly picked up, and prices rose until 1883, when a decline in both prices and security values led to an acute financial panic in the spring of 1884 following the disclosure of several enormous defalcations. Fortunately, the acute monetary shortage was confined largely to New York, so the withdrawal of funds from that center was moderate, and resort to the use of clearinghouse loan certificates enabled the banks there to avoid suspension of specie payments. The worst of the financial trouble soon passed, and the subsequent business reaction, lasting little more than a year, was very moderate.

The revival had developed into general prosperity by 1887 and this continued, with only a moderate reaction after the Baring failure of 1890 in England, until 1893. Railroad construction was resumed on such an unprecedented scale that by 1890 the mileage operated was twice that in 1878. This, together with the growing scarcity of good free land and, up to 1887, several years of favorable rainfall, stimulated a speculative Western land boom, nearly 8 million acres of the public lands being sold in 1888 (see the charts on pages 463 and 481). A large inflow of foreign capital provided an added stimulant, but after 1890 trouble in England and fear lest the country go off the gold standard led to substantial withdrawals.

The Panic of 1893. Two big failures and a collapse in the stock market, followed by heavy withdrawals of New York deposits to the West and the South, forced a resort to clearinghouse loan certificates in New York in June, 1893. More failures and a further drop in securities late in July so reduced the New York reserves that the banks there practically suspended payments, and this became general throughout the country. Currency was at such a premium throughout August that numerous substitutes were issued in different places. An unprecedented importation of gold and the final reversal of the drain into the interior shortly made possible the resumption of specie payment and ended the monetary panic. By the close of the year, nearly 600 banks had failed, most of them in the West and the

South, which suffered more severely than the East. The number of commercial failures was three times that in 1873, though the total of liabilities was only 50 per cent greater. As after 1837 and 1873, a prolonged business depression ensued.

This depression was aggravated by the fear that the country would be forced off the gold standard, despite President Cleveland's vigorous statement that the administration would do all in its power to maintain redemption of the greenbacks and the treasury notes of 1890 in gold, and the repeal of the Sherman Silver Purchase Act of 1890 in October, 1893. This fear led to heavy exports of gold and much domestic hoarding of the metal. In consequence, the Treasury's gold reserve, which tradition held should be at least $100 million, dropped below this figure in 1893. To replenish this reserve, the government during 1894, under the authorization of the Resumption Act of 1875, twice sold $50 million of its bonds to purchase gold. Yet the drain continued, partly because the deficit in its receipts compelled the government to pay out the notes that it had redeemed in gold, so they could again be presented for redemption, and early in 1895 the gold reserve fell to $41 million.

Through a third bond issue in 1895, $65 million of gold was purchased from a group of international bankers who agreed to secure at least half of it from abroad, but in January, 1896, another purchase of $100 million had to be made through a public offering of bonds. Fortunately, during this year conditions took a favorable turn. As the fiscal position of the Treasury improved, it could cease paying out the notes that it redeemed and the outflow of gold was replaced by a large inflow. By what a narrow margin in the popular vote those sufferers, who felt with Bryan that they were being crucified on a cross of gold, lost their battle for free silver in the November election, has already been told. Thus the prolonged uncertainty as to the maintenance of the gold standard was removed.

Meanwhile prices had continued to fall till in 1896 the long decline, which had been in process ever since 1865, came to an end. The great farm staples were then reduced to a level unknown since the early 1840's, and the distress in the South and the West became acute. By 1895, a fifth of the country's railroad mileage was in the hands of receivers. The cut in tariff duties in 1894 increased the difficulties of the manufacturers. Strikes spread, unemployment mounted, and in 1894 Coxey led his "army" upon Washington to demand relief by employment upon public works. Unlike the more recent policy, very little was done to meet this demand. Conditions improved somewhat in 1895, but 1896 was nearly as bad as 1894. At this time long-term interest rates were the lowest the country had known thus far.

Prosperity and the Panic of 1907. The process of liquidation having been allowed to run its course with the minimum of governmental interference, a very solid basis was laid for the revival of business, which started in 1897 and ushered in a period which for widespread and long-continued prosperity was scarcely equaled in the history of the country. With but relatively slight and brief reactions in 1903, 1907, and 1914, it lasted until 1920. The nearest previous approach to such prolonged prosperity would be found in the periods after 1792 or 1847. At this period, as in the earlier periods, abnormal factors played a prominent part in the outcome. First, the very rapid increase in the output of gold, chiefly from South Africa, brought a world-wide rise in the price level; in the United States by 1910 wholesale prices were about 50 per cent above the low level of 1896. Then, in 1914, appeared the other abnormal factor—war—and by May, 1920, prices in the United States were 170 per cent above the 1913 level. In all our history no such prolonged or (except under the Revolutionary paper money) extreme rise in the price level had been known, though that from 1793 to 1814 closely approached it (see the frontispiece). That it would lead to unusual business activity was to be expected.

Agricultural products as a group rose more rapidly than the general price level, and the much slower advance in railroad rates gave the farmer an added profit margin. The average value of farm land increased at an unprecedented rate. Never was American agriculture so continuously and extremely prosperous as between 1898 and 1920. Manufacturing, aided by higher tariff duties and growing exports, flourished. The railroads benefited from greater traffic, but rising operating costs and the slow advance allowed in rates checked the growth in net earnings as the period advanced. Foreign trade mounted rapidly, and the favorable balance attained the unprecedented average of some $500 million in the years before 1914.

Under these fostering influences, security values bounded upward and speculative activities spread. Between 1898 and 1902, promoters were quick to take advantage of this opportunity to deluge the market with the securities of many newly organized trusts. This activity was ended by a mild business reaction in 1903, but after 1904 the upward swing was renewed and marked prosperity prevailed, despite signs of undue strain, till the panic of 1907 broke like a bolt from the blue.

This panic most closely resembled those of 1884 and 1857 among its predecessors. The financial stringency attending its outbreak was very acute while it lasted, but no prolonged depression followed. Hence it is often referred to as a rich man's panic. Following the closing of a trust company in October, the security market crashed and the rate for demand loans rose to 125 per cent. A 2-week run of depositors on the banks and trust companies led to many failures. To relieve the money stringency, the

government deposited $36 million of its funds in New York, clearinghouse loan certificates were issued, and a fund was created to extend loans to solvent concerns in greatest need. As panic spread, interior banks withdrew funds from New York, nearly every clearinghouse authorized loan certificates, involving the practical suspension of cash payments, and private hoarding of cash became common. Currency was at a premium for over 2 months, and makeshift forms totaling $250 million were issued in various cities. Through such expedients and a large influx of gold, the acute monetary stringency was ended by the close of the year, though clearinghouse loan certificates continued in use several months longer.

This acute financial panic, in the opinion of Professor Sprague,[1] was due in part to a mistaken banking policy, particularly lack of speed and vigor in action, and the sacrifice of sound banking practice to the fetish of maintaining the legal reserve. A situation less serious than in 1873 or 1893 and probably less serious than in 1884 was thus "allowed to drift into the most complete interruption of its banking facilities that the country has experienced since the Civil War." He concludes that "ability in New York to increase loans and to meet the demands of depositors for money would have allayed every panic since the establishment of the national banking system." To remedy this outstanding defect was one of the chief objectives of the Federal Reserve Act of 1913.

From 1908 to the Panic of 1914. The business reaction after 1907 was very moderate. By 1909, fairly prosperous conditions had returned, and prices reached a new peak in 1910. A moderate reaction in 1911 was followed by a year of prosperity, after which there was a decline so that in 1914 business was slightly below normal. The brief panic that followed was due entirely to the sudden outbreak of war in Europe.

One acute problem arose in meeting payments due abroad. Imports had been heavy, large foreign loans were falling due, and such enormous quantities of European-held American securities were dumped on the New York Exchange that it was forced to close on July 31 to prevent a complete collapse of security values. The war cut off the usual means for meeting payments; foreign loans were unobtainable; and the shipment of goods or gold was unsafe with German cruisers in the Atlantic. As a result, sterling exchange rose to over $7 a pound, though $4.89 was the normal maximum. To meet this crisis, a pool of over $100 million was formed to lend to those having to make gold payments abroad. Then the Bank of England agreed that gold deposited at a branch it opened in Ottawa, Canada, would be accepted as if deposited in London, thus making transatlantic shipment unnecessary. As this ended the sterling panic, little of the gold pool was

[1] SPRAGUE, O. M. W., "History of Crises under the National Banking System," in Reports of the National Monetary Commission, p. 319, Washington, 1910.

used, and by mid-November, as exports were resumed, exchange on London had fallen to par.

Another problem created by the cutting off of exports arose in the case of the surplus farm staples, most of which are shipped in the autumn. The cotton crop, nearly two-thirds of which was exported, was much the most important of these, and the 1914 crop happened to be the largest previously known. When the price dropped nearly one-half, many growers faced the prospect of having to sell at a heavy loss. To meet such needs, the banks organized another pool of $135 million to loan against cotton at 6 cents a pound. This at once reduced the pressure to sell and, as export was later resumed, full use of the pool fund proved unnecessary. Thus, again, the advantages of united action in time of panic were effectively demonstrated.

Though there were no serious failures or prolonged runs on the banks, withdrawals of deposits in New York led to the use of clearinghouse loan certificates, and more serious trouble was averted by the availability of the emergency national bank note currency authorized under the Aldrich-Vreeland Act of 1908, which had fortunately been extended to June 30, 1915, for the Federal Reserve System was not yet in operation. These notes, having been printed beforehand, were immediately available, and the amount outstanding rose to its peak of $363 million in October. As the money stringency passed, they were promptly retired, thus proving their suitability for the function for which they were designed.

By mid-November, when the Federal Reserve System started operations, the strain had passed. Commodity exports were gradually resumed, and the outflow of gold ceased. Restrictions on the stock-exchange operations were slowly removed to prevent any serious collapse in security values, and the last disappeared in the following April. Business resumed a moderate pace, some lines benefiting, others suffering, from the war; but over all there hung the uncertainty as to the effects and the duration of the conflict.

From the outbreak of the First World War in 1914 down to 1941, the fluctuations in general business conditions were shaped so largely by developments arising out of the war that a consideration of them is best postponed to the chapters dealing in some detail with the war and the postwar periods.

Chapter XLI

THE GOVERNMENT AND ECONOMIC LIFE SINCE 1860

Introduction. There were three outstanding developments that substantially reacted upon the relationship of government to the economic life of the country during this period: (1) A more representative and democratic control was introduced. (2) Efforts to adapt the governmental organization and activities to the changing economic order and social ideals led to a rapid and wide-ranging expansion of these activities, a trend that reached its peak under the pressure of wartime needs. (3) This expansion in turn involved vastly greater expenditures and so increased the fiscal problems of government.

A more democratic control was secured by extension of the franchise to the only large groups of adult citizens theretofore generally denied the ballot, and other changes gave the voters a more direct control over political action. Adaptation of the organization of the various governmental units to fit the needs of the changing conditions proved a difficult and complicated matter. Few changes were made in the Federal Constitution by amendment, but its interpretation by the Supreme Court, notably after 1936, brought some modifications in its application which greatly helped to meet certain problems. The state constitutions, especially those of the new states, showed somewhat greater adaptability, and this was much more marked in the case of the minor political units. For the most part, however, adjustment had to be made as best it could under the original framework of government, chiefly in the form of new legislation. This resulted in enormously increased governmental activities, including not only those of a regulatory type but also those assuming the more positive form of public provision for social needs. Thus, from around 1870 on, there was a more rapid shift away from the individualistic, laissez-faire policy previously so dominant.

These activities involved a large increase in governmental expenditures and hence more revenue, since few of them were self-sustaining. Whereas borrowing was a temporary expedient, taxation in one form or another was a final necessity, and the problem how to raise the taxes, which even in peacetime came to equal a fifth or more of the national income, grew increasingly difficult. It was complicated by the relatively fixed taxing powers

of the various political units, by the increasing variety in the sources of income and forms of property rights, and by the need for a coordinated system that would distribute the total burden in conformity with the general interests of society.

The Progress toward Greater Democracy. After the Civil War, the country turned to the problems of reconstruction in a spirit still embittered by the fratricidal strife and lacking the farsighted, tolerant leadership of Abraham Lincoln. It was not until 1877 that the last of the state governments set up in the South after the war passed back under the control of the local white population. In the interval, the region had been subject to the corrupt and generally incompetent "carpetbag" rule provided by the combination of Northern officeholders and ignorant freedmen backed up by the Federal military forces.

Meanwhile the country, anxious to protect the Negroes, adopted three Constitutional amendments. The Thirteenth abolished slavery. The Fourteenth declared among other things that

> No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

This amendment under court interpretation has proved to be of great significance for whites and for property rights in general, as well as for the Negro. The Fifteenth declared that

> The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any state on account of race, color, or previous condition of servitude.

Outside of the South, though few states had previously given the Negro the vote, this amendment became effective in practice. In the South at first, intimidation or fraud kept many freedmen from voting; after about 1890 various constitutional restrictions, nominally applying to all citizens regardless of race but in practical effect excluding many Negroes along with some whites, were generally adopted. These constitute the only large group of citizens still deprived of the ballot.

The movement for women's suffrage, though started before the Civil War, progressed very slowly at first but finally swept the country with surprising ease. There were only a few very limited local concessions before the territory of Wyoming granted equal suffrage to the sex in 1869 and, on admission to statehood in 1890, it became the first state with full suffrage for women. By 1918, all states from the Rocky Mountains to the Pacific, except New Mexico, had followed its example. Elsewhere, only

Kansas and New York had advanced thus far. New York's capitulation in 1917, aided by the many wartime activities of women and other innovations of the period, gave a new impetus to the movement, and in 1920 the Nineteenth Amendment, providing that "the right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex," was ratified. This created by far the largest single addition to the electorate that the country had ever known.

With the growing opposition to immigration, the wartime concern about aliens, and the decreasing rivalry of the states to attract foreigners, a move to repeal such franchise rights as had previously been granted to aliens spread very rapidly, so that by 1929 only one state continued to allow them a vote. There were also a few other minor restrictions besides those in the South, chiefly in the form of literacy tests, yet the net addition to the electorate through the extension of the franchise during this period represented a long stride toward greater democracy. How far it promoted better government is another question which cannot be discussed here. Certainly the result was an electorate very different from that conceived of as desirable by the founders of the Republic.

This period, mainly after 1900, also saw the adoption of various expedients for giving voters a more direct voice in governmental affairs. Direct primary laws, first made state-wide in Wisconsin in 1903, quickly spread until the system was mandatory in three-quarters of the states and optional in most of the rest. Provision for the direct election of United States Senators was made general by the Seventeenth Amendment in 1913; in time this resulted in a marked alteration in the make-up of that group, then noted for the number of its millionaires. The opportunities for political manipulation were further circumscribed by laws limiting campaign expenditures and contributions and requiring publicity concerning them. The power of wealth in politics, which Lord Bryce had noted as one of the most serious dangers in modern democracies, especially in the United States, was thus somewhat curbed. Though confined to state or local government, and even there rather limited in adoption, the movement toward the initiative, the referendum, and the recall gave the people a more direct voice in government.

Government and the Changing Economic Order. The most revolutionary changes incident to the spread of modern capitalistic industry in this country came in the second half of the nineteenth century and introduced an economic order such as was undreamed of when the Federal and the early state governments were being formed. The country then had less than 4 million population, practically confined to the Atlantic coast states, and a relatively simple economic organization which, except for the fairly important foreign trade of some states, was essentially provincial in char-

acter, so that the economic activities of one state had little effect upon those of any noncontiguous state. In contrast, we now have a population of over 145 million spreading over a territory extending from the Atlantic to the Pacific, more than three times the size of the original area, to say nothing of insular possessions. These people live under an economic order so highly integrated, complex, and interdependent that the activities of all groups and sections are closely bound together.

That the old governmental framework, particularly its division of powers between the state and the Federal authorities, should prove well adapted to the new economic order was hardly to be expected. This order created many problems that were essentially national in scope and character which could be dealt with effectively only by the Federal government. Yet the Federal powers were narrowly circumscribed by a Constitution which limited them to the very minimum deemed essential in 1787, which was difficult of amendment, and which created an elaborate system of checks and balances that was another obstacle to ready adaptation. That, under these circumstances, the Constitution survived with so little change and without causing greater friction in the social order was due in part to the broad terms in which it was formulated and to the element of elasticity inherent in the interpretation of its terms by the Supreme Court. Nonetheless the adaptation, as must already have become evident, is still far from satisfactory.

In consequence, the main burden of adjustment to the changing economic order has been cast upon the states, since (1) they retained all the powers not directly or impliedly vested in the Federal government and (2) the state constitutions, generally speaking, proved far easier to amend and not infrequently were entirely rewritten. The newer states of course could formulate constitutions adapted to their times. Furthermore, the various units of local government were entirely subordinate to the states, which were free to change their form and powers or to create new units whenever changing conditions made this desirable. In fact, it was in these local units that the process of adaptation, so far as changes in organization and powers were concerned, proved easier and more successful than elsewhere.

As things actually worked out, a large proportion of the adaptation had to be achieved by such legislation as was practicable under the existing framework of government, and it proved possible to accomplish a great deal in this manner. In consequence, the volume of laws dealing with the economic life of the nation was expanded very rapidly, and the general attitude toward such action reflected an accelerated trend away from the earlier policy of *laissez faire.*

The Reaction from *Laissez Faire.* The term *laissez faire* implies relatively little governmental interference in economic life, a high degree

of freedom for individual initiative. It is commonly applied to a situation lying somewhere—just where will vary with the individual—between the extremes of anarchism and communism or fascism. It is thus one of those vague concepts which it is difficult to use because it is relative in character and there is no method for measuring with accuracy the degree of *laissez faire* that exists in any given situation. What a typical American of the 1850's would have considered a serious departure from *laissez faire* might be viewed as a very minor matter by one brought up under the social attitudes of today.

It should also be noted that the shift away from *laissez faire* reflected a distinct change in policy only in the case of the Federal government, for it had been in evidence in state and local governments throughout the preceding period as the economic problems created by the growth of large cities and the rise of modern capitalism necessitated more social control. The common impression that this shift was scarcely evident before the last quarter of the nineteenth century is due to the tendency to concentrate attention on what the Federal government did and overlook the growing activities of the states and cities.

In western Europe, the reaction against the elaborate system of state interference in economic activities, built up through several centuries and culminating in the Mercantile System, was chiefly because this system, whatever its original justification, proved unsuited to the new economic order being ushered in during the eighteenth and nineteenth centuries. The business world demanded to be set free from the fetters of a bygone age and found support for this attitude in the theories advanced by such groups as the Physiocrats in France and the classical school of economists in England. In America, however, this reaction against antiquated state regulation was much less influential in the shift toward *laissez faire*, simply because the colonies had never adopted more than a fraction of the European system of regulation—much had been abandoned in the transit of civilization across the Atlantic. Also many of the regulatory measures that had been taken over were practically ignored or soon abandoned. Thus, in the United States, the nineteenth-century heritage from colonial times was a much more individualistic system than that inherited in Europe.

The chief explanation for the growing acceptance of a laissez-faire policy in the United States is to be found in the general social environment that prevailed, at least until the latter part of the nineteenth century. The people were an ambitious, energetic, liberty-loving group in whom the spirit of individualism was highly developed. Those who migrated to the New World were actuated chiefly by the desire to improve their material condition, and business became the all-absorbing pursuit of most of their descendants. A rich virgin continent combined with the introduction of

modern technology provided an unparalleled opportunity to acquire wealth, and all that the people asked of the government, aside from financial aid for certain enterprises or protective duties, was to be let alone to use the opportunity as each saw fit.

Also there was no general recognition of a need for much governmental interference in the existing economic order. In part, this was due to the predominance of the extractive industries and the rural environment in which most of the population lived. The typical small-scale farming operations presented few of the problems of modern capitalistic industry and the isolation of rural life did not create the many needs for social control that developed with the rise of the modern city. Rural people, too, were slow to appreciate the new problems confronting those in industrial centers, and hence were backward in providing the political support for legislation required to meet them. The significance of this increased as time went on because the representation of the urban groups in both state and Federal legislative bodies, especially in their upper branches, failed to increase in proportion to the growth of the urban population.

In the shift away from *laissez faire*, one important factor was the rising spirit of humanitarianism with its emphasis upon society's responsibility for man's well-being, which became increasingly marked as the nineteenth century wore on. In colonial times, the state had been much concerned about man's spiritual well-being and had been very active in adopting measures to promote it, but these governmental activities largely ceased with the subsequent separation of church and state. On the other hand, man's mundane woes were considered to be very largely the product of his own individual defects for which he might justly suffer, since society was not responsible therefor. As the humanitarian spirit spread concern about man's well-being in this world, and as society rather than the individual came to be recognized as responsible for numerous ills, the movement for state interference in many economic matters received a powerful impetus.

A more important factor in the shift away from *laissez faire* and one necessitating more immediate action was the spread of modern capitalistic industry, which proceeded so rapidly in the second half of the nineteenth century. The many advantages obtained from this development were as usual not free from certain evils and the consequent need for making social adjustments that required new forms of social control. But it took time for people to become aroused by the new evils, and still more time to secure the needed legislation. Some states had made a meager beginning before 1860 in the legislation concerning railroads, labor, banks, etc.; yet it was not until the last quarter of the century, especially in the case of the Federal government, that the reaction against the prevalent laissez-faire policy

gained much momentum and only in the twentieth century that it became widespread.

Though the Civil War caused a substantial increase in governmental intervention in economic affairs, it was nothing like that involved by the twentieth-century wars and proved to be only temporary. The outburst of state legislation to regulate the railroads in the 1870's was the next move, followed by more state laws concerning labor, banks, and trusts. After having established the national banking system in 1863, the Federal government next swung into action by passing the Interstate Commerce Act in 1887 and the Sherman Antitrust Law in 1890. Still the power of vested interests opposed to governmental interference with private enterprise, combined with the strong spirit of individualism, remained a potent force, faced by relatively weak opposition until at least the opening of the new century.

The influence of "big business" on public affairs was at its height during the four decades following the Civil War. The contemporary attitude of many leaders of enterprise reflected in the famous exclamation of William H. Vanderbilt, "The public be damned!" had been only slightly modified by 1902 when President Baer of the Reading Railroad, then involved in the anthracite coal strike, referred to "the Christian men to whom God in His infinite wisdom has given the control of the property interests of the country. . . ." Similar views were common among the new generation of captains of industry at this period. The greatly modified attitude of this group and the growing sensitiveness to public opinion, which became evident as the twentieth century advanced, were reflected in the establishment of public-relations departments in many large corporations—a move considered wise business policy even when not due to changed personal convictions. Such advance in social control as was made before 1900 can be attributed chiefly to the farmers when aroused to action by economic distress, to the growing power of organized labor (though the AFL fought shy of certain lines of action), and to the initiative of a very small group of social reformers.

Thereafter, however, a distinct change in social attitudes is noticeable. The 1900's brought the "muckraking" period of the popular magazines attacking various forms of special privilege and the practices of "malefactors of great wealth." Though socialists were few in number, their constant agitation was not without some influence upon the rising generation. In Federal affairs, the aggressive leadership of Theodore Roosevelt, in marked contrast to the easygoing complacency of McKinley's administration, brought increasingly effective governmental control in economic affairs, and this was substantially augmented during Taft's administration. The states, particularly those where the Insurgent or Progressive parties were

strong, enacted much legislation of a similar character. In the Federal sphere of action, the Democrats under Wilson's liberal leadership passed a series of important reform measures and then, upon engaging in highly mechanized warfare, found it necessary to extend government control over business to a degree theretofore undreamed of.

When the return of peace lessened both the need for controls and the patriotic spirit of sacrifice for the common good, the cry for "Less government in business" arose, and there was a determined effort to regain the ground lost by freedom of individual initiative during the war years. The Republican party was returned to power and under the lax Harding administration, the ultraconservative regime of Coolidge, and that of Hoover with its reiterated stress on the old American spirit of individualism, things were allowed to drift, even after the outbreak of depression, until the situation became so serious that people talked of the downfall of the capitalistic system and fear of a social revolution became widespread.

When the Democrats assumed control under the vigorous, liberal leadership of Franklin D. Roosevelt in the banking crisis of 1933, they faced the problems involved in trying (1) to alleviate the economic distress and restore normal business conditions and (2) to carry out the "New Deal" reforms promised in the election campaign. The result was a group of measures involving a far greater departure from *laissez faire* than the country had ever known in time of peace. The individualistic cry of less government in business was for the moment completely silenced, for capitalists as well as farmers and laborers so suffered from the disorganization of the economic system that all were glad to secure at least one or another form of governmental intervention or aid. Even after allowing for the subsequent reaction, the contrast between the attitude of the conservative moneyed class at this time and its attitude during the depression of the 1890's is most striking. Probably the marked broadening in the scope of Federal control through the decisions of the Supreme Court at this time, which greatly facilitated action, can be attributed to similar shifts in attitude.

One indication of the growth of Federal activities is found in the number of employees in the Federal executive civil service which rose to 1,000,000 by 1940 as compared with 572,000 in June, 1933; in 1861, the figure was 49,000 and in 1816 only 6,000. That the rugged individualism of the previous century requires modification to secure adjustment to the economic order and the social ideals of the twentieth century is more generally agreed than ever before. The First World War and its sequence in the events of the 1930's appear to mark the beginning of a new period in the reaction from *laissez faire.* The Second World War, being more prolonged and on a greater scale than its predecessor, involved still more extensive govern-

mental controls. What the subsequent reconversion period will bring remains to be disclosed, but a reversion to the attitudes of the 1920's seems most unlikely.

The State Governments and Their Activities. As previously explained, the framework of government was such that the expansion of governmental activities after 1860, at least up to the First World War, was most marked among the states and their minor political units. Also it was usually easier to secure popular approval for new activities among these smaller, more homogeneous political bodies than in Congress, which represented the heterogeneous interests of the whole nation. The new activities taken on were made possible in part by changes in the state constitutions and to a still greater extent by new legislation.

The alterations in state constitutions immediately after 1865 were chiefly those in the Southern states, necessitated by the policy of reconstruction adopted by Congress and the later reactions when these states were freed from their carpetbag governments. Elsewhere, constitutional alterations were not numerous or radical in character, and few reflected changes in the economic order.

Beginning about the 1890's, the demand for amendment or complete revision of the state constitutions became more insistent. This received some impetus from the examples set by the constitutions of the ten new Western states admitted to the Union between 1889 and 1912. These constitutions clearly reflected the less conservative and more democratic ideals of the West, those of Oklahoma and Arizona being the most radical. Amendments of older constitutions in some of the other Western states, such as Oregon, made them equally progressive. Generally speaking, the older states were much slower in acting, due partly to strict provisions about amendment and partly to their greater conservatism.

Certain prominent trends in this constitutional development after 1860 other than those arising out of reconstruction require notice. Constitutions, especially the new ones, became longer and much more detailed, resulting in less elasticity and more frequent need for change. The power of the governor tended to grow and that of the legislature to decline. Increasingly elaborate provisions regarding corporations in general and various specific classes among them, such as banks, railroads, or public utilities, were introduced. The frequent prohibition of local or special legislation and the trend toward municipal home rule gave the cities and smaller communities greater freedom of action. Popular election of judges and the chief state officials became the common rule along with biennial sessions of the legislature. Finally, constitutional amendments were made a little easier.

Partly aided by these constitutional changes, the states enacted a constantly growing mass of laws extending their activities in economic affairs.

The greater portion of this legislation was regulatory in character and designed to meet the new problems that had arisen. Another portion, which may be called "positive" in character, was designed to provide goods and services to meet important social needs. The latter was significant as involving a direct, state-determined addition to the people's standard of living while the former usually had only indirect reactions upon that standard.

The breadth of state activities became such that only the chief fields in which they were carried on can be listed here. Much of the expansion occurred in the more detailed ways in which the state functioned in fields of action that were not necessarily new. Judged by the amount of money expended in 1929, highways and waterways; education; and charities, hospitals, and corrections were, in the order named, the leading functions performed by the states. The outlay for these three activities then made up three-quarters of all state expenditures. The outlay on highways became important only after 1920, but that on the other two functions has grown more steadily ever since 1860. Two other state activities, chiefly of very recent development, are conservation of natural resources, especially the agricultural, and recreation. All these activities, it will be noted, are chiefly of the positive type and represent contributions to the standard of living.

Activities of a regulatory type, though greatly increased in numbers, involve far less outlay. The very meager control over corporations, banks, railroads, insurance companies, etc., before 1860 has been greatly expanded. Public utilities, warehouses, cotton gins, and various new financial institutions have been put under regulation; a mass of laws now protects the interests of labor; numerous professions and occupations were subjected to licensing systems; the courts have been elaborated; and aid was given local governments for public health and sanitation. Often, these activities reflected a tendency for the state to take over or to supplement functions formerly undertaken by minor political units, especially the counties—one phase of a common centralizing trend in government. Another phase is seen in the growing frequency of Federal grants of funds to the states, especially for road construction, agriculture, education, and health, all largely a development of the last three decades. The depression of the 1930's brought added grants on a large scale. These grants, when conditional, generally required supplementary grants from the states and the maintenance of certain standards. Thus the Federal government came to exert an appreciable influence over these activities, and centralization of control was extended.

Local Government Activities. Though the county still remains the chief unit of local government in most of the country, the changing eco-

nomic and social order has left it in a somewhat uncertain and precarious position. It is too large to serve the chief needs of all but the great metropolitan centers, and it is becoming too small for the most efficient performance of the main functions of government in rural districts. The state has been assuming more of the county functions and, although the county has increased its activities in other lines, none of these are of marked importance. Comprehensive information as to the development of activities of the towns and villages is lacking, but apparently, although some of their functions have been in part taken over by the county or the state, they have assumed a few of the newer activities being adopted by the cities.

A rather widespread feature in the development of local government has been the creation of districts to carry on special functions for which the older political units were not well adapted. School, highway, drainage, and irrigation districts are the most common; but park, sanitation, levee, agricultural development, mosquito abatement, and herd are among the nearly fifty varieties that have arisen.

It is in city government and activities that the greatest changes have taken place since 1860. The framework of city government has proved relatively easy of adaptation to changing conditions. Also the enormous growth of cities and the closely interknit life in themselves create a far greater need for governmental control than exists in rural districts, while the concentration of wealth and the more advanced social spirit help to provide both the means and the impetus to varied activities.

The move to improve city government got under way in the 1870's, due partly to growing needs and partly to the corruption and misgovernment in some of the larger cities, which became notorious at that time and have never since been adequately controlled, so that the big city still remains the weakest point in American government. At first the tendencies were to check special legislation for individual cities and to increase the power of the mayor, while some progress was made in introducing civil service reform and budgetary control. In the twentieth century, greater home rule was granted and the effort to secure more centralized, responsible, and businesslike administration led several hundred municipalities to adopt the commission or city manager form of government.

The rapid expansion of municipal activities since 1860 is due in part to a far more elaborate performance of the most essential general functions but slightly developed theretofore and in part to an assumption of many entirely new functions, new at least for most cities. The former included the administration of justice, protection of persons and property, sanitation, education, care of the poor, and the construction, maintenance, and lighting of streets. The latter included personnel service, provision of pensions, city planning and zoning, numerous forms of health conservation and

recreational services, hospital care, charitable relief, library service, and various public service enterprises. Such a list but imperfectly suggests the range of activities and how recently most have been assumed, but a detailed study of Detroit shows that of the 306 activities of that city in 1930 only 45 had been assumed before 1860 and only 129 previous to 1900. As the growth of state and local activities increased expenditures, the problems of finance assumed greater importance.

State and Local Finance. Up to about 1900, state activities expanded slowly, and state finances were handled so that, after the growth in debt due to the war and reconstruction, the total of state indebtedness steadily declined to the middle 1890's. During the 1860's, the Northern states secured over $100 million of long-term loans for war purposes. The debt of the Southern states in 1874, excluding that outlawed because incurred for the war, was about $250 million as compared with some $100 million in 1860. The increase was largely a product of the corrupt reconstruction governments, and on the basis of this or some other excuse about half this debt was finally repudiated.

From a total net debt of around $350 million for all the states in 1870, there was a decline to less than $200 million in 1895 or, measured on a per capita basis, a reduction from $9.15 to $2.80. Thereafter, borrowing to finance growing activities raised the state debt to nearly $350 million or $3.57 per capita in 1913. A more rapid rise then set in, especially when highway construction mounted; by 1923 the total net state debt exceeded $1 billion and by 1937 it was over $2.4 billion or $19 per capita.

Among the minor civil divisions, the county debt during this period followed a trend similar to that of the state debt. A rise after 1860 was succeeded by a decline to 1880 and then a slight growth to a total of $145 million or $2.51 per capita in 1890. Thereafter, an accelerating rate of increase brought the total to $1.4 billion in 1922 and nearly $2.4 billion or $21.82 per capita in 1932, but this total had been reduced a third by 1943. Excluding incorporated places, the debt of other minor divisions remained low until about 1902 when the total was around $100 million. Thereafter the rate of debt growth of this group exceeded that of any other, due partly to the great increase in school district debt, which made up more than half the total until the latter 1930's, and partly to the creation of many special districts undertaking expensive public improvements. By 1922, the total debt of this group had risen to nearly $2 billion; since 1940, it has been about $4 billion.

Outstanding in its rate of growth was the debt of cities. The rapid increase in the number of cities as well as in their size partly accounts for this, but municipal activities generally grew even more rapidly than the population. This also explains why the total city debt, unlike that of most other political

units, underwent a considerable and constant increase during the period 1860–1890. By the latter date the total net debt of incorporated places was $700 million, a figure presumed to be between two and three times that for 1860. During each of the next two decades, the debt was about doubled and by 1932 the total was $8.8 billion or $111 per capita; in 1940, the total was slightly lower. Nearly seven-eighths of the 1940 total was borne by cities of 30,000 or more population, and the per capita debt tended to increase with the size of the city.

The growth in state and local debts after 1860 was due mainly to the assumption of activities involving large outlays for some relatively enduring public improvement. In recent decades perhaps nine-tenths of the state and local bond issues, other than those for refunding purposes, were used to finance construction projects. Until about 1880, aid to railroad construction was one of the chief purposes, but thereafter such issues rapidly declined. Waterworks, schools, streets, sewerage systems, and miscellaneous public buildings were most prominent among the purposes for which cities bonded themselves in the first half of the period; in recent decades highways, recreational facilities, institutions for the care of the poor, the sick, and the aged, and in some places public service enterprises have become more prominent. Taking state and local governments as a whole, we find that education, highways, and charitable institutions got most of the proceeds of bond issues, the growth in the outlay for highways since 1910 being especially marked. During the depression of the 1930's, the issue of bonds for relief purposes, almost unknown theretofore, attained large proportions. Until then, the general policy that, except in an emergency like war, bonds should be put out only to meet the cost of fairly enduring improvements had been well adhered to. Thus such expanding activities as involved a greater operating outlay as well as the servicing of the rising debt necessitated heavier taxation.

The growth in the burden of state and local taxes during this period apparently followed a trend similar to that of the debt. Though complete figures are lacking, we have statistics of the ad valorem or property tax levies which in 1902 made up 84 per cent of all state and local collections and probably constituted an equal, if not a slightly higher, percentage in the preceding four decades. The total of these levies starting at $94 million, or $3 per capita, in 1860 had tripled by 1870 and then rose more slowly to $725 million, or $9.22 per capita in 1902. Thereafter the advance was more rapid, aided partly by the adoption of new forms of taxation, so that by 1922 all state and local tax collections totaled nearly $7 billion and by 1941 over $9 billion, or almost $70 per capita. At the latter date these units also received about $2 billion net additional funds from other sources such as fees, services sold, and Federal aid. Though not strictly comparable,

the difference between the per capita tax receipts in 1860 and 1941 vividly suggests the enormous expansion of the activities of these governmental units during this period.

The general character of state and local taxes appears to have undergone no very marked changes until about 1900. Thereafter the rapid rise in expenditures led to the adoption of many new forms of taxation while still retaining the old forms. Although the general property tax on real and personal property continued to provide the greater portion of total state and local tax receipts till about 1940, this proportion declined from around five-sixths in 1902 to less than three-quarters in 1932 and less than half by 1940. Despite the many faults of this tax as it works in practice, the chief being that so much intangible personal property is concealed so as to escape taxation, relatively little has been accomplished in the way of reform. Some gain has come from the slow move to classify intangibles separately and impose lower rates on them, so there will be less reason for concealment, as the general property rate on intangibles often becomes almost confiscatory. Local governments alone, however, still depend almost entirely on property taxes for their tax revenue, this source providing about nine-tenths of their tax receipts, though only about three-fifths of their total revenue. Except for the very few cases of a city sales tax, no important new sources of tax revenue have been developed here; but since the depression of the 1930's, these local governments have been given very substantial grants from the states.

It is the states with their greater powers that have been most active in developing new taxes to meet rising expenditures. Among the first, and in recent years distinctly the most productive, of all state levies were the gasoline sales and motor-vehicle license taxes, which may be lumped together, since they were designed to provide funds for the construction and maintenance of highways. Their total yield rose from $8 million in 1913 to over $1.2 billion, or 30 per cent of the states' tax collections, in 1940. Next in yield and also the most recent is the unemployment compensation tax which produced a fifth of the state tax receipts in 1940. Almost as recent is the general sales tax which, despite the objection that it weighs most heavily on the poor, came into favor during the depression and by 1940, when it existed in twenty-six states, yielded almost an eighth of all state tax revenues. Numerous states have also levied special taxes on the sale of alcoholic beverages and tobacco products. Some form of inheritance or estate tax existed in forty of the states as early as 1913 and in all but one in 1940, yet the total collection in that year was only $117 million, nearly two-thirds of which went to four states. Much more remunerative, but also going mostly to a few states, were the income taxes amounting to $358 million net in the thirty-five states that levied them in 1940.

The Finances of the Federal Government. The enormous increase in the national debt rising out of the Civil War brought the total, less Treasury cash, to a peak of $2,750 million in September, 1865. Less than half of this was funded, and $460 million consisted of noninterest-bearing greenbacks and fractional paper currency. By 1870, most of the short-term debt had been refunded into long-term bonds bearing a lower rate of interest. There was a strong agitation centering in the West and South for paying off these obligations in the current depreciated paper currency, at

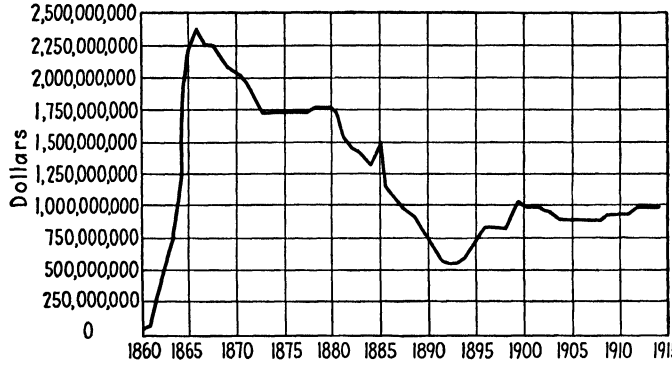


FIG. 77. Interest-bearing public debt of the United States, 1860–1914.

least where coin was not specified, but this was prevented by the firm stand of Grant's administration, which thus improved government credit and facilitated refunding operations.

The insistent demand for relief from the burdensome war taxes led to a series of acts which by 1870 had eliminated the levies on income, cotton, and most manufactures along with many stamp taxes and reduced rates on other items. Thereafter, except for a few unimportant levies which disappeared in 1883, the only internal-revenue taxes were those on spirits, liquors, and tobacco. Thus internal-revenue taxes, dropped after the War of 1812, were revived as a permanent feature in Federal finance. As receipts from these taxes were relatively steady, there was a gain in the stability of the revenue. This together with the higher level of protective duties proved to be the enduring changes in Federal taxes arising from the Civil War.

An appreciable surplus in every year but 1874 made possible a reduction of the interest-bearing debt to $1,723 million by 1880. The very prosperous condition of the Treasury during the 1880's with a surplus averaging over $100 million a year resulted in a further reduction to less than $600 million in 1893. Interest charges were cut still more rapidly by the lower rates on refunding bond issues. Moreover, this debt reduction was accomplished

despite the temptation to extravagance on the part of Congress which the large revenue provided, leading to a rapid increase in the "pork-barrel" appropriations for public buildings or river and harbor improvements, and a doubling of the outlay for pensions.

After the panic of 1893, the Treasury faced 6 years of deficits, due chiefly to reduced customs receipts and increased expenditures, especially after the outbreak of the Spanish-American War. This short war involved no serious financial strain. Congress was unusually prompt in passing the war revenue act of June, 1898, doubling the taxes on tobacco and fermented

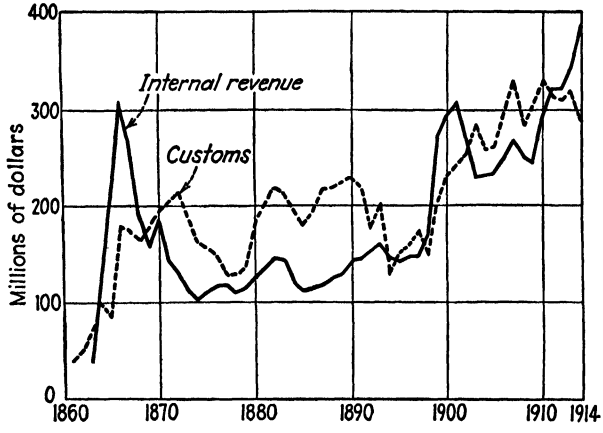


FIG. 78. Federal receipts from internal revenue and customs, 1861–1914.

liquors, and levying an inheritance and some minor taxes. An issue of $200 million 3 per cent bonds was authorized, and this together with the earlier issues to buy gold raised the interest-bearing national debt to over $1 billion in 1900. Meanwhile returning prosperity and higher tariff duties increased customs receipts, so that by 1902 the war taxes had been generally repealed.

The war aroused imperialistic ambitions and left a heritage of insular possessions which led to a rapid rise in the peacetime expenditures for the army and navy. Also about two-thirds of the $400 million outlay for the Panama Canal was provided out of current revenue, the remainder being secured through a bond issue. Finally, there were the added costs of the expanding governmental activities and a growth in pensions. Though customs receipts rose to a higher level than ever before, averaging over $300 million a year from 1906 to 1914, and internal-revenue receipts up to 1910 brought in around $250 million a year, this proved barely enough to meet the growing outlay.

To provide for the rising expenditures, two taxes new to the Federal

government in time of peace were adopted: the corporation tax authorized by the Tariff Act of 1909 and the income tax enacted in 1913 after the Sixteenth Amendment of the Constitution. Though starting at very moderate rates, these levies subsequently underwent a rapid expansion. One result was that after 1910 internal-revenue receipts regularly exceeded those from customs duties. This marked the beginning of an important shift in the main sources of Federal revenue. In peacetimes, before 1860, customs

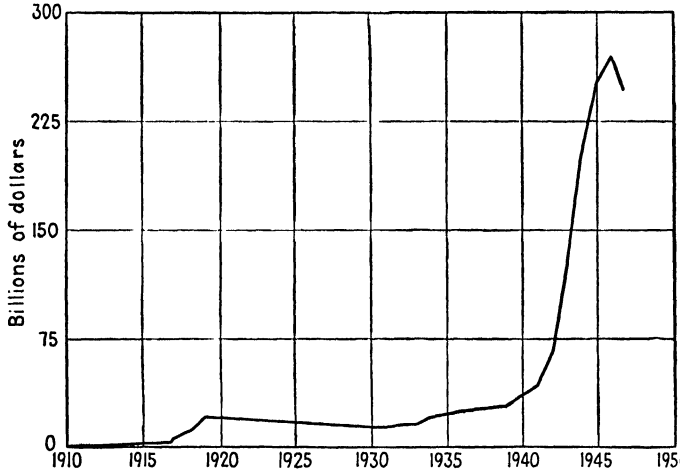


FIG. 79. Interest-bearing public debt of the United States since 1910 (fiscal years).

receipts commonly provided nine-tenths of this revenue and subsequently about three-fifths, but since the First World War, though absolutely higher than ever, they have become a very minor element in the total.

The effects of that war upon Federal finance were revolutionary in character and will be described in the chapter devoted to that period. Here, to continue the account of Federal finance and to make clear the contrast between the postwar and the prewar situation, it will suffice to summarize the main results.

From Apr. 6, 1917, until most of the overseas troops had been returned at the end of October, 1919, the total expenditures of the Federal government, exclusive of debt operations and postal disbursements, reached the enormous total of over $34 billion, of which $9.5 billion net was in the form of loans to the Allies. By more prompt and vigorous action than in previous serious wars, over $11 billion, or a third of the total outlay, was obtained from taxation, chiefly from the individual and corporate income or war-profits taxes. The remaining two-thirds was met by borrowing in the form of short-term treasury notes and the long-term Liberty and Victory bonds. As a result, the national debt rose from $1 billion in 1916 to over $25 billion

in 1919. The burden involved can be better appreciated when stated in per capita figures which for 1919 were $240 as contrasted with $12 in 1916, nearly $78 in 1866, and $2 in 1860. The lower value of the dollar in 1866 and 1919 should be kept in mind, however, as well as the dubious offset of the debt due this country by foreign nations in 1919.

Clearly in 1919 there was no prospect of a return to prewar fiscal conditions for some years, if ever. Interest on the debt alone was $1 billion a year or more than the total Federal outlay before the war. Also there was the new and heavy outlay for veterans along with a considerable increase in

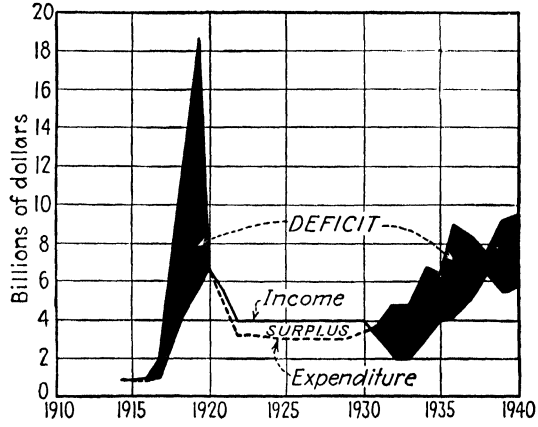


FIG. 80. Total ordinary receipts and expenditures of the United States, 1914–1940.

pensions; expenditure for military purposes was more than double the prewar level; Federal grants-in-aid were expanded; and the higher price level increased operating expenses generally. During the decade 1922–1931, total ordinary expenditures averaged over $3 billion a year.

The usual postwar demand for quick relief from taxes was augmented by the depression of 1920–1921. In 1921, the excess or war-profits tax was eliminated and income tax rates reduced. By 1928, most of the special war taxes had been repealed and the income and inheritance tax rates further reduced; by 1930, with prohibition still in force, the tax on tobacco provided the only important internal revenue remaining outside of the income tax, which provided two-thirds of all Federal tax receipts. Customs duties then yielded a sixth of these receipts. Fortunately, owing partly to far-sighted administrative pressure, taxes were not reduced so fast but what a surplus averaging $900 million a year was available during the 1920's, and $9 billion of the national debt was paid off, reducing it to $16 billion in 1930. That this policy was wise and that an even greater reduction of the debt during these prosperous times would have been advantageous became evident in the fiscal difficulties that arose in the 1930's.

That decade of depression had a repercussion upon Federal finances very similar to that upon state and local finances. As business slumped, the important receipts from income taxes were cut one-half to two-thirds; at the same time the expenditures, due to the various relief and recovery measures, rapidly mounted. A deficit appeared in 1931 and averaged $3 billion a year for a decade, despite a series of increased tax levies starting in 1932. Income tax rates were restored to about the 1921 level; estate tax rates were greatly increased and supplemented by a gift tax; with the repeal of prohibition receipts from the liquor taxes rose; a new Federal gasoline tax was enacted; and various New Deal measures led to such new levies as the processing tax, the undistributed-profits tax, and the pay-roll tax. Though ordinary receipts rose to $6 billion in 1938—a sum previously only barely exceeded in 1920—the continuing deficits necessitated frequent borrowing so that by 1940 the interest-bearing debt was over $44 billion, an increase of $28 billion since 1930 and greater than that during the First World War. However, thanks to very low rates, the annual interest charge was about the same as that on the much smaller debt of 1920. The war on depression proved much the most costly type of war the country had ever undertaken, as far as direct outlay was involved. Yet even this proved small as compared with the cost of the Second World War, the effects of which will be described in a later chapter.

Total Governmental Receipts and Expenditures, 1938. The situation as a whole resulting from the separate development of Federal, state, and local fiscal policies needs to be considered and is suggested by the charts on the following page covering the fiscal year ending in 1938. It will be noted that the general property tax produced about a third of all tax revenue and went almost entirely to local government and that the income tax on individuals and corporations yielded nearly a quarter and went mostly to the Federal government, the next most important tax receipts of the latter being derived from liquor and tobacco. For the states, the motor fuel and vehicle taxes provided the largest item of revenue. The total tax receipts of all governmental units was $15 billion, or $114 per capita, as contrasted with about $23 per capita in 1913. Of this total the Federal government obtained $6 billion, the local units almost $5 billion, and the states nearly $4 billion. In addition to the tax revenue, over $1 billion was secured from various sources of nontax revenue and about $1.5 billion net from borrowing. It is most significant that a fifth of the national income was being appropriated and its expenditure determined by governmental authorities.

How the tax and other receipts of the different governmental units, totaling nearly $17.5 billion, were being used is shown by the chart on page 729 which covers the expenditures, except debt retirement, of each

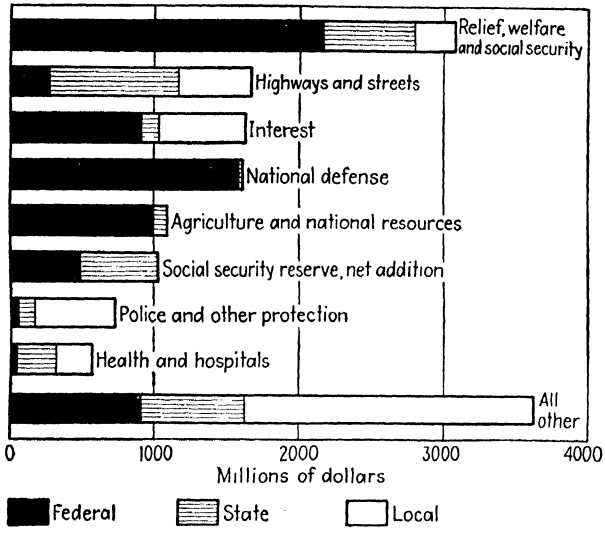


FIG. 81. Federal and estimated state and local expenditures from own sources, 1938. (*U.S. Treasury.*)

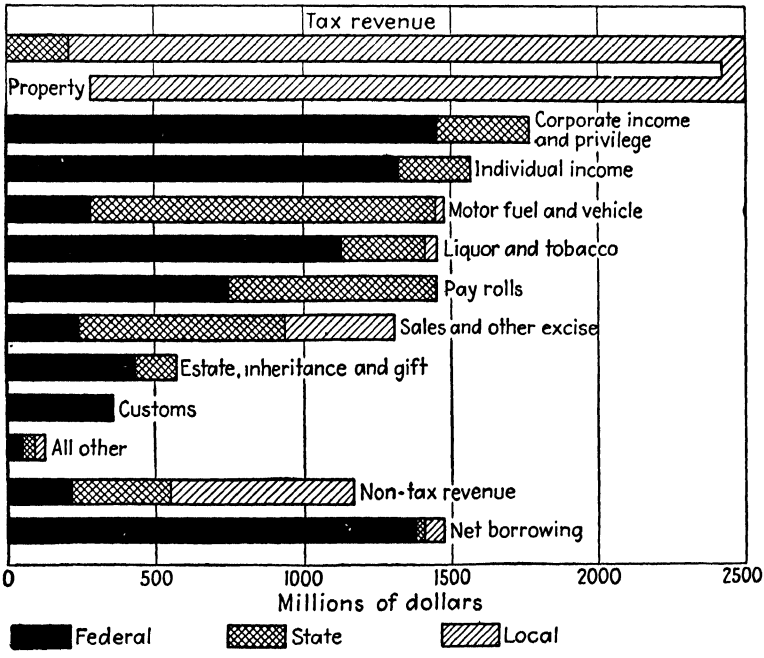


FIG. 82. Federal and estimated state and local receipts, 1938. (*U.S. Treasury.*)

unit from its own sources and excludes the outlay of each based on grants from other units. The largest item, that for "all other" functions than those listed, covers most of the wide-ranging activities of government, including nearly all those of the essentially regulatory type; yet it makes up but a fifth of all expenditures. Thus much the greater portion of the total was used to provide the people with certain goods and services. For the time being, the largest outlay of this type was for relief, welfare, and social security, while a portion of that for other purposes was an indirect form of relief. The outlay for education, which in normal times generally exceeded any other, came next in order, followed by that for highways and streets, an outlay that had risen to second rank in the period before the depression. The smallest outlay listed is for health and hospitals, and it is in this field that an increase in public expenditures in normal peacetimes is most needed.

Some Features of the General Situation. The great increase since about 1900 in the expenditures for education, highways, health, and, of late, for relief and social welfare is of the greatest importance for its effects upon the distribution of income and the standard of living of different economic groups. This has been due chiefly to the rising democratic and humanitarian spirit and to the discontent with the great inequalities in the distribution of wealth and income. The result has been to provide for the masses, on a vastly larger scale than ever before, certain goods and services deemed especially important for social well-being that they could not otherwise have obtained, thus appreciably raising their standard of living. Moreover, to a very considerable extent, this has been done at the expense of the rich and the more well to do.

This trend toward heavier taxation of the rich and its general popularity raise questions as to how far it can go and as to the distribution of the general burden of taxation among different economic classes that has resulted from the rather unsystematic development of the tax systems as a whole. The amount of the total tax burden that the rich, or even the well to do, could bear is often exaggerated. A mere glance at the figures shows that inevitably a considerable portion of that burden would have to fall on the middle classes. According to the estimated distribution of aggregate income (including that imputed from owned houses and family production) for 1935–1936, the total income of all those receiving $10,000 or more was about $7.5 billion or only about half of the total tax revenue in 1938. To obtain $15 billion from the aggregate personal income of the upper income groups in 1935–1936, it would have been necessary to take almost all the income of those receiving over $3,500 a year. Actually, this somewhat exaggerates the situation, partly because private income was still subnormal in those years and partly because the abolition of various other forms of

taxes which this system would make possible would provide an appreciable addition to the income of this group. Yet such additions would be partly offset if it were decided that this group should be allowed to retain at least enough income to live on; it might be far more than offset if the imposition of such levies had a serious reaction on production in general. It is therefore clear that even the most extreme measures would not have sufficed to produce the tax revenue then needed without imposing an unbearable burden on a large portion of the middle class as well as on the rich.

How the tax burden was actually borne in the last analysis at this time cannot be determined with any pretense to accuracy, though a fair impression of the general situation is obtainable. The chief uncertainty arises from the inability to determine the extent to which numerous taxes, which as a group yield around half the total tax revenue, are shifted to others by those upon whom they are levied. The careful recent study made for the Twentieth Century Fund,[1] based on estimates for different classes of individuals in New York and Illinois for 1936, concluded that the tax system as a whole was regressive for the lower income groups up to an income of around $2,000 a year, and distinctly and increasingly progressive for the higher income groups, rising to a point around $100,000 income where it took at least half, and at higher levels a considerably larger percentage, of incomes. The progressive factor in the system is due chiefly to the relatively recent income, estate, and gift taxes. The regressive feature is mainly a product of the shifting of various taxes so that they add to the cost of goods bought by the masses. The group least hard hit by taxes was that with incomes between $5,000 and $50,000. A needed reform would eliminate the regressive feature of the system and place more of the burden on this intermediate group. To some extent this was done during the Second World War.

A recent development in fiscal history, though somewhat analogous practices were known before 1860, is the growth of intergovernmental grants of funds for various specified purposes, commonly called "grants-in-aid." For the fiscal year 1938 these totaled over $2.2 billion, about two-thirds consisting of state grants to local governments and most of the rest of Federal grants to states. Until the 1930's depression, when grants for relief became important, most of the grants were for education and highways. Federal grants in particular were often employed to induce states to make greater provision for such purposes or to establish higher standards. The state authorities usually disliked the resulting increase of Federal power, but they welcomed the money, and the results were generally most beneficial.

It must also be noted that the various governmental units have often sought to use their taxing powers for purposes of regulation and control,

[1] "Facing the Tax Problem," Twentieth Century Fund, New York, 1937.

any revenue obtained being rather incidental, as illustrated by the tax on state bank notes, protective tariff duties, the abortive effort to check child labor, numerous Federal laws during the 1930's, and other cases scattered through the preceding narrative. Such uses of the taxing power have generally been severely circumscribed by the courts.

Many defects of the present tax system, taken as a whole, go back to the division of powers between the Federal government and the states. Each authority has tended to go its own way regardless of what the other was doing, resulting in little coordination, double taxation, and lack of balance generally. Competition among the states and fear lest a tax imposed by one state put it at a disadvantage as compared with others have often prevented desirable fiscal action, though occasionally the Federal authority has been able to get around this obstacle. Since many taxes are levied and collected in such a way that those who really bear the burden do not realize what it is, the demand for economy and fiscal reform is weakened generally. A system that led to a greater degree of tax consciousness is desirable.

In fiscal administration, this period brought some improvements. One of the most important was the general introduction of the budget system, the climax being its adoption by the Federal government in 1921. This promoted both economy and a better balanced distribution in expenditures as well as a closer adjustment of outlay to income and a more farsighted fiscal policy. Among the states, the move to establish permanent tax commissions was also productive of numerous improvements in tax administration.

SUMMARY OF THE ECONOMIC DEVELOPMENT SINCE 1860

This chapter concludes the survey of the chief fields of economic development during the period between 1860 and 1940. As the three following chapters covering the First World War, the interwar years, and the Second World War will be concerned only with the general aspects of the dominant problems confronting the country at that time, the general summary of the most significant developments in the country's economic history since 1860 can best be presented here. The points most stressed, as heretofore, will be those of primary significance for their bearing upon the effort to raise the standard of living of the people.

The nation's supply of natural resources received no such additions from the acquisition of new territory during this period as in the preceding periods. The purchase of Alaska, the resources of which are not yet fully explored, has thus far proved significant chiefly for the fisheries, gold, and copper. The new insular possessions provided semitropical products which

well complemented the nation's resources, notably sugar, manila hemp, copra, and tobacco; domestic interests, however, have tried to limit the potential gain from this source, and the Philippines have now been granted independence. The acquisition of the Canal Zone, facilitating the construction and control of the Panama Canal, ensured a great improvement in transport facilities. Within the old boundaries, further exploration, aided by scientific advance, led to the discovery of both new and additional important resources, notably oil, copper, lead, zinc, silver, gold, bauxite,

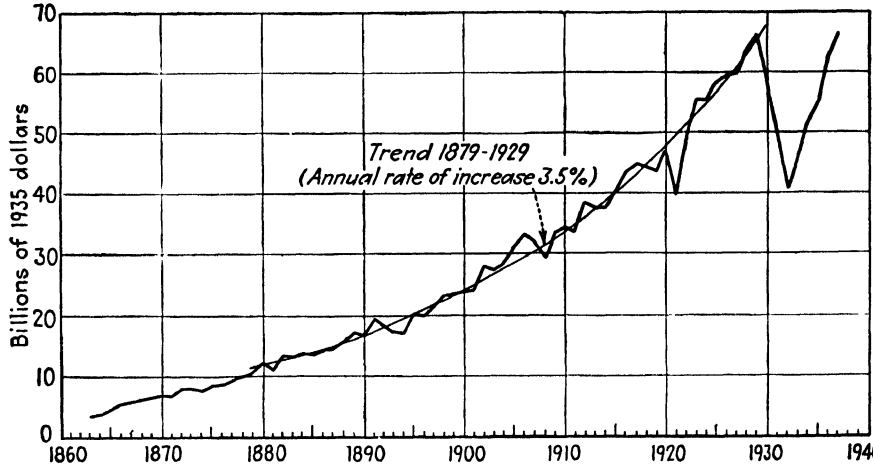


FIG. 83. Total production in the United States, 1863 1937. (*National Resources Committee, "The Structure of the American Economy."*)

and sulphur. Technological improvements and better transport facilities gave value to many resources theretofore useless.

The labor supply, as far as determined by the growth of population, continued to increase but, for the first time in two centuries, at a steadily declining rate which, after 1910, was but half, and in the 1930's but a fifth of that prevailing before 1860. This resulted, despite a decline in the death rate, from the marked fall in the birth rate and the drastic restriction on immigration. Although the intensity of work was greatly increased in most occupations, the weekly hours of work were cut nearly a third even before 1930 and still more later; the individual's years of toil were appreciably reduced, chiefly by prolonging the period of training. The remarkable expansion of the provision for general education, as well as for vocational and professional training, greatly improved the quality of labor in nearly every occupation. Yet, despite the widespread introduction of laborsaving devices, the demand for labor was such that, as compared with other countries, this factor of production still remained relatively costly.

In the case of the factor capital, however, this period saw the ending after 1914 of the relative scarcity that had theretofore prevailed. Though the inflow of foreign capital continued till then, the enormous increase in the domestic accumulation, due to the growth of the savable fund and the developments reacting upon the effective desire to save, was such that capital began to flow out and the country became a creditor nation. The growing importance of capital as a factor of production made the ending of its scarcity the more significant. For the same reason, the rising power of those in control of capital and the extent to which that control, facilitated by various corporate devices, became concentrated, attained added significance. Because of these developments, this period is sometimes said to mark the transition from what is called "industrial" capitalism to "finance" capitalism. But in addition to the steadily mounting per capita quantity of capital goods that each generation handed on to the succeeding generation, and of still greater significance, was the enormous improvement in the quality of those goods produced by the progress of science and invention and embodied in better machinery, plants, transport facilities, etc. This progress, also significant for its reactions upon the other factors of production and the structure of the economic order, may be considered the greatest contributor to the rising standard of living.

In the case of the factor business management, the conditions that had previously favored the development of an able group of leaders still generally remained operative. There emerged the so-called "captains of industry," a group which in such fields as manufacturing, transport, communication, mining, and marketing came to be regarded as world leaders whose methods foreigners came over to study. As the size of the business enterprise grew, the problems of management became increasingly difficult. For meeting these problems, entrepreneurs as a group benefited by the increased provision for general education, and in time professional training in business management was made available. Also, the developments in cost accounting, statistical technique, personnel administration, and other phases of scientific management provided new and better means for attacking many of their problems in a more systematic manner.

Of the progress made in the various sciences, natural, biological, and social, almost nothing has been said in the preceding chapters, except to note a few of the discoveries and inventions of particular economic significance. Yet the advances in these fields, chiefly the first two, were the basis upon which much of the economic achievement of the period was ultimately founded. The cumulative effects of these advances brought results unequaled in any similar period in history. Among the social sciences, these years witnessed the rise of social psychology and sociology and saw political science devote more attention to the applied problems of politics and

public administration. Economics refined or revised the formulation of its laws and gave more attention to the institutional background in studying its concrete problems. Though the teaching of all the social sciences was greatly expanded, the general acceptance and application of the lessons to be learned therefrom proceeded much more slowly than in the case of the other sciences. In part, this was because social rather than individual action was so often required in this field, and wise social action was frequently obstructed by the ignorance of the masses or the power of selfish pressure groups.

The trend of development in the framework of the economic order within which the factors of production were combined was along the general lines indicated during the preceding period when the characteristics of modern capitalistic industry were appearing. Continuing an agelong trend, that toward greater specialization of functions and division of labor was one of the most pervasive of the times, and the results were reflected in almost every line of economic activity. There was a very considerable trend toward integration to secure a more effective coordination and control of the productive processes; yet within the integrated concern specialization was sure to be found. In the use of the factors of production this trend led, in the case of natural resources, to a better territorial specialization, both among different sections of the country and different parts of the world, despite the recent spread of nationalistic restrictions on foreign trade. In the case of labor, it was reflected in the growing proportion of the semiskilled, skilled, and professional groups; the same trend was obvious in the case of entrepreneurs. With capital, it resulted in the more highly specialized forms assumed by plants, machines, and stores. In addition, the same trend was in evidence in the growing specialization among the various institutions of the economic order.

Fundamentally, specialization was a product of technological progress and the resulting widening of the market due to improved facilities for transport and communication. Though water transport costs were greatly reduced as the steamship was improved and deep waterway channels were constructed, the greatest gains came to those regions mainly dependent upon overland transport; for it was largely during this period that the revolutionary effects of the introduction of railroads were experienced both in the United States and elsewhere. The recent advent of the motor vehicle was chiefly significant for passenger transport and for local or regional rather than for long-distance commodity movements; that of the airplane for speed in the transport of passengers, mail, and very limited classes of goods. In communication, besides the improvement in the older facilities, such as printing, advertising, the post office, and the telegraph, this period saw the advent of the permanent cable, the telephone, and the radio, offer-

ing a speed, a range, and an ease of facilities that immediately became essential features of the economic and social orders.

The character of the marketing organization was inevitably reacted upon by all these developments. Generally speaking, however, the progress made in this field, owing to the limited chance to introduce machine methods, was productive of less striking gains than in some other fields—a fact that enabled the older or "regular" channels of distribution to continue with less modification than might otherwise have been the case. Outstanding changes were the spread of large-scale retailing by the department store, the mail-order house, and the chain store; the growth of commodity exchanges; the decrease in the number of middlemen, bringing producer and consumer closer together; the assumption by the producer of more of the functions of distribution; and the marked expansion of advertising. As a result of these changes, the process of distributing goods (including their transport) became a more important function in the economic order, and its costs tended to absorb a greater portion of the total cost of goods to the final consumer.

Among financial institutions, many developments of the period proved distinct contributions to the economic order, yet some created problems of a serious character. The chaotic and insecure circulating medium of the preceding period disappeared with the substitution of sound national bank notes for the uncertain issues of the state banks and the maintenance of a normally adequate supply of specie after the greenback period. Thereafter the different forms of money were kept on a parity with the standard, which was a decided gain, though the standard itself did not escape marked fluctuations in value. Moreover, the rapid growth in the use of bank credit in the form of deposit currency greatly added to the difficulties of the situation and made credit control one of the most serious problems of the time. Effective action in dealing with this and other problems was hindered by the division of banking control between the Federal and the state authorities—an obstacle only in part overcome under the Federal Reserve System. The rapid rise of the trust company offered a wide range of needed financial services, and the creation of specialized institutions to provide agricultural credit remedied a long-standing deficiency.

The vast increase in the use of corporations and the issue of their securities was facilitated by adaptations in corporate law, the rise of investment bankers, and the better organized and regulated markets provided by the stock exchanges. The investor secured many new services, and substantial progress was made in establishing controls to safeguard his interests. New forms of insurance offered protection against a far greater variety of business risks than ever before; at the same time the general adoption of life insurance and the recent provisions for industrial, accident, and unemploy-

ment insurance together with old-age assistance or pensions were especially beneficial in giving greater security to the masses. Through these and other developments, saving was stimulated and a much greater mobility in the flow of loanable funds was secured, thus increasing the likelihood that capital would be diverted to the most productive uses. The outstanding problem still confronting the country in this field involved the relationship of monetary and banking policies to the business cycle.

The general outcome of all these rapid changes was what is often spoken of as the "flowering" of modern capitalism, which may be said to have occurred in the sixty years or so centering about the turn of the century. This was characterized by the large scale of business enterprise that came to dominate a vast range of economic activities; by the common use of the corporation in these fields and the accentuation of the corporation problem; by the sharpening of the conflict between labor and capital; by the rising importance of capital and the power of those controlling it; by the growing ferocity of competition along with the marked swings of the business cycle and the resulting efforts to prevent, or at least modify, the consequences of both through resort to various methods for checking competition among laborers as well as producers.

Finally, the new problems created by these rapid changes, combined with a growing concern over the rising power of concentrated controls, the increasing inequalities in the distribution of wealth and income, and the fear that the ideals of a democratic social order were endangered, led to a rapid extension of activities on the part of the state in the effort to check or eliminate these evils and to protect and foster these ideals. Thus, during this period the relatively unrestricted freedom of individual initiative and enterprise, along with certain of what had been considered the rights of private property, were substantially modified by innumerable laws that involved greater social control and were deemed essential to maintain the efficient functioning of the increasingly complex economic order and to foster the ideals of the democratic republic.

The speed with which the economic order was being changed and the slowness that marked legislative and constitutional changes meant that the process of adjustment in the social order typically lagged far behind the needs of the time. The outcome of the Civil War, by preserving the unity of the nation, was of the utmost economic importance. It is significant that thereafter no serious threat of secession ever arose. Though the conflicting interests of different sections still played a prominent role in shaping legislation, the trend toward an essentially national economy with a growing interdependence among the different sections, gave increased economic support for political unity. The same trend made many of the problems that arose essentially national in character, and hence such as could be

effectively dealt with only by the Federal government rather than by forty-eight states with all their varying interests. That the Constitution of 1787, but slightly altered, could still be used without more serious consequences, thanks in part to the element of elasticity in its interpretation, was the greatest tribute to the wisdom of those who drew it up; yet few would claim that it became ideally adapted to the new economic order. A similar difficulty, though less marked in degree, appeared in the field of state government; here an added obstacle to advance arose from competition among the states, which often delayed desirable legislation. Thus the problem how to secure a speedier and better adaptation of the political order to the economic order still faces the nation.

Despite the new problems that arose, it is clear that this period could lay claim to a remarkable economic achievement. Aided by a most favorable combination of circumstances, it saw the nation rise from a position none too eminent among the powers of 1860 to one of economic and political preeminence among those of the twentieth century. Of much greater significance in its basic contribution to the well-being of the people, it saw their standard of living raised to a level unequaled by that of any other great nation in the history of the world. Despite its manifold defects, the economic order had succeeded in providing means for such ends as the people might choose to use them in unparalleled profusion, as well as far more leisure in which to enjoy their use.

CHAPTER XLII

ECONOMIC PROBLEMS OF THE FIRST WORLD WAR

Introduction. The chief reactions of the First World War in various fields of economic activity have been briefly noted for the sake of continuity in the preceding chapters. These scattered bits, however, give no conception of the broader problems involved in the effort to mobilize the country's economic resources for war. It is the purpose of this chapter, therefore, to try to present the problem as a whole: indicating its size and general character, suggesting the intricate interrelationships among the different fields of economic activity with the extensive coordination necessary to attain the desired results, and explaining the organization and methods actually adopted.

An understanding of the economic problems of modern warfare as illustrated in the First World War is important for several reasons: (1) Since this "war to end war" failed in that objective and we cannot at present feel certain that its successor will prove more successful in this respect, national self-preservation requires an appreciation of these problems. (2) The twentieth-century mechanization of warfare has made war a conflict where economic resources largely determine the outcome, and efficient handling of the economic problems is vital for victory. (3) Because mechanized warfare has come to involve the whole economic order, its problems well illustrate the basic characteristics of that order. (4) As there is growing emphasis on social planning and this was by far the most comprehensive effort of that sort the country had thus far made, the experience throws much light upon what such planning involves, even though the problems of peacetime planning have certain characteristics differing from those in time of war.

As previously indicated, the outstanding economic problems of war involve (1) securing the goods and services necessary for carrying on the war, (2) securing the funds required to pay for these goods and services, and (3) providing for the economic needs of the civilian population. Both the size and the complexity of all these problems have been greatly increased by the rapid advance in the mechanization of warfare during the twentieth century. In this warfare, mere man power in battle counts less

than ever before and equipment vastly more; it is a battle of machines and back of them not simply of the brains directing them but of economic resources and the efficiency with which these are coordinated and quickly made available on the battlefront in the form needed. This requires not only vastly more elaborate and farsighted planning as well as greater extension and concentration of government control, but also the active support of a far larger portion of the civilian population than ever before. The marked contrast as compared with the Civil War will appear from the account that follows.

Developments in the Years of Neutrality. From the outbreak of the war in Europe on July 28, 1914, until the United States entered the conflict, Apr. 6, 1917, various developments helped to prepare the country for a more effective participation in the war. First, the European demand for American foodstuffs, munitions of war, and other supplies tended to divert some of the country's resources to the production of wartime necessities. In 1916, over $1 billion worth of war munitions was exported, so by 1917 the country was better prepared to provide its own war supplies than would otherwise have been the case. Second, as the country slowly came to realize that it might be drawn into the conflict, it began to make its own preparations. In the summer of 1916, action was taken to expand the army and the navy and to provide more revenue to meet the expenditure involved.

At the same time, the Council of National Defense was created composed of six cabinet members to advise as to "the coordination of industries and resources for the national security and welfare." There was also created an Advisory Commission to the Council consisting of seven experts in as many different fields and constituting the real initiating and working group in the Council; but its first meeting was held Dec. 7, 1916, only 4 months before the declaration of war. When one considers the Council's tremendous task of surveying all the available resources for producing and transporting war supplies and planning for their speedy and efficient mobilization, it seems incredible that almost nothing had been done about this problem theretofore. As early as 1910, Congress had been urged to create such a council, but it failed to act. Every war from the Revolution down showed the need for such planning, and it was obvious that the mechanization of warfare made the need infinitely greater. Yet the lessons of history had not been learned. Still it was out of the Council and its Commission that most of the special bodies organized to deal with the problem finally evolved.

The War Situation and American Resources. When the United States entered the war, the outlook for the Allies was by no means favorable and soon became worse. Submarines were sinking ships faster than they

were being replaced and threatened to create a desperate situation, especially for England. The 1917 land operations failed to fulfill most of the high hopes. Finally, the revolution in Russia and her withdrawal from the conflict at the end of the year released the Central Powers' troops and supplies for other fronts and made possible their great offensive on the western front in 1918 which was the climax of the war. Obviously, if the United States was to exert any appreciable influence on the outcome of the war, speed in getting men and supplies into the line of action was of the utmost importance, and these must be provided on an enormous scale.

The potential resources of the country for meeting these needs were great; the main problem was how they could be made available in the form, at the time, and in the place where they were most essential. Moreover, the scale upon which these were provided must be enormous, and the Allies were in desperate need of loans. The navy was the branch of the services best prepared to meet the call made upon it, at least as far as fighting ships rather than transport ships were concerned. The existing army was very small, consisting of 200,000 men, one-third being members of the national guard temporarily called into service for duty along the Mexican frontier. Yet the man power that could be drawn upon was great; over 24 million registered under the selective service law, while before the war's end over 4 million had seen army service, over half of them in France. The real problem here was to select the new soldiers and get them trained, equipped, and overseas as soon as possible. At the start, however, not even the Allies expected over half a million would be sent.

As for needed raw materials, the country possessed most of them in abundance; lack of shipping was the main obstacle in securing what had to be imported, such as rubber. The main problem in getting equipment was to conserve and control the raw materials, ensure the needed labor, develop the producing capacity, and then make certain of adequate overseas transport. The increase in the output of foodstuffs needed to meet the wants of the army and the Allies was fortunately far less than in the case of war munitions, for a very large and rapid increase would have been practically impossible. As production of foodstuffs depended on millions of scattered small-scale farmers, the problem here was to stimulate them to raise their output, check all waste, and provide adequate transport facilities. The Allies, having by this time about exhausted their own means for paying for American supplies, were in desperate need of loans, and there was no other form of resource that the United States was able to provide more abundantly and speedily. The government's credit was of the strongest, and the estimated national income in 1914 exceeded that of the United Kingdom, Germany, France, and Italy combined.

All these resources, however, were useless unless transport and cargo ships were available to carry troops and goods overseas. Yet in suitable shipping the United States was very deficient. The same was true of existing facilities for ship construction, though the country had an abundance of nearly all the essential raw materials. Moreover, to construct shipyards and produce the shipbuilding materials required time; yet the utmost speed was essential.

Thus the potential resources that the United States was able to contribute were great. But to make most of them quickly effective they had to be conserved and mobilized, and to do this effectively required elaborate and farsighted planning and the development of an extensive organization with a highly centralized administration with sweeping powers. This in itself was a very difficult task, not to be accomplished overnight. In fact, it was not adequately worked out before the war ended.

The Problem of Economic Mobilization in Its Broader Aspects. Mechanized warfare involved a sudden and enormous shift in productive resources from peacetime purposes to those of war. How large a shift is crudely suggested by the fact that the increase in Federal expenditures for the fiscal year 1917–1918 over the prewar level was equal to about a fifth of the national income for that year. Except for a large part of the outlay for food, most of this involved a marked shift in the kinds of goods and services produced. From innumerable sources there thus arose a demand for various raw materials, labor, capital, and entrepreneurship, and a wild scramble ensued. What was obviously needed was a complete survey of war requirements; an inventory of the available raw materials, labor, and facilities for producing, transporting, and distributing the commodities; and a coordinated plan involving a system of priorities and rationing which would ensure that all these resources were diverted to provide for the most urgent needs first of all and as quickly as possible. Such a survey must cover not only the resources of the United States but those available to all the Allies as well. On the economic as well as on the military battle front, coordinated planning and action were essential.

The urgent demand, backed by the almost unlimited purchasing power of the government, and the limited supply of resources immediately available meant that, unless some form of price control was adopted, prices would skyrocket and the cost of the war would be greatly increased. Second, it was certain that this rise in prices would quickly spread to goods and services required by the civilian population and that the resulting increase in the cost of living might cause serious injustice and social unrest. Third, it was clear that to allow some individuals remaining safely at home to reap enormous profits while others were sacrificing life itself at the battle front would have a serious effect upon the morale of both the fighting

forces and the public. Important as price control was, however, it presented an extremely difficult and intricate problem; it tended to spread through the whole price structure and required vigorous support from the production and fiscal policies.

Since the problem of securing the goods and services required for war and that of providing for the needs of the civilian population were closely interconnected and often were worked out by the same administrative bodies, no sharp separation between them will be made in the following narrative. The third problem, that of financing the war, and the integrally related developments in money and banking will be explained separately. Only the main features of the wartime effort can be outlined. It will be seen that at the start there was very little comprehension of the character of the problems involved, that the organizations and controls set up were evolved pragmatically from the necessities of the situation as experience and mistakes indicated what was required, and that throughout the whole tendency was toward greater coordination of direction and centralization of powers.

The Council of National Defense. The Council of National Defense and its Advisory Commission, out of which many of the war agencies developed, were formally organized Oct. 11, 1916; but for several months there was little action other than discussion of plans for procedure. Late in February, 1917, a board was set up to fix standards for the manufacture of munitions of war; a month later this was enlarged into the General Munitions Board with the function of coordinating the munition buying of the various agencies, because, acting independently, they were competing with one another and creating a localized congestion of orders. The council was designed to serve as a center of contact between the government and the economic activities of the nation, and each of its expert commissioners was assigned to one of the fields of transport, engineering and education, munitions and manufacturing, medicine and surgery, raw materials, supplies, and labor. Committees of different producers and manufacturers were set up to analyze the resources of each industry and to plan with the government for meeting its requirements.

In February, the commission started to estimate what material would be required to equip an army of a million men, since no satisfactory figures were available; 2 weeks before war was declared, it felt called upon to urge the council that such an army be raised. The degree of public preparedness is well illustrated by the reported remarks of the Chairman of the Senate Appropriations Committee who, on being told of the difficulty in estimating the cost of placing a fully equipped soldier in France, exclaimed, "My God! You don't intend to send men over there, do you?"

Even with the best of efforts, the problem of planning and providing the

equipment for such an army was extremely difficult and subject to constant change. The size of different elements in the army was uncertain. How much of the army could be sent abroad and when was uncertain until the amount of shipping available for troops and supplies was known, and that depended on innumerable other things. It was uncertain what kind of equipment could be best adopted until it was known what materials would be available and whether experiments with a better type would prove successful. Changing conditions on the battle front might necessitate radical alterations in any plan. Obviously such complex interrelationships called for a high degree of cooperative planning and action, yet very little of this had been achieved before the country found itself in the war.

By the latter half of 1917, it was evident that a serious congestion was developing in the manufacturing district of the North Atlantic states. Various agencies of the government and of the Allies, each acting independently, had piled up such a volume of orders here that they could not possibly be filled as wanted. Fuel and raw materials could not be brought in fast enough; adequate skilled labor was lacking and in some places could not have been housed even if available; confusion and delay in output were general. Every government agency wanted its order filled first, and every manufacturer wanted his coal, raw material, and transportation requirements filled first on the plea that he was working on a government order. There was no assurance that the things most urgently needed would be turned out first. On top of all this, competition among the different government agencies as well as those of the Allies and the efforts of contractors to secure supplies or to obtain options to protect bids on orders sent prices skyward and caused a constant shifting of labor.

It was this chaotic situation that led to the creation by the council July 28, 1917, of the War Industries Board to replace the Munitions Board. Its comprehensive functions at once made it the leading agency for dealing with industry, as will appear in the following account. Another result was the setting up in August, 1917, of the Allied Purchasing Commission which was to coordinate the Allies' orders with those of the United States, settle conflicts of interests, and assist all in securing the best prices, terms of delivery, priorities, etc., that were practicable. Thereafter all purchases made by the Allies in this country with money borrowed from the government were approved by the commission. Several other branches of work originally started under the council but later transferred to independent bodies such as the food, fuel, railroad, and labor administrations, will be described separately. Other activities continuing under the council and reflecting the wide range of its functions can be briefly noted here.

The council's Section on Cooperation with States set up state councils of defense in the spring of 1917, and then within each state local units,

commonly on a county basis, the total of all units reaching 184,000. This promoted uniformity of state action where needed, and the local units helped to contact all the people in such matters as food conservation and the sale of Liberty bonds. At the same time, the Women's Committee was formed to coordinate and centralize both the organized and unorganized forces of women for carrying on a wide variety of war activities. Through the National Research Council, which was taken under the council, research was directed toward problems in physics, chemistry, engineering, medicine, psychology, and other fields where need arose. Through cooperation with the council, the General Medical Board was created to help mobilize the civilian and military medical resources. Another committee dealt with highway transportation and the relief of congestion, and still another enlisted the resources of universities to solve engineering problems. Thus in one way or another, the activities of the council were extended to affect the work of a large portion of the people.

The War Industries Board. No agency set up to deal with economic mobilization had a more direct and comprehensive contact with the industrial life of the country than the War Industries Board. At first, possessing advisory powers only, it had to rely upon the support of the President, the secretaries of war and of the navy, and other agencies, and upon the voluntary help of businessmen. In general, the cooperation secured was excellent. However, in the spring of 1918, when it became clear that the scope and effectiveness of the board's work must be increased, the President reconstituted it into an independent agency directly responsible to himself and possessing enlarged powers. Its personnel and the general character of its work continued with little change under its new and efficient chairman, Mr. Bernard M. Baruch, in whose person most of the authority delegated to the board by the President was centralized.

In reconstituting the board, the President declared that its function should be

> . . . (1) the creation of new facilities and the disclosing, if necessary, the opening up of new or additional sources of supply; (2) the conversion of existing facilities, where necessary, to new uses; (3) the studious conservation of resources and facilities by scientific, commercial, and industrial economies; (4) advice to the several purchasing agencies of the Government with regard to the prices to be paid; (5) the determination, wherever necessary, of priorities of production and of delivery and of the proportions of any given article to be made immediately accessible to the several purchasing agencies when the supply of that article is insufficient, either temporarily or permanently; (6) the making of purchases for the Allies.[1]

[1] CLARKSON, G. B., "Industrial America in the World War," p. 49, Boston, 1924. Quoted by permission of the publishers, Houghton Mifflin Company. The following account of the board's work is based largely on this volume.

As the historian of the board later wrote, "The war was henceforth to be conducted not only by the army and the navy, but by them with the War Industries Board, and in its field the last was to be supreme." [1]

What the chairman called the "backbone" of the board's structure consisted of the commodities sections, fifty-seven of which were eventually organized to deal with shortages or threatened shortages in different lines. Each section served as a clearinghouse for information, gathering the necessary facts and having a representative from each agency purchasing that line of commodities. Contact with the producers was maintained through the War Service Committee organized for each industry, which served as spokesman and agent for the industry so that the board could deal with it as a unit. It was through the commodity sections that the so-called "functional" divisions of the board—conservation, priorities, price fixing, requirements, labor, and Allied purchasing—obtained their expert information, made contact with the industries and the purchasing agencies alike, received suggestions, requests, and complaints, and directed the enforcement of regulations and controls.

The power to grant or withhold priorities made the priority system one of the most effective and comprehensive means for securing coordination in, and control over, the industrial life of the nation. It was also a valuable aid in price stabilization and control. Though starting earlier, it scarcely got underway before the autumn of 1917, and the full possibilities of the system were hardly realized, or believed authorized, until the reorganization of the board in 1918. The Priorities Board, as then made up, included representatives of the various buying agencies so that the relative importance and urgency of the requirements of each could be fairly considered. It also included representatives of other agencies such as those dealing with food, labor, foreign trade, and the railroads which, through the cooperative use of their powers to supply to, or withhold from, producers the goods and services they controlled, were in a position to compel compliance with the board's orders. Also there still remained the powers vested in various officials under a series of laws to commandeer plants and goods, which by the President's decree was made subject to the approval of the chairman of the War Industries Board. Facing such possibilities in the use of governmental powers, private business was made very amenable to the wishes and orders of the board and resort to commandeering was not often necessary.

The Requirements Division was not formed until June, 1918, when the need for a complete survey of requirements projected far enough into the future to allow time to provide the materials and facilities essential for their production was finally recognized. Previously, a clearance committee had tried to control the filling of immediate requirements so as best to

[1] *Ibid.*, p. 48.

promote the war effort. The new division secured from all agencies and the Allies statements of their needs as far in advance as was practicable in view of the constant shifts in the war situation. These were then studied as a whole, and the various commodity sections were asked to report on the possibilities for meeting the requirements. On the basis of the situation disclosed by these reports, clearance of orders was authorized, either with or without restrictions as to the power system to be drawn upon, the plants to be used, etc., as seemed needed to avoid congestion and make the best use of all resources. This system also provided the commodity sections with information needed to guide their action. Thus, for the first time, a really effective coordinating and planning organization was secured; unfortunately, this was not until the war was nearly over.

After determining requirements, the next problem was to inventory the resources available for meeting them, either immediately or in the long run, through shifts in their use. For this purpose, the Resources and Conversion Section was formed in May, 1918, to take over the work of the Industrial Inventory Section which had been organized a year earlier. The country was divided into twenty-one industrial regions, each having an advisor and a committee representing its chief war industries. These gathered information as to production resources, the extent to which they were being used, the possibilities of shifting any to war needs, or shifting orders to prevent congestion. Thus carpet factories were diverted to make blankets or duck, horseshoe plants to make trench picks, stove plants to make hand grenades and trench bombs, etc. Where new war plants could best be located in view of the productive resources that they required was carefully studied.

The Conservation Division of the board, created in May, 1918, was a reorganization of the Commercial Economy Board set up a year earlier chiefly to deal with distribution problems, but the work of the new division was much broader in scope. Wherever shortages of materials, facilities, or labor developed, studies were made as to possible measures of conservation and regulations formulated, ordinarily by agreement with an industry, to put them into effect. These involved such things as reducing the varieties of products, substituting plentiful for scarce materials, and eliminating wastes. Thus a reduction of 12 to 15 per cent in the yardage used in men's clothing and of 20 to 25 per cent in that for women's garments was secured; 33 per cent of the wool used for certain knitted articles was saved. Better packing methods, it was claimed, would annually save 17,000 carloads of freight space, 141 million cartons, and 500,000 packing cases. Most shoe manufacturers cut their number of styles about two-thirds; much more drastic cuts were made in the case of various farm implements, the variety of planters and drills falling from 784 to 29.

The numerous serious problems created by the rapid rise in prices led the President to announce in July, 1917, that, if necessary, prices would be fixed on government purchases. Various laws authorized the requisition of supplies for "just compensation" or "reasonable prices," and this was backed by the power to commandeer supplies or plants. How far the power extended to control the price of supplies bought by the Allies or by private individuals was in doubt, but in practice it was generally accepted. In fact, nearly all schedules of fixed prices were arranged by a negotiated agreement between the government and the industry involved.

Actual price control, starting in August, 1917, after a large rise had already occurred, was taken up, commodity by commodity, as expediency dictated. Except for items controlled by the Food and Fuel Administrations, the work was done by the War Industries Board and after March, 1918, by its price-fixing committee appointed by the President who ratified and promulgated nearly all the schedules. From the first, the Food and Fuel Administrations' chief aim in price control was to protect the civilian population, and the usual method was to fix margins of profit rather than the basic prices of raw materials, coal being the chief exception. The War Industries Board at the start was fixing prices on government purchases, but soon extended its activities to include protection of civilians as well. Commonly, it tried to fix the price of basic raw materials, determining them on the basis of estimated cost plus a reasonable profit. As costs varied greatly among different concerns and the price set was the same for all, it was fixed at a point high enough to cover the costs of all but a few of the highest cost producers so as not to discourage production and it was assumed that taxes would recover most of the higher profits thus accruing to low-cost producers.

Price control primarily sought to check unreasonable profits and to stabilize prices; it did not attempt the vain task of trying to offset the depreciation of the dollar that had already occurred when it started, as was attempted during the Revolution. Once started, it proved fairly effective where applied, as will be explained later; but the policy followed involved selected controls rather than the general control finally adopted in the Second World War. Even this led to a constant expansion of the range of control, because of the endlessly ramifying interrelationship of prices. This is one reason why it is essential that controls be applied at the start before the rise in prices begins to spread and gather momentum.

Concerning other activities of the board little can be added here. Although it helped to remedy the chaotic conditions that arose in the labor field, most of that task devolved upon the Labor Administration and other units with which the board closely cooperated. To coordinate the needs of the United States for certain imports with those of the Allies, an inter-

national control of nitrate and tin was arranged, and only the ending of the war prevented like control over jute, rubber, leather, wool, tungsten, manganese, and several other commodities.

The Food Administration. The necessity for increasing production, checking waste, and controlling the distribution of food led to the Food Production Act and the Food and Fuel Control Act of August, 1917. The first law gave the Department of Agriculture powers to stimulate production and promote the conservation of food on the farm. Under the broad powers granted the President by the second law, the National Food Administration was created, headed by Mr. Herbert Hoover, with extensive control over the processes and facilities involved in the production, distribution, and consumption of essential foodstuffs. This law also declared it illegal to hoard, monopolize, restrict the supply, and willfully waste such necessaries, or to charge excessive prices therefor. Though Mr. Hoover's general policy was to rely heavily on educational propaganda and voluntary cooperation, resort to more stringent methods became increasingly necessary.

A vast campaign to inculcate efficient and economical methods in the use of food secured pledges from over 11 million homes to follow the suggestions made, and "Hooverizing," as this was called, was considered a patriotic duty. Hotels and restaurants were placed under fairly strict supervision. More complete control over the processing and distribution of the scarcer food products was secured by a licensing system applied to manufacturers, stores, and distributors of a rapidly expanded list of goods and designed to control their flow and limit profits.

In the case of two commodities, wheat and sugar, additional action was deemed necessary. To stimulate the production of wheat, the government guaranteed the farmer a minimum price, originally fixed at $2.20 a bushel, standard grade, for the 1918 crop. The Food Administration Grain Corporation, formed by the government, bought wheat and wheat flour, including all the requirements of the United States and the Allies, and maintained the guaranteed price. Eventually other cereals were included in its purchases. Its activities helped to stabilize prices and control distribution. The Sugar Equalization Board was set up to buy raw sugar from the producers and sell it to the refiners under an arrangement that fixed their profit margin and stabilized the retail price. The scarcity of both wheat flour and sugar was such that sales by retailers to consumers were limited, but the country escaped the detailed rationing of food that was then adopted in most European nations and became necessary here in the Second World War.

The Fuel Administration. The shortage of coal was such that the Food and Fuel Act, under which the Fuel Administration was set up, gave

the President even greater powers over it than over food and backed them up with authority to take over and operate the plant or business of anyone not conforming with government regulations. The shortage, which threatened to become more serious for civilians than any other shortage, was due to numerous conditions most of which arose, not from inability to mine coal, but from lack of transport facilities to distribute it. This in turn was due to such things as congestion of war orders in certain areas, lack of storage or warehouse facilities, lack of terminal or port facilities, and lack of coal cars and ships. The situation was only typical of the complex character of many war problems. Obviously, the remedies for most of these deficiencies required the cooperation of numerous different agencies.

The Fuel Administration endeavored to increase output in various ways such as decreasing waste, introducing more efficient methods, and reducing losses from strikes. The price of coal was fixed at all stages of its handling. In cooperation with the Railroad Administration, a zone system of distributing coal was put into effect in March, 1918, under which each consumer received coal from the nearest mine. The resulting elimination of cross hauls was estimated at 160 million car-miles. By pooling all the coal received at a port so that any of it could at once be used to supply a ship, thus eliminating delays in unloading cars and coaling ships, a saving was secured in the use of coal cars, wharves, and shipping. In cooperation with the War Industries Board, a priority system was worked out to control the distribution of coal.

Voluntary agreements with industries to reduce their use of coal were estimated to save 15 million tons a year. In November, 1917, the use of coal for electricity to operate illuminated signs, etc., during the evening was prohibited. In January, the burning of coal on Mondays in factories, stores, offices, and amusement places, with certain essential exceptions, was prohibited in the region east of the Mississippi for about 2 months. In April, a general rationing for domestic users was inaugurated. Rationing of fuel oil had been adopted in January and near the close of the war was extended to include natural gas, gasoline, and related products.

The Railroad Administration. In the case of the railroads, there was much the same sequence of experimental steps, each, as necessity dictated, leading to a more comprehensive and centralized control, as in other fields. Two earlier plans proving totally inadequate, the chief railroads in April, 1917, voluntarily set up the Railroads' War Board with authority to formulate a detailed policy of operations to be accepted by all. To strengthen this, the Preferential Shipments Act of August, 1917, gave the Interstate Commerce Commission complete control of the use of cars during the war, on the basis of which a priority system was set up. When this also proved inadequate and it was recognized that a completely centralized and abso-

lute control was essential, the President under an act of 1916 took over the whole railroad and water transport system Jan. 1, 1918, and placed it under the Railroad Administration. Nothing short of governmental powers seemed adequate to cope with the financial and labor problems that then overhung the railroads. Later the chief express companies were consolidated into one concern, which subsequently was placed under the Railroad Administration.

An act of March, 1918, assured the railroads, during government operation, an income equal in each case to the average for the 3 years ending June 30, 1917. A large revolving fund was established to pay the expenses of Federal control and compensation and also to provide new equipment or loans and to develop water transport. The law also gave the President power to initiate changes in rates, classifications, and practices, subject to the Interstate Commerce Commission. To stave off threatened labor trouble, a special commission in May, 1918, recommended wage increases, estimated as totaling $350 million a year, to offset the rising cost of living. As the roads were already in a difficult financial situation, this soon necessitated an advance in rates. Through this and the aid of several boards set up to deal with labor disputes, any serious interruption of traffic from labor troubles was avoided. By operating the railroad system as a unit, innumerable economies were secured, facilities were put to the essential uses, and congestion reduced. By the time the roads were turned back to private operation in February, 1920, the guarantee had cost the government about $1.2 billion.

It was also found expedient to assume control of various communication facilities. On the outbreak of war, the radio systems had been taken over and placed under the Navy Department. Under an act of July, 1918, the telegraph and telephone systems were at once taken over and put under the Postmaster General. In November, marine cables controlled by American companies were also taken over.

The War Trade Board. Centralized control over foreign trade was needed for three main reasons: (1) to obtain various essential imports, (2) to prevent supplies passing to the enemy, (3) to conserve cargo space. To provide such control, authorized by the Espionage Act of June, 1917, and the Trading with the Enemy Act of October, 1917, the President in the latter month created the War Trade Board which took over the work of several temporary boards. This was supplemented by the creation of the Alien Property Custodian, to control the private property of enemy aliens in the country, and of the Censorship Board.

After consulting with other agencies to determine needs, the War Trade Board established controls by a licensing system. The right to refuse bunkerage coal and other necessary supplies to ships provided a most

effective leverage over the use of shipping. The control over exports needed by other countries enabled the government to exert pressure on neutrals, and even on the Allies, to supply this country with goods that they controlled or to take other favorable action. Thus individuals and concerns throughout the world whose activities were thought advantageous to the enemy could often be placed under some sort of boycott such that these activities were abandoned.

The Shipping Board. The paramount importance of conserving and increasing shipping has already been noted. The Shipping Board under the act of 1916, in addition to its regulatory powers, was given the duty of securing ships and providing for their operation. In April, 1917, it organized the United States Shipping Board Emergency Fleet Corporation, with $50 million of government capital, to which it delegated its powers for the acquisition and operation of shipping. Later laws gave the board almost complete control over the construction and operation of all our ships not under the navy or the army.

Since most ships required a year or more to build, it was fortunate that some could be made available almost immediately. About 600,000 tons of German shipping interned in American ports was seized and, despite the damage done by the German crews, made usable within 6 months. Negotiations with other countries secured other ships and in March, 1918, 500,000 tons of Dutch shipping in American ports was taken over with provision for compensation. In August, 1917, the government commandeered 431 steel cargo vessels totaling over 3 million dead-weight tons then under construction in the country, and over half this tonnage had been completed by Oct. 1, 1918. In fact, such sources rather than new construction started by the government provided most of the additions before the war ended.

As shipyards were already working to capacity, new yards had to be built or old ones expanded. The Fleet Corporation built four great "agency yards" of which the largest, at Hog Island near Philadelphia, had a capacity larger than the total of Great Britain before 1914. These with nearly 200 other yards eventually gave the United States a capacity of 6 million dead-weight tons a year, or about double that of the rest of the world. To speed construction, standardization of types of vessels was stressed and prefabrication of parts before assembly at the yard. Cooperation with other agencies helped to ensure prompt and orderly delivery of materials. Scarcity of labor became an acute problem, and through a recruiting system the number of shipyard workers was raised from 50,000 to 350,000 in 9 months. At Hog Island, where 34,000 were employed, a fair-sized city had to be built. To lessen the high turnover of labor and prevent strikes, an organization to standardize wage rates and policies and to settle disputes was set up.

At its height in October, 1918, the program of construction called for a

total output of 17.4 million dead-weight tons of shipping, but following the armistice this was cut to 13 million tons. Up to Nov. 1, 1918, a total of 480 ships of 2,756,131 tons had actually been delivered, two-thirds of this being requisitioned ships and the rest construction initiated by the corporation. The peak in monthly delivery of ships was not reached until September, 1919; during that year nearly half of the corporation's total deliveries took place. The completion of the program took a year or two longer.

To secure the needed centralization of control, the corporation was also given the task of conserving, mobilizing, and controlling the use of shipping and regulating cargo rates. By mid-1917 rates in trades outside the war zone were around fourteen times those in the spring of 1914. As the Chairman of the Shipping Board later wrote, "There was nothing to do but to own or control every ship that flew the American flag and to fix the scale of requisition rates ourselves at some fair level that represented legitimate values." This was done in October, 1917, when the Fleet Corporation requisitioned all American steel cargo and passenger vessels of 2,500 dead-weight tons or over suitable for ocean service. The owners were generally retained as operators by the corporation, but it controlled the use of the ships and the rates. Rates were often cut from one-third to one-half and sometimes three-quarters of the previous rate.

Even this centralization of control proved insufficient to prevent congestion at ports in both this country and France, partly because the army, the navy, and the Shipping Board were each operating separate fleets. Consequently a Shipping Control Committee was formed to coordinate the operation of the combined fleets. Delay in French ports was cut by additions to docks, warehouses, and other port facilities and by securing ships able to transport locomotives already assembled. Cutting the time for a round trip to France in half thereby was equivalent to saving hundreds of ships. Even then it was necessary to borrow from England to help transport the troops sent overseas in 1918. This was facilitated by the formation of the Allied Maritime Transport Council early in 1918 to study the shipping needs and resources of all the Allied and associated countries and advise as to the use of the available ships.

The Bureau of War Risk Insurance. When it became evident that private enterprise would not meet the needs, a law of September, 1914, authorized the government to insure American, and later certain foreign, ships and cargoes against war risks. A limited life and personal injury insurance was also offered officers and crews of American merchantmen. After the country entered the war, the Bureau of War Risk Insurance, established for this purpose, was also made the agency to provide insurance and compensation offered soldiers and sailors. The law providing for this marked a new departure in policy, and it was hoped it would obviate the

need for pension legislation such as had followed previous wars. It provided for compulsory and voluntary deductions from the pay of enlisted men, supplemented by varying government contributions, to be given their dependents, and also for compensation for death or disability incurred in service. Servicemen could also secure low-cost government insurance up to $10,000 against death or permanent total disability.

The Labor Administration. When, on top of the greatly increased demand for labor created by the war, nearly 4 million active men were drawn into the military services and immigration ceased, the necessity for conserving and mobilizing labor was obvious. Disputes and strikes threatened great losses of labor time and delay in production. Workers, enticed by offers of better pay, were shifting from job to job causing a high turnover, with resulting waste and inefficiency. Obviously, a nation-wide standardization of wages and working conditions for similar work was needed. Yet it required a year of chaotic experience before the government adopted the necessary centralized control and coordinated administration.

A great variety of measures helped to increase the supply of labor. Needed skilled workers were exempted from the draft; 100,000 laborers were imported from Puerto Rico and the Virgin Islands; the Boys Working Reserve enlisted 300,000, mostly for farm work; after 1915 nearly a million women were added to those employed outside the home; an elaborate system of intensive training for certain skilled trades was set up. To control the distribution of labor, the United States Employment Service in cooperation with state and local agencies established a nation-wide system of clearances and in certain regions special divisions to care for shipyard, dock, railroad, farm, and woman labor. During 1918, over 10,000 workers a day were being placed. In June, 1918, the President asked employers engaged on war work to secure all their unskilled labor through this service and urged labor to seek work in war industries. Thus the labor turnover was reduced, some degree of priority in the distribution of labor secured, and the flow of labor to essential work promoted.

In the effort to prevent labor disputes and strikes, organized labor generally cooperated with the government. When the country entered the war, a committee of the Council of National Defense called a conference of workers and employers which led to an understanding that virtually established a truce between the two groups for the duration of the war. Though without the backing of authority, this was observed by most leaders on each side; but it proved far from sufficient to prevent many disputes. To settle these, the general tendency at first was for each agency to set up its own mediating board and formulate its own policies. This failed to secure the needed standardization of conditions and often led to working at cross purposes, as in the case of a munitions plant strike where

representatives from four agencies each with different instructions appeared to settle the dispute. In January, 1918, the President's Mediation Commission declared,

> Unified direction of the labor administration of the United States for the period of the war should be established. At present there is an unrelated number of separate committees, boards, agencies, and departments having fragmentary and conflicting jurisdiction over the labor problems raised by the war. A single-headed administration is needed with full power to determine and establish the necessary administrative structure.

Accordingly the Council of National Defense drew up for the President a program for action which he in substance put into effect.

First, the Secretary of Labor was appointed Labor Administrator. He then chose an Advisory Council to study the problems, make plans, and supervise their execution. Assistance in planning was provided by the War Labor Conference Board made up of representatives of employers, employees, and the public. It recommended certain principles and standards of labor policy and the creation of a National War Labor Board to mediate and, if necessary, to arbitrate, disputes affecting war work on the basis of these principles. In April, the President created such a board with the same membership as the Conference Board, and its awards were almost always accepted. Later, to supplement the essentially administrative work of this board, a War Labor Policies Board was set up with members from various agencies to work out problems of standardization in more detail and to allocate labor according to the most essential needs.

Among its numerous activities, the Labor Administration endeavored to improve the laborer's working and living conditions. To relieve housing congestion, the Housing Corporation was formed in July, 1918, to construct and operate workers' houses, though most were unfinished when the war ended. In some cases new transport facilities between plants and homes provided relief. Another activity endeavored to promote sound public sentiment on labor questions and to place the real issues of the war before the workers. There was a service for the training and dilution of labor and a special study of the Negro wage earner's position and the means for improving it.

Other Governmental Organizations and the Allied Councils. The preceding account gives no adequate picture of the elaborateness and comprehensive scope of the wartime organization. Nothing has been said of the work of the Committee on Public Information in exercising censorship or presenting news and views to the public, or of that of the Aircraft Board and others in promoting aircraft production. As for the rest, it must suffice to note that the "Handbook of Economic Agencies of the War

of 1917" lists many hundreds of agencies each of which played some part in the great undertaking.[1]

Just as experience showed the need for placing the supreme command over military operations on the western front in the hands of one man, so in economic affairs the Allied nations and their associates were finally driven to recognize the necessity for coordinated planning and concentrated control in the use of their available resources. As a result of an inter-Allied conference late in 1917, a series of inter-Allied councils was formed for this purpose. That for War Purchases and Finance was to coordinate purchases, serve as a clearinghouse on the needs for funds, and develop a unified policy in the granting of loans. The Inter-Allied Food Council allocated stocks of food and prepared programs for their transport. These programs were turned over to the Allied Maritime Transport Council, which began operations in March, 1918, supervising the general conduct of Allied transport to secure the best use of the available tonnage. In the summer, the Munitions Council began making programs for munitions and the requisite raw materials. Minor organizations included those dealing with tin, nitrate, petroleum, wheat, and sanitation. For the last part of the armistice period, the Supreme Economic Council took over most of these tasks. These Allied agencies proved valuable chiefly for coordinated planning; the extent to which they could exercise absolute control was sometimes rather limited.

As the preceding narrative makes only too plain, scarcely anybody at the start seems to have realized the enormous size and the infinite complexity of the problems of economic mobilization for modern mechanized warfare. Lessons that might have been learned from the experience of other countries during our period of neutrality or even from the Revolutionary War had not been learned. Consequently the wartime organization was worked out under great pressure from day to day as the exigencies of the situation seemed to demand. Typically, it was the repeated experience of delay, waste, working at cross purposes, and chaotic conditions generally that forced the adoption of policies involving farsighted comprehensive planning, a general coordination of effort, and greater concentration of control. A year passed before much of this had been achieved, and the war ended shortly thereafter. That under such conditions so much was accomplished was remarkable; certainly nobody was more surprised thereby than the enemy.

The Accomplishment. There were relatively few needs for supplies of such American troops as got to the European battle front that were not adequately met. The total number serving in the different armed forces

[1] Prepared in the Historical Branch, War Plans Division, General Staff, Washington, 1919.

during the war was 4.8 million, or about a twentieth of the population as compared with a tenth in the North during the Civil War. The universal draft, finally including all men from eighteen to forty-five, was generally accepted and provided 60 per cent of the men. Nearly 4 million were in the army and half went to France—nearly four-fifths only after May, 1918—and only two-thirds of these served in battle.

Scarcity of shipping was the great bottleneck limiting the flow of both troops and supplies to the front, and the number of ships available to the Allies steadily dwindled until the summer of 1918, the increase thereafter being primarily due to the output of this country. Thus in the 1918 spring emergency requiring troops at once, British shipping was diverted for the purpose and eventually transported half of all the men sent overseas. American vessels, however, carried 95 per cent of the cargo shipments; the monthly peak was reached in November, 1918, with 800,000 tons. Total shipments to the army till May, 1919, were 7.5 million tons, nearly half consisting of quartermaster's supplies, chiefly food and clothing. The navy so efficiently safeguarded American troopships that not a man was lost through enemy action in the eastbound passage and but few on the westbound. The convoy of troops in British ships, most of whom were first landed in England, and that of most cargo vessels were under British control and were also carried on with but slight losses.

The construction in France required by the American forces nearly equaled that in the United States, where the outlay involved $800 million. In the ports, eighty-three new ship berths together with warehouses and dock equipment were built, lessening delay and tripling the cargo-handling capacity. Nearly 1,000 miles of standard-gauge and 500 miles of narrow-gauge track were built; 27,000 freight cars and 1,800 locomotives were sent over to use as rolling stock; 100,000 miles of telephone and telegraph wires were put up. For building training camps, hospitals, etc., local materials were generally used. Though the port and railroad facilities were never entirely adequate, the resulting delays were not very serious.

As far as food and clothing went, the supplies of the army in France were always adequate, except for brief local shortages incident to army movements. To ensure this, a 45-day reserve food supply was kept in France—it was fixed at 90 days before the submarine danger decreased. For clothing, it was the policy to keep a 3-month reserve in France, an equal quantity in transit, and 2 to 3 months' supply in the United States. Much the same situation existed in the case of other supplies subject to rapid consumption. This illustrates a peculiar difficulty arising in the early part of a war in securing adequate supplies for a rapidly growing army, especially where the fighting is far from the base of supplies. It means that at first, if an adequate quantity of supplies is not on hand, a productive capacity is

needed which is two or three times greater than that required later to provide a steady flow to a given number of troops. This, together with the length of time required in modern processes of production, also means that in highly mechanized warfare the nation that has prepared for war possesses at the start an enormous advantage over one of equal resources that has not.

In providing the overseas army with fighting equipment from its own resources, the country was less successful. An adequate supply of infantry rifles was secured, but to save time most were of the modified Enfield type rather than the better Springfield. Until late in 1918, when the efficient American Browning reached the front, France supplied most of the field guns. The pistol and revolver supply was always inadequate, but the ammunition for small arms was generally sufficient. Artillery and its ammunition were obtained mostly from France and England, also heavy tractors and tanks. About a fourth of the airplanes sent to the zone of advance operations for American aviators was of home manufacture. The United States also contributed to the Allies supply of munitions, notably smokeless powder and high explosives as well as raw materials. In the main through our own output but in some essential parts through the aid of the Allies, the American troops that reached the front were pretty well provided with the needed supplies and equipment.

In the great German offensive in the spring of 1918, the task of holding a retreating line unbroken fell mostly on the Allies, though some American troops participated. It was then that the effort of this country to answer the urgent cry to speed up the movement of troops and supplies completely altered the balance of man power on the western front. On April 1, the Germans had a superiority of 324,000 riflemen; during June, the balance was turned in favor of the Allies; by August 1, it had risen to 277,000 in their favor and to over 600,000 by November 1, despite a decline in the British and French troops. Thus, when the German attack had been halted on July 15, American troops were prepared to take a prominent part in the offensive which was immediately launched and speedily brought the war to an end.

The cost of the war in life and money was appalling. The total of battle deaths is estimated at 7.45 million, thus exceeding the total of under 6 million killed in all the chief wars from 1793 to 1914. The direct money cost to all the nations engaged is estimated at $186 billion and the indirect costs at almost as much again. The grand total thus exceeded the total wealth of the United States in 1922, which was figured at $320 billion. American lives lost numbered 122,500, less than a half being battle deaths. In the expeditionary force, losses from disease were only half those from battle deaths—a vast improvement over previous war records. Typhoid was practically eliminated from camps. Hospital facilities for overseas

troops exceeded needs, and the medical work generally proved highly efficient. The immediate money cost to the United States, including foreign loans, was over $30 billion.

The accomplishment in providing for the needs of the civilian population during the war can be briefly stated, postponing the effects of the methods of financing the war until after those methods have been described. In general, civilians were adequately provided with all the necessities and a goodly share of the luxuries to which they had been accustomed. The restrictions on the use of food were mostly voluntary and slight where compulsory. Limitations on the use of coal for domestic purposes were barely felt and those on other uses brief. Numerous personal services were curtailed, but only the less important. Both private and public assistance was given the families of those entering the service more generously than ever before. There were not a few, among the wage earners as well as the war profiteers, whose extravagant expenditures attracted much attention. As a whole, the nation worked harder and for longer hours than customarily, and the pursuits of leisure, cultural or otherwise, suffered accordingly.

The Problem of Financing the War. The account of the methods adopted to deal with the third war problem—that of finance—can best be divided into two parts. The first will deal with the fiscal needs and the means chosen to provide for them; the second will cover the effects of these measures on the monetary and banking system, which was completely dominated by the fiscal policy, and the consequences thereof, which were momentous in character.

The staggering cost of modern warfare is a product both of the vastly greater military forces which the present economic order makes it possible to employ and of the infinitely greater material equipment per combatant which technology has devised for use in fighting. Thus, whereas the total direct cost of the Napoleonic wars from 1793 to 1815 was probably around $6.2 billion, it was estimated that the United States alone, exclusive of loans to the Allies, would require twice this sum for only the first year after it entered the First World War. Later, the country was spending in 2 days more (specie value) than during the whole Revolutionary War. Yet the common belief that the cost of such warfare would soon end a war proved mistaken.

As finally revised, the estimated need of the government for the fiscal year ending June 30, 1918, including foreign loans, was $18 billion, or about a third of the national income. How to obtain such a sum from the people—previously less than $1 billion a year had been taken—without serious suffering was a problem. Of possible sources, increased production might yield considerable; the annual savings of $4 to $6 billion might be drawn upon; for a while the replacement of many durable capital and consumers'

goods could be postponed; most of the rest would have to come from reducing consumption.

Since a direct issue of paper money was considered unwise, Congress had to decide how much to raise by taxation and how much by borrowing. In favor of taxation it was argued that it was more certain; that it would compel saving; that it could take away excessive war profits; that it would lessen inflation. Borrowing, it was claimed, would secure funds quicker; it would be easier, both for business and private individuals; it would thus cause less opposition to the war; it would shift some of the burden to future generations. Except for the last, there was some truth in all these claims. But as long as the war had to be financed within the country, the burden could not be shifted, though unfortunately few seemed to realize this. The war had to be fought with the existing, not future, goods and services, and the burden consisted in the diversion of these resources from peacetime uses to those of war. It is also true that the next generation would suffer, since it would inherit less because of the destruction; but this burden would accrue no matter how the war was financed. The really important consequence of the choice between borrowing or taxing is the alteration in the distribution of the burden among different groups, both within the generation waging the war and within subsequent generations.

Raising the Money. Though some urged that half the needed funds be raised by taxation, Congress, always mindful of the general and undiscriminating hostility to new levies, decided to raise only $3.5 billion in this way and to borrow the rest. As usual, it took months to get the Revenue Act of October, 1917, through Congress. This law raised income tax rates substantially, the peak surtax rate being 63 per cent; estate taxes were advanced about a third, and there was a heavy graduated excess-profits tax. The old excise taxes on tobacco and liquors were greatly increased and many new taxes imposed, such as those on transportation and various forms of luxurious expenditure. More months had to pass before receipts mounted appreciably; meanwhile the war was going on and borrowing was a necessity.

The Treasury's general policy in war borrowing was (1) to sell short-term notes or certificates every few weeks as money was needed, chiefly to banks, and (2) to pay these off, since the banks' ability to absorb them was limited, with the proceeds from taxes and the sale of long-term Liberty bonds, also hoping that these proceeds would provide a surplus to meet current expenses for a little while. As the sale of these Liberty bonds required a highly organized drive, it was attempted only twice during each of the war years. The first Liberty Loan in June, 1917, yielded $2 billion; the second in November, $3.8 billion; and the third in May, 1918, $4.2 billion.

The total outlay for the fiscal year ending June 30, 1918, including $4.7

billion of foreign loans, was $13 billion. This was much below the previous estimate, partly because loans were smaller than expected but chiefly because of the slow output of war supplies. Toward this total, taxes contributed almost $4 billion, 68 per cent coming from income and corporation taxes, and net borrowings over $9 billion. This record of providing nearly 30 per cent of expenditures from taxes was much better than the country had ever made in any serious war and far better than those of the chief European combatants (see the charts on pages 726–727).

The original estimated outlay for the second fiscal year of the war was $24 billion, including $6 billion of foreign loans, and it was proposed to raise a third from taxes. While Congress was still considering how to do this, the war ended; the estimate was accordingly cut to $18 billion, one-third to be derived from taxes. The law to secure this, though not passed until February, 1919, was known as the Revenue Act of 1918. Despite the enormous revenue sought, few important new taxes were levied, most of these being excise taxes. It was planned to obtain four-fifths of the revenue from the income and excess-profits taxes, and the rates for these levies were substantially raised and made applicable to returns covering 1918.

Meanwhile borrowing was proceeding as before. The Fourth Liberty Loan of October, 1918, brought in nearly $7 billion with over 22 million subscriptions, 84 per cent of these being for $50 or $100. The final bond issue, known as the Victory Loan and yielding $4.5 billion, was sold in May, 1919. The result for the fiscal year ending in 1919 was that out of a total outlay of nearly $19 billion, including $3.5 billion foreign loans, $4.6 billion was obtained from taxes and minor receipts.

The total outlay of the government from April, 1917, until the end of demobilization, Oct. 31, 1919, was estimated by the Treasury at $34.4 billion, including $9.4 billion of foreign loans but excluding debt operations and postal outlay from postal revenue. This sum was double the total Federal expenditures from 1789 to 1900. Practically one-third was met by tax revenue and other minor receipts; when foreign loans were deducted from the total, the proportion was 43 per cent. As compared with previous serious wars, our financing of this war showed two decided improvements: (1) The incidence of the taxes fell upon those who were profiting from the war to a greater extent than ever before. (2) There was a more prompt and extensive resort to taxation and less dependence upon borrowing than previously. Unfortunately, however, this was not carried far enough to prevent the inflation that attended the enormous borrowing operations, as will appear in the account that follows.

The Monetary and Banking Problems of the War. With the great demand for lendable funds both from the government and from private enterprise engaged upon war work, it was obvious that conservation and

mobilization of the available supply were necessary to direct the flow to the most essential uses, to minimize the cost of the government's borrowing, and to prevent needless disturbance of ordinary business.

To facilitate the sale of Liberty Bonds to the people, they were offered in small denominations and on the installment plan. War-savings certificates and stamps attracted even the smallest sums. The banks made borrowing to buy bonds easy, and favorable rates were offered on loans secured by these bonds. Also some bonds enjoyed certain tax exemptions. To induce the banks to lend to it, the government greatly increased the number of banks where its funds could be deposited and allowed them to subscribe for loans by simply crediting the government deposit; this deposit was then left in the bank until needed, and the law was amended so that the bank did not have to maintain the legal reserve against it. The Federal reserve banks also granted member banks favorable rediscount rates on loans secured by government paper.

As the low interest rate stimulated borrowing for nonessential purposes, the government was forced to adopt a form of rationing lendable funds. Early in 1918, the Capital Issues Committee was set up under the Federal Reserve Board, and it requested banks and others aiding in the issue or underwriting of any sizable amount of securities to refrain from this unless approved by the committee as desirable. A little later, under a new law, this work was taken over by a committee of the War Finance Corporation. This corporation, formed under an act of April, 1918, with $500 million of government capital and power to issue six times this amount of bonds, had the function of extending loans otherwise not easily obtainable for a wide range of activities considered important for the war effort, including those of farmers, manufacturers, public utilities, and banks.

Monetary and Banking Developments during the War. Since most of the measures to facilitate government and private financing involved a great expansion of credit, it proved fortunate that the new Federal Reserve System went into operation in November, 1914, for no such expansion as later occurred would have been possible under the old national banking system. Even the Reserve System, despite facilitating amendments, eventually had its credit facilities strained to the limit.

The Federal Reserve System made possible an expansion of credit both in the form of money, because of the elasticity in the issue of Federal reserve notes, and in the form of bank loans, because of the lower reserve requirements. On top of this, the inflow of gold raised the supply in the country from $1.8 to $3.2 billion in the 3 years ending June 30, 1917. As the gold reserve was the final factor limiting the supply of both reserve notes and bank loans in the form of deposit credits, this greatly facilitated expansion. To ensure that this gold would be used as a reserve, it was made a definite

policy to draw gold coin and gold certificates out of circulation into the Federal reserve banks; during the war over $1 billion was thus added to the gold reserve.

Until the country entered the war, the credit situation remained relatively easy, but then the government's rising need led in June, 1917, to amendments to the law to aid an expansion of credit. The reserve requirements of the member banks were reduced, but all the required reserve now had to be kept in the Federal reserve banks. This both hastened the shift of gold to these banks and made it easier for them to retain it. Another change added some $400 million to what could be counted as gold reserve. A few months later, an embargo was placed on all exports of coin, currency, and bullion not approved by the government. The Pittman Act of April, 1918, authorized the melting and sale at a minimum price of some of the silver coin, which could be used in place of gold to meet heavy payments due to silver-using countries of the Far East. Other changes in 1917 were designed to bring more state institutions into the reserve system. As a result, their membership rose from under 50 in April, 1917, to over 900 by the end of 1918. Though these made up only 11 per cent of those eligible to membership, they possessed over half their total resources. Through these and other measures, gold was conserved and mobilized as a reserve where it could best facilitate a great expansion of credit either in the form of Federal reserve notes or deposits arising from bank loans.

The changes in the circulating medium of the country from 1914 to the peak of its expansion in the postwar boom are shown in the accompanying table.

MONEY IN CIRCULATION AND TOTAL STOCK OF MONEY, 1914–1920

June 30	Money in circulation, billions			Total stock of money, billions	
	Gold coin and certificates	Federal reserve notes	Total, all kinds	Gold	All kinds
1914	$1.6	$0.0	$3.4	$1.8	$3.7
1917	2.4	0.5	4.7	3.2	5.6
1918	1.9	1.7	5.3	3.1	6.9
1919	1.6	2.4	5.7	3.1	7.6
1920	1.2	3.1	6.0	2.8	8.1

The striking fact is the great increase of 119 per cent in the total stock of money and of 76 per cent in the money in circulation during these years.

The rise in the total stock was due largely to (1) the influx of gold prior to our entrance into the war and (2) the far greater issue of Federal reserve notes, chiefly after that date. As regards the money in circulation, the increase in this note issue greatly exceeded the withdrawal of gold and gold certificates into the Federal reserve banks. Minor changes in other items are shown by the chart just below. The decrease in silver certificates, as

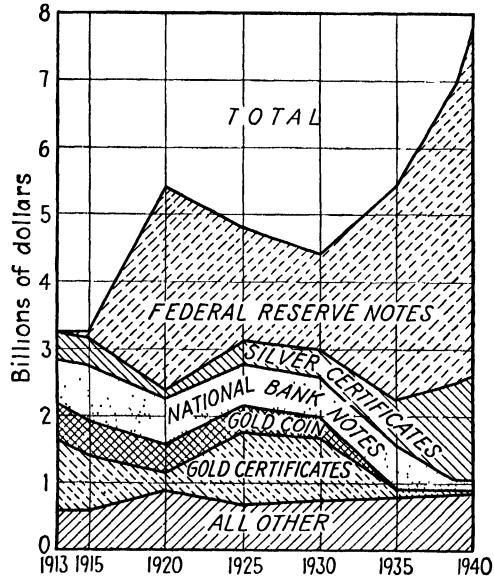


FIG. 84. Money in circulation, 1913–1940.

silver coin was melted down, was almost offset by the new Federal reserve bank issues. Thus, except for the new gold, the increase in the stock of money was due to an expansion of credit, based largely on the rising government debt.

The second form of credit expansion in the shape of bank loans was very similar in its proportions. The total resources of all reporting banks rose from $27 billion on June 30, 1914, to over $37 billion 3 years later and to $53 billion on June 30, 1920. The total of their loans and discounts for these three dates was $15 billion, $20 billion, and $31 billion, respectively. This doubling of loans, however, had raised them almost to the limit set by the gold reserves. At the end of March, 1917, the reserve banks' ratio of total cash reserves to net deposits and Federal reserve notes was 89 per cent; just before the armistice, it was 50 per cent; and then in the postwar boom, it fell to 42.2 per cent on May 20, 1920, or almost the legal minimum. The rapid advance in money rates during the preceding months reflected the strain and the feeling that the end of credit inflation was at hand.

The Results of Credit Expansion. Undoubtedly the expansion of credit enabled the government to borrow at a relatively low cost. Money rates advanced only moderately during the war, chiefly during the first 12 months of our participation. The rate on 60–90-day commercial paper rose from 4¼ per cent at the start to nearly 6 per cent; the rediscount rate of the Federal Reserve Bank of New York remained at 4 per cent till near the close of 1917 and at 4¾ per cent during the last three-quarters of 1918; the last Liberty Loan bore 4¼ per cent interest, and the highest rate paid on short-time loans was 4½ per cent. Despite the substantial saving so obtained, the Treasury policy has been severely criticized as having encouraged nonessential uses of resources, greatly increased the cost of the war through its inflationary tendencies, and aggravated the problems of the postwar deflation.

As the government continued to borrow till the debt reached a peak in August, 1919, the policy of keeping rates low was also continued. Since rationing of loans had been quickly abandoned, the low rates helped to stimulate the speculative postwar boom. This had gathered such momentum that, when in November the Federal reserve banks, for the first time since 1917 free from Treasury pressure, slightly raised their rediscount rates, it had little effect. In January, 1920, in New York this rate was raised to 6 per cent and in May to 7 per cent. That month marked the peak in the rapid rise in wholesale prices. Then the reaction set in with a precipitous drop in prices during the next 12 months. Though heavy losses occurred, there was no such acute financial panic as had previously accompanied such events.

The Effects on the Price Level. The most important results of the government's fiscal policy were its effect upon the general price level and the consequent reactions. The course of wholesale prices is shown by the chart on page 442 and in more detail in the accompanying table.

BUREAU OF LABOR INDEX NUMBER OF WHOLESALE PRICES

July, 1914	100	December, 1917	183
December, 1914	98	November, 1918	206
December, 1915	106	April, 1919	203
December, 1916	147	December, 1919	238
March, 1917	161	May, 1920	272
July, 1917	187	June, 1921	148

The rapid rise in prices only started late in 1915 when it became evident that the war would not end that year; then it carried the level to 61 per cent above that of 1914 when the country entered the war, and to 87 per

cent above it in July, 1917, when government price fixing began. Though limited in scope, this decidedly checked the advance, so that when the war ended in November, 1918, the general level was 106 per cent above that in 1914. The effect of the government's selective price control is made clearer by a weighted index number of the War Industries Board which separates the movements of 573 controlled and 793 uncontrolled prices. With average prices, July, 1913, to June, 1914, as the base of 100, the index for the subsequently controlled items—naturally those for which there was the greatest war demand—had risen to 209 in July, 1917, just before control started; the index for uncontrolled items had risen to only 160. Control proved so powerful that the index for these items fell to 189 in June, 1918, and rose to only 200 in the armistice month; whereas the index for uncontrolled items had risen to 200 at that time. Unfortunately, all control was abandoned within a few months. Though prices dropped slightly until May, a spectacular rise starting in July carried them to a peak of 172 per cent above the 1914 level in May, 1920. Even after the precipitous drop to June, 1921, they fluctuated around a point about 50 per cent above the prewar level until after 1929 and did not get back to the 1914 level until the bottom of the following depression in 1932.

It may be noted that the course of prices 1914–1918 was remarkably similar to that of 1861–1865; but prices started to drop early in 1865 and there was no such immediate postwar rise as in 1919–1920. Also the basic cause for the doubling of prices in both cases was the same: a process of inflation of money and credit. In the Civil War it took the form of greenbacks and bank loans, in the First World War the form of Federal reserve notes and bank loans. In the former case, the early suspension of specie payments took the country off the gold standard; in the latter case, such currency as could be redeemed in gold was redeemed at par, but cutting off the chief demand for gold by severely limiting its export practically took the country off gold, though the government would not admit this. At bottom the inflation of the First World War differed from that of the Civil War (except for the fortunate early influx of gold) chiefly in the more devious methods through which it was brought about under a more flexible and centralized banking system.

Inflation, of course, brought the usual sequence of many undesirable consequences. It greatly aggravated the problems of postwar readjustment and deflation. After the Civil War, the process of readjustment was not completed until about 1878; after the First World War it took even longer, partly because of other complicating factors, for it had not been completed before the next war broke out, and it entailed enormous losses and great suffering. Inflation also resulted in great injustice in the distribution of the burden of war costs, to say nothing of the resulting increase in those costs.

Leon Henderson later estimated that $13.5 billion of the war outlay might have been saved by adequate checks on inflation. Debtors gained and creditors suffered correspondingly; those whose wages or salaries failed to advance in proportion to the rise in the cost of living suffered, many were able to meet this rise only by working longer hours. Public-utility industries, caught between rising costs and delayed allowance of an increase in rates, often found earnings drastically reduced. On the other hand, large gains accrued to other groups. Farmers in general were extremely prosperous; large groups among the workers found their real wages were higher than ever, though they might work longer hours; despite the war-profits taxes, many manufacturers and merchandizers gained large fortunes. A large crop of new millionaires arose, though before the reaction was over many were in sadly depleted circumstances.

The result of these various reactions, just as in the case of previous war-time inflation, was a great shift in the distribution of wealth and income. As best summarizing the main incidence of the immediate burden of war costs, we may accept the estimate of Professor J. M. Clark that some $13 billion came out of increased productive effort during the years 1917–1919, but that this was nearly wiped out by the shrinkage in the national output of wealth in 1920–1921. The remaining $19 billion came out of decreased consumption, partly among income groups such as creditors but chiefly among the salaried classes.

The record of war financing shows that, whereas something had been learned from past experience, much still remained to be learned. Whether such a war could have been financed without inflation, as some claim, may be left as an open question; that the degree of inflation actually resulting could have been substantially reduced, thus lessening the attendant evils, by a more prompt and vigorous policy of taxation, especially if supplemented by other controls, is undoubted. On the assumption that it was not ignorance on the part of governmental authorities, political expediency—that is, giving in to demands based on ignorance on the part of most, and private profit seeking on the part of some, among the masses—must explain the course of action chosen. Unfortunately, these obstacles to sound war finance are also in the way of the millennium.

Social Planning in War and in Peace. The First World War involved the country in social planning on a scale not even dreamed of theretofore; the succeeding depression after 1929 led to planning on a smaller scale, but still far exceeding anything previously attempted in time of peace, as will appear in the following chapter. Both experiences led to much greater emphasis upon the need for social planning and also provided many lessons as to the problems that it involves. However, there are important ways in which planning in time of war differs from that in time of peace.

Planning in time of war has the great advantage of a single, clearly defined objective—winning the war—upon which it is assumed that everybody is agreed. People may differ as to the concrete methods by which that objective can best be obtained, but the range of possibilities is narrow and decision is relatively simple. The objective in time of peace, when stated in broad terms such as the general welfare, may be accepted by all, but when it comes to determining what that vague concept means in the concrete, there is endless variety of opinion. The answer of each individual will depend in the last analysis upon his philosophy of life, assuming that he has one. Doubtless there would be many specific things upon which substantial agreement could be reached, yet people would still differ as to their relative importance and the best means for their attainment.

Another great advantage in wartime planning is the unusual spirit of cooperation and self-sacrifice aroused by patriotism. This is an important factor in the attainment of its objectives. Whether it is possible to arouse and sustain such a spirit in the more humdrum years of peace is a question; we can only sadly confess that in the past in this country it has not been done.

Peacetime planning has advantages in that there is seldom such need for speed of action or for such a comprehensive range of action. The outcome of a war may depend largely upon the speed with which resources are mobilized and brought into battle. Modern mechanized warfare reacts upon almost every phase of social activity so that the most effective war effort demands an enormously wide range of planning, as the preceding account must have made clear. Planning in peace can be more leisurely and take more time for working out its problems; it can proceed step by step and is not forced to act at once in so vast a field. Yet in the long run, its planning should be far more comprehensive in scope and look much further into the future.

The fundamental difficulty in any comprehensive scheme of social planning, once the objectives have been formulated in concrete terms and agreed upon, is the infinitely complex character of the problems that arise in attempting to carry it out. This is the chief lesson in planning to be derived from the experiences of the First World War; the failure to realize the interrelationship of problems with the consequent breadth of action and centralization of control that were required was responsible for most of the mistakes and failures at that time. Planning in peacetime can ordinarily lessen these difficulties by proceeding more slowly, step by step. Social planning of some sort, of course, has been going on in this country from the very first, and the course of our history shows a slow but steady enlargement of the scope of activities for which planning was adopted.

That this trend was desirable and that it should be further developed, few will deny. The issue is rather at how fast a pace it can wisely and effectively be pushed. Clearly, success in planning will depend in no small measure upon how much has been learned from the lessons of the past. The experiences in planning during the interwar years provide many such lessons, as the following chapter will show.

Chapter XLIII

THE POSTWAR DECADE, THE DEPRESSION, AND THE NEW DEAL, 1919–1940

Introduction. In previous chapters dealing with developments in particular fields of economic activity since 1860, the account was brought down to 1940 to provide continuity in the treatment of each field and to make clear the evolutionary trend. But for the same reason that the war period required treatment as a unit to obtain a clear understanding of its problems and what was done to meet them, so the interwar period needs a similar treatment. Though no one factor so completely dominated action during these years as during the war, the problems of readjustment culminating in the prolonged depression after 1929 had such an overwhelming repercussion upon economic life and thought and the methods adopted for dealing with them were so interrelated that they need to be surveyed as a whole. This involves a consideration of such trends in the postwar decade as were factors in the depression and an account of the New Deal program—an independent factor in the situation but one that became inextricably involved in the recovery effort. Such a study is important (1) because, as it covers the country's only comprehensive effort at peacetime planning, it provides many illuminating lessons as to what this involves, (2) because of the light that it may throw upon the problems of readjustment from the Second World War which are certain to beset the country for many years to come.

The phenomenon of the business cycle is an extremely complex one about which we still have much to learn, since there is lack of agreement on many points among theorists. Some stress one factor and others another in the complicated sequence of causal relationships that tend to generate booms and depressions, but there is fair agreement as to certain factors or sets of conditions that play some part in the process. Though further study of this depression is still needed, the more important developments responsible for its generation, outbreak, and subsequent course can at least be described.

It is essential for an understanding of the significance of the facts in the following account to remember that a depression—which may be defined as a relatively low ratio of employed resources to employable resources willing to accept employment at the prevailing rates of pay—is funda-

mentally due to a lack of proper adjustment between the price of the various factors determining costs and the price at which enough of the product can be sold to provide full employment of resources. In other words, the cost-price relationship is not such as to lead producers to believe that they can fully employ resources and still sell the output at a price yielding a fair profit. Hence the basic remedy is to be sought in a readjustment in the cost-price relationship.

This readjustment is commonly worked out in an essentially individualistic competitive order, partly through such regional or occupational shifts in the use of resources as their mobility permits, but chiefly through the force of competition which, if unhindered, will in time induce such changes in the cost-price relationship as to give employment to those resources offered at the resultant market prices. Obviously anything that interferes with these methods of adjustment, such as restrictions on the mobility of resources and commodities or rigidities in the price structure, will prolong a depression; it may also be either aggravated or modified by new changes of various origins giving rise to additional maladjustments or hastening the readjustment.

The Legacy from the War. It is generally agreed that, fundamentally, the difficulties that finally culminated in the depression of 1929 originated in developments arising out of the war. The more immediate reaction on the return of peace during 1919–1921 brought important readjustments, but much remained to be done before the world-wide dislocations in the economic order could be overcome. Despite the drastic fall in prices 1920–1921, the general level remained about 50 per cent above the prewar level for nearly a decade; yet hourly wage rates, outside of agriculture, were sustained at more than twice that level, while in agriculture wages of hired labor were over 70 per cent above it. Since the increase in output per man-hour had not risen in proportion, this meant an increase in labor costs per unit of product and thus was an appreciable factor in the maladjustment of the period. A like difficulty arose from the great increase in public and private debt between 1914 and 1921. As the chart on page 775 shows, the increase in the private long-term debt was about 50 per cent while the gross Federal, state, and local debt increased over five times. Though not all the resulting increase in taxes entered into producers' costs, this did involve a substantial addition to fixed charges. On the other hand, credit was easy after 1922, aided by the influx of gold, and interest rates fell to a very moderate level.

Though many lines of manufacturing experienced heavy losses in 1920–1921, most were soon able, by restricting output and cutting some costs, often aided by reorganization or bankruptcy procedure, to show a profit. Rapid technological innovations helped to reduce labor costs. The most

serious maladjustment was in agriculture. The fall in the price of farm products had been greater than that of wholesale prices generally. Yet the reduction of output was not only slight but temporary, despite the prospect of a decreased export market and the rigidity of many elements in costs of production. As the postwar period opened with a serious housing shortage and rents continued to rise, the residential building industry was soon booming. As ocean shipping became superabundant, cargo rates dropped to a low level, but most of the vessels affected were owned by the government. The export trade, particularly that in farm products, faced serious problems of readjustment due to changes arising out of the war in other nations as well as in the United States.

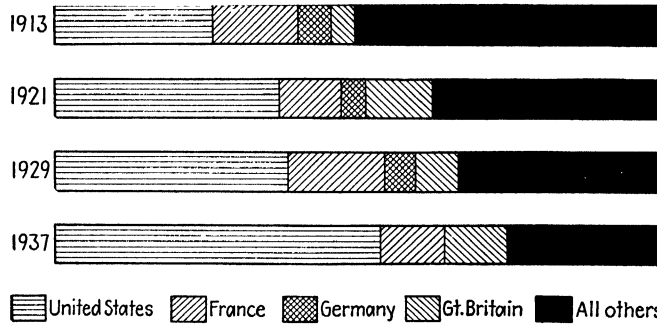


FIG. 85. Distribution of the world's monetary gold supply, 1913–1937.

In Europe, the dislocation of economic life still existing by 1921 was naturally far more serious than in the United States. The leading nations had been forced off the gold standard and, staggering under a burden of debt, were still, except for England, undergoing inflation. Some had been almost completely drained of gold. Their foreign trade was faced with many readjustments arising from shifts in political boundaries and changes in the items determining the balance of payments, besides the restrictive effects of the measures to promote national self-sufficiency or check the drain of gold. Outside of Europe, countries that had greatly expanded their agricultural exports during the war, like the United States, generally failed to curtail output when the European market dwindled, and so further depressed world prices for farm products.

Developments Abroad, 1922–1929. As the United States now found its economic life more closely bound up with developments abroad than at any period before the war since 1815, foreign difficulties became important for their reaction on this country. Particularly disturbing and persistent were the uncertainty about, and the changes in, the standard of value in various countries. By 1925, England had returned to the gold standard with the same gold content in the pound as before. It is generally

agreed that this tended to overvalue the pound and hence made the maintenance of the gold standard difficult. Italy and, eventually, France also returned to the gold standard, but only after devaluing their monetary unit to a quarter or a fifth of its former value. In Germany, by 1923, inflation was carried far beyond anything the world had previously known. Subsequently a new unit, the reichsmark, based on gold and similar to the old unit was adopted. In this process, as also in the case of France, about four-fifths of the outstanding domestic debts were wiped out, thus facilitating readjustment in this element of costs at the expense of creditors.

After the leading countries had struggled back to the gold standard, it was still a question whether, in view of the existing maladjustments, they could maintain it. One obstacle was the large volume of reparation and war-debt payments. Because these as originally planned were found to be more of a burden than could be met, they were scaled down, but this only mitigated the difficulties involved. On the other hand, foreign loans, chiefly obtained from the United States and England, provided at least temporary relief. Germany, where interest rates were abnormally high, obtained loans more than sufficient to offset the current reparations payments. Unfortunately, the proceeds were not always wisely used or were devoted to public works yielding little or no revenue to meet interest payments, thus causing trouble later. The small remnant of old Austria, which seems to have been living on its capital, was in a similar situation. The difficulties of countries largely exporting farm products such as Argentina, Brazil, and Australia were also temporarily relieved by large loans. The lending countries thus gained by facilitating an expansion of their export trade.

Despite the downward trend in world prices for agricultural staples after 1925, production continued to expand. Cotton acreage rose to a point a third above the prewar level and similar tendencies appeared in the case of wheat, sugar, coffee, and various animal products. Many of the older European importing countries, desiring to protect their farmers against the low prices and also wishing to secure a greater degree of self-sufficiency for nationalistic reasons, began to impose severe restrictions on these imports, especially after 1925. This increased their domestic output but hastened the decline in world prices, and also led to rising surplus stocks.

By 1925, the volume of world trade was 7 per cent above the 1913 level and the output of primary commodities was 17 per cent higher, though the world's population was but 6 per cent greater; yet both trade and commodity production increased 19 and 11 per cent, respectively, in the years 1925–1929. Nationalistic efforts to build up various merchant marines, especially in Germany, kept cargo rates relatively low. Gold production, which had substantially declined 1915–1922, picked up quickly thereafter

and by 1930 was back at the prewar level. But the international movement of gold was such that the monetary stock became very unevenly distributed, the United States holding about 40 and France about 15 per cent of the world's total in 1929 (see the chart on page 772). This, added to the other maladjustments of the period, created a situation of instability which was certain to become serious on any powerful unfavorable development.

Developments in the United States, 1922–1929. The decade, which in the light of subsequent events, is sometimes spoken of as "the golden twenties," was one in which, after the quick rebound from the brief but sharp depression of 1920–1921, a general and rising prosperity seemed to prevail, except in agriculture where, after the ending of two decades of abnormal prosperity, many readjustments had still to be carried out. The most serious situation existed in the cotton-, wheat-, and livestock-raising areas, which had been most affected by the abnormal war demand and whose surpluses had to be disposed of in the declining world market. Other areas, producing for the more or less protected domestic markets, also suffered, though to a less degree.

Various elements in costs that failed to decline in proportion to the decline in the price of farm products have already been noted. The rapid increase in state and local debt, which continued after the war, raised the total to about 3½ times the prewar level and so greatly increased the farmer's taxes. Those who had borrowed to increase their acreage or equipment at the inflated war prices found payments on their debt a far heavier burden when prices had dropped. Those that had benefited by the rigidity that modified the rise in freight rates during the two preceding decades now suffered from the same rigidity when the situation was reversed, despite some effort to extend special aid.

On the other hand, technological and other improvements secured a considerable reduction in the cost of producing many farm products. Except for the lowered cost of local transport derived from motor vehicles and better roads, which was widespread, these gains were largely limited to particular products and regions. The attempt to extend aid by the marked increase in tariff duties, 1921–1922, proved of little avail, except for a few products such as wool, sugar, hides, and spring wheat, which were imported in substantial quantities. Despite these unfavorable conditions, the general tendency of farmers was to increase production.

The housing shortage and the continued rise in rents up to 1924 led to a great building boom which reached its height in 1926–1928, though new contracts remained fairly high for the next 2 years. The collapse of the speculative Florida land boom in 1926 had little restraining effect elsewhere. Though building material costs and wage rates in the industry remained relatively high, interest rates were fairly low. The rapid growth

of building and loan associations and the remarkable development of the market for real-estate mortgage bonds during this decade greatly facilitated the financing of new construction in the form of workers' homes, enormous apartment buildings, and skyscraper office structures. An increase of some $18 billion is said to have tripled the outstanding urban mortgage debt during these years. In too many cases, the bonded debt on buildings was so grossly excessive that when the depression came disaster followed.

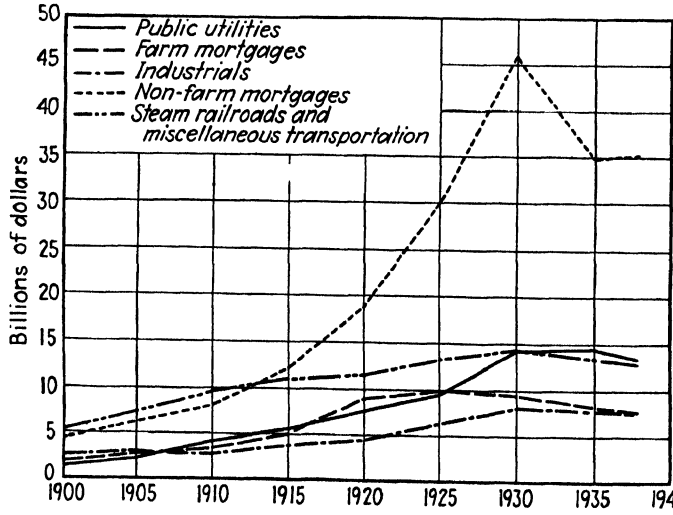


FIG. 86. Total private long-term debt by major economic divisions, 1900–1938. (*From National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

Manufacturing in general after 1921 entered upon a period of fair prosperity as profits tended to rise, slowly at first and in 1928–1929 rather rapidly. In many lines better methods of production substantially increasing the output per man-hour helped to offset the high hourly wage rate which remained at about double the prewar level, although prices had fallen to a point only about 50 per cent above that level. Reduced Federal taxes and low interest rates helped most manufacturers, and some benefited by higher tariff duties. The spreading concentration of control over production and restrictions on competitive practices helped to stabilize many industries, though the resulting price rigidities delayed the process of readjustment. Generally adopting a more conservative financial policy than in prewar times, as profits rose increases in dividends were moderate and a substantial proportion of earnings was retained in the business—most fortunately for many as subsequent events turned out.

The railroads and other public utilities, caught between rising costs and the rigidity of regulated rates, had emerged from the war in a weak finan-

cial situation and in need of new equipment. Of the two groups, the railroads were much the worse off and, in marked contrast to the other utilities, except the street railroads, the succeeding decade brought them only scanty relief. Improved equipment and a striking gain in operating efficiency made possible a great reduction in the number of employees and helped to offset the higher wage rates; but the competition of motor vehicles, which the railroads were slow to meet in an effective manner, deprived them of a steadily growing amount of both passenger and freight traffic. As a result, they fell considerably short of earning the legally defined "fair return."

Fortunately for the electric-light and power utilities, this decade brought an enormous expansion in the demand for their services, and here, as for the railroads, volume of business was a vital factor in the rate of profit. Marked increase in technological efficiency as well as greater volume made lower rates possible, which helped in turn to increase the volume still more. Integration of systems carried out under big holding companies produced additional savings. A highly competitive scramble to acquire choice additions developed, frequently regardless of location with reference to the main system, and often resulting in the payment of fantastic prices, commonly in the form of securities, for the properties acquired. In some cases, financial manipulation for the benefit of inside groups played no small part in these activities. The outcome was a top-heavy pyramiding of security values on a basis of net earnings which, even if only moderately impaired, threatened serious disaster.

These various developments along with others resulted in a very large addition to the outstanding volume of private long-term debt, as is shown on the chart on page 775. The National Industrial Conference Board estimated the total for 1929 at $87 billion or almost twice that for 1921, while in 1913 it was only $33 billion. On top of this, the gross public debt had risen from nearly $6 billion in 1913 to about five times that amount by 1921. Its subsequent increase up to 1929 was slight and, since the Federal debt was substantially cut during these years, was due entirely to the growth of state and local debt, much of the proceeds of which went into road construction and public buildings and so created an abnormal demand for the materials these required. A total burden of long-time debt in 1929 around three times that in 1913, with a price level only 50 per cent higher, not only meant a much bigger element of rigidity in the price structure, but it also betokened a weaker setup in the financial structure of private business.

In the field of money and banking, a basic change was the increase in the monetary stock of gold from $2.8 billion in 1920 to $4.5 billion in 1924, after which there was no lasting change before 1930. This increase of over

50 per cent brought the total to nearly 2½ times the prewar level. Add to this the changes in the banking system since 1913 that made possible a greater expansion of credit on a given gold basis and it is clear why, despite the higher price level and greater volume of trade, the decade was one of comparatively easy money and lower long-time interest rates. These low rates not only promoted borrowing but also tended to raise the market price of all income-yielding property. Bankers, pressed to find profitable outlets for their surplus reserves and aided by the new Federal laws, turned to new lines of investment and an increasing proportion of their assets took on a less liquid form. Large sums went to the financing of installment sales, which are estimated to have risen to about $1 billion a year. The purchasing power so secured was used chiefly to buy more or less durable consumers goods and created an abnormal demand for these products.

Foreign loans provided another outlet for lendable funds, and some $4.5 billion is estimated to have been invested in foreign long-term securities from 1921 to 1929, inclusive. These loans were significant, both immediately and later, as they affected the balance of international payments and the flow of gold. In so far as these loans helped other countries to meet payments due the United States because of its favorable balance of trade, which averaged over $700 million a year during this decade, they tended to lessen the inflow of gold and to stimulate exports. As long as they continued to be made, they gave additional support to the domestic price structure, but as they piled up a greater foreign indebtedness to the country, they simply postponed the day and aggravated the trouble when settlement had to be made.

Another outlet for surplus funds was found in speculation on the stock markets, which eventually developed into a movement far exceeding anything the country had ever before experienced. After 1922, as corporate profits began to rise, at first slowly and then more rapidly, speculation gathered momentum and after 1927, losing all sense of proportion, it shot stocks skyward at an unprecedented rate. A group of thirty leading industrial stocks selling about 60 per cent above the 1924 level in 1926 sold at almost four times that level at the peak in September, 1929. At this date, the total market value of stocks listed on the New York exchange was nearly $90 billion as compared with $27 billion in January, 1925. A seat on the exchange selling at $100,000 six years before reached the peak of $625,000 in 1929. The fact that New York brokers' loans had risen to over $8.5 billion by September, 1929, suggests how extensively lendable funds had been supporting this speculative craze.

The Crisis Years, 1929–1933, at Home and Abroad. The crisis that started in 1929 descended like a stroke from the blue upon a world little suspecting, especially in the United States, what the next 10 years had in

store for it. The failure of the postwar decade to remedy many of the basic economic maladjustments in the world was largely overlooked. Stresses and strains in various fields were noted by those familiar with each, but few sensed the dangers inherent in the situation as a whole where a crisis in some one field might start the series of reactions that would quickly aggravate the maladjustments throughout the complex economic order and spread general disaster. Some explained the unusual severity of the following depression as due to a combination of a cyclical and secular downswing in business; later others attributed the stagnation to what they called the "economic maturity" of the country, though far more mature countries suffered much less.

In the United States the most deceiving thing was the comparative stability of the price level after the recovery from the 1920–1921 reaction. This, on the surface, seemed to belie the warnings as to the danger of inflation, and the action of the Federal Reserve Board showed little evidence that it sensed such a danger. The slow but ominously steady decline of the price level after 1925 went unheeded. Warnings that stock-market values were unjustified were given by some a year or two before the crash, but others insisted that the country was in a "new era" which fully justified them. Banking authorities failed to take any decisive action until the speculative movement was quite out of hand.

The crash in the New York stock market in the fall of 1929 was the first conspicuous event to set in motion the chain of reactions aggravating the more basic maladjustments that brought on the great depression. In the last 4 months of 1929 the market value of stocks listed on the New York exchange decreased $25 billion, thus losing between a quarter and a third of their value. Even then the dangers ahead were little realized. It was insisted that general business would be only slightly affected, and the first 5 months of 1930 brought a substantial rise in stocks. Then, as the underlying difficulties became more obvious, the decline was resumed and at the bottom in July, 1932, some $74 billion or five-sixths of the September, 1929, total, had vanished in thin air. Just as the speculative rise had provided an artificial support of the latter "golden twenties," so this phenomenal shrinkage aggravated the following depression.

One of the first reactions of the American difficulties on other countries was the complete cessation of foreign loans. A reduction had started in 1928 as domestic call-loan rates rose and became general in 1929, after which little but short-term credits were extended and even these soon ceased. England soon adopted a similar policy, and the chief borrowing countries at once faced an acute financial situation. A group of debtor countries exporting farm products after the drop in their prices in 1930 faced not only heavier foreign debt payments but also a shift to an unfavorable

trade balance. Help from new loans was cut off and importing countries imposed new restrictions on the admission of farm products, thus further depressing world prices. Under these circumstances, Argentina stopped gold exports, and Australia and Canada were forced off the gold standard.

In Europe the stoppage of loans and other difficulties led to a financial crisis starting in Austria in May, 1931, and soon spreading to Germany, where all the Berlin banks except the Reichsbank closed. President Hoover arranged a moratorium on intergovernmental debts and reparation payments, and Germany practically abandoned the gold standard. As English banks were heavily involved in German loans, a run on sterling started with large withdrawals of foreign deposits in London, and in September England abandoned the gold standard in favor of a managed currency and the pound sterling quickly fell in terms of gold. In this she was followed by a group of smaller countries, notably the Scandinavian, closely tied with her by trade relationships, and the resulting "sterling bloc" marked the practical ending of an effective international gold standard, though France, several smaller European countries, and the United States still adhered to gold.

The nations devaluing their currency thus secured at least a temporary advantage in foreign trade over those that did not, since this tended to stimulate exports, check imports, and make possible an easier money policy. It also helped industries suffering from relatively high and rigid elements in costs, such as debt charges or the impracticability of reducing wage rates. Conversely, it placed countries remaining on gold at a corresponding disadvantage with deflationary effects unless they could find some means of reducing costs. Lacking this, they could resort to measures for subsidizing exports and restricting imports, and this was commonly done. Thus a vicious circle was developed: deflation of prices led to depreciation of the currency and that led to trade restrictions which tended to engender a repetition of the circle.

The world-wide fall in prices generally continued into 1932; in the chief countries, prices were then 30 to 40 per cent below the 1929 level, though the drop was modified in most countries that went off gold. Generally it was more marked for farm products than manufactured goods, except where imports of farm products were severely restricted. The decline in agricultural prices in terms of gold in great exporting countries such as Canada, Australia, and Argentina was between 60 and 70 per cent, thus making payment of foreign obligations fixed in gold currencies extremely burdensome.

Although the manufacturing output of the chief industrial nations declined between 30 and 50 per cent, the world's production of raw materials fell little below the 1925–1929 level, while that of foodstuffs actually rose,

resulting in both cases in large surplus stocks. The value of world trade in 1932 was 30 per cent below that of 1929, and the United States and France then held nearly 60 per cent of the world's monetary stock of gold. Wages in general were remarkably well sustained, in 1932 being about 5 per cent below the 1929 level in England and France and from 15 to 20 per cent below in most other countries. The number of unemployed in the world in 1933 was roughly estimated at 30 million.

Though the situation that developed in the United States during these years became much more serious than in most countries, the administration showed less inclination to act than was common elsewhere. At the low point early in 1933, wholesale prices were 38 per cent below the highest point in 1929, thus bringing them down slightly under the prewar level. Farm products, however, dropped 60 per cent to a point a third below the prewar level. Realized national income for 1933 was 44 per cent below that for 1929. Whereas wage rates of hired farm labor were cut nearly in half, those of common labor were cut only one-quarter and those of factory workers less than a fifth. Yet early in 1933 the number of unemployed was estimated at around 15 million.

Industrial production in 1932 was 46 per cent below that in 1929, but the output of farm produce remained the same as the average for 1924–1929. After 1930, interest rates fell to a low level and idle capital accumulated, but there was a rapidly spreading fear as to the solvency of the banks. Starting in 1931, the withdrawal of deposits and hoarding of money soon gathered great momentum and by the time of the crisis in March, 1933, the Federal reserve ratio had dropped from 85 to 53. No banking system could withstand such a run and, as previously described, when the Roosevelt administration came in the system was paralyzed.

The Foreign Background, 1933–1939. Of developments abroad from the bottom of the depression in 1932–1933 until the outbreak of war in 1939, a brief summary will suffice. As the process of liquidation slowed down and surplus stocks shrank, prices began to rise, further assisted in many countries by inflationary measures. By 1936–1937, a fair degree of prosperity prevailed except in the gold-bloc countries. In 1937, the number of workers employed in the world was above the 1929 figure, though the hours of work had been cut about 10 per cent; the world output of primary products was around a tenth larger than in 1929 and the volume of world trade nearly the same. The disparity in the ratio of agricultural prices to nonagricultural as compared with that of 1929 had been reduced to 10 per cent.

In the gold-bloc countries, the deflationary effects of their policy combined with the rigidity of wage rates and the resulting effects upon foreign trade were becoming increasingly difficult to bear. Between 1935 and 1937,

France lost half her stock of gold; between 1936 and 1938, the value of the franc in gold fell 60 per cent as a result of devaluation and abandonment of the gold standard. When the United States devalued the dollar in 1934 and offered $35 an ounce for gold, this with other factors attracted most of the outflow from Europe as well as the newly mined output, which rose to an unprecedented level. This aggravated the maldistribution of the world's stock (see the chart on page 772). The more normal stage of economic activity that had been recovered by 1937 then received a setback, but the loss had been fairly regained when war broke out again in 1939.

Even before then, world politics had exercised an increasingly disturbing influence upon economic affairs. In Germany the depression had helped Hitler into power, just as postwar economic troubles in Italy had previously helped Mussolini, and thenceforth the economic life of Germany was regimented with the sole aim of building up military power. Like tendencies in Italy, Russia, and, to a less extent, elsewhere, led to abnormal outlays for armament, often sustained by deficit financing, which had helped to stimulate recovery. As the nationalistic trend toward autarchy grew, restrictions on international economic transactions mounted; increasingly such transactions were negotiated by governments instead of by individuals and shaped by political rather than by economic considerations. The economic world was being split up into segments where the normal processes of adjusting economic relationships had less and less scope for operation. That, despite all these barriers, international economic dealings continued on as large a scale as they did only proved how vital a factor they had become in the economic life of the world.

1933–1940 in the United States; the Problems. The developments in different economic fields during these years have previously been described; the purpose here is to indicate how these developments interacted on the general situation so as to promote or retard the attainment of the two dominating objectives of recovery and a New Deal. Recovery, it must be repeated, was a problem of readjusting cost-price relationships, so that for this problem developments were chiefly significant as they hastened or retarded this adjustment.

A possible policy to secure recovery, at least after the banking crisis had been met, was to let things take the natural economic course with the minimum of governmental interference, assuming that, as in the past, the competitive system and liquidation would work out the necessary readjustments. This would have meant more bankruptcies and severe suffering but, once carried through, would have provided a sound basis for recovery. The policy adopted, however, was the reverse. To lessen bankruptcies and alleviate suffering, financial aid to those in difficulty, at least to those not

hopelessly insolvent, was extended on an unprecedented scale. On the ground that rigidities in the economic order had so increased that the old processes of readjustment could not be relied upon, extensive governmental interference was urged. Logically, this implied action to decrease these rigidities, but in the confusion of dual objectives this point was often forgotten. Also, in so far as international economic relations were involved, greater governmental action to secure cooperation with other nations was necessary.

The New Deal promised in Roosevelt's election campaign had not been formulated in any very specific shape. Broadly generalized, the objectives were (1) a more equitable and socially desirable distribution of wealth and income, mainly for the benefit of the "forgotten man," particularly the laborer and the farmer, (2) an elimination of certain evils in the economic order which checked its functioning efficiently but which, if removed, would still make possible the retention of that order.

More specifically, as later carried out in action, the New Deal program centered about the following objectives: (1) Improving the condition of the laborer by strengthening his position in collective bargaining, fixing minimum wages and maximum hours, increasing his security, providing him with better low-cost housing, and eliminating child labor. (2) Aiding the farmer by strengthening cooperative marketing, providing cheap credit to all and special help to tenants, improving farming methods and, through various means, by raising and stabilizing the price of farm products. (3) The elimination of certain forms of competition believed to have undesirable consequences and the stabilization of certain industries such as soft coal and petroleum where competitive waste was conspicuous. (4) Improving the monetary and banking system to promote sounder banking, check speculative excesses, insure the smaller depositors, and especially to provide the control needed to check the swings of the business cycle. (5) The reform of at least some of the corporation evils, through greater publicity of facts and elimination of investment trust abuses to protect investors, provision for more efficient procedure in reorganization and bankruptcy, and more adequate control of public-utility holding companies. (6) The promotion of more effective regulation and coordination of rail and motor-vehicle transport and an expansion of the merchant marine. (7) Increased protection for the consumer, particularly against false or misleading advertising, monopolistic prices, and excessive rates for electricity. Unfortunately, the means adopted to secure some of these New Deal objectives conflicted with those intended to promote recovery.

The Recovery Measures. The marked success of the Roosevelt administration in reviving the stricken banking system has previously been described. The action taken was prompt and thorough; the most necessary

banking facilities were quickly restored and great unnecessary losses prevented. To check needless liquidation in other lines of economic activity, the chief reliance was placed on extending government loans at low rates—an essentially sound and constructive policy provided the loans were not excessive. Revision of the bankruptcy laws also facilitated and eased the process of readjustment as did, in a far less discriminating way, the moratoria laws. Many contractual charges out of line with the altered conditions, such as rents, were revised by private agreement. Such measures, by ensuring a slower and more orderly liquidation, saved enormous needless losses, though they tended to delay complete readjustment in cost-price relationships.

For more positive action to promote recovery, the main reliance was placed on various measures to sustain or to raise prices. Except for the pressure to lower rates for electricity, the effort to ensure easy credit, and the very belated antitrust drive, almost nothing was done to promote readjustment by reducing prices that were out of line. The highly inflationary powers granted in the Thomas Amendment to the Agricultural Adjustment Act of 1933 with the subsequent devaluation of the gold dollar,[1] the NRA, and most of the laws affecting farm products, soft coal, oil, and labor were all designed to support or to raise prices. The very extensive provision for various forms of relief for the unemployed and the unparalleled spread of restrictions on competition had a like tendency. This policy, being in line with the usual inflationary demands in a depression, was generally popular, but there was no assurance that it would secure the discriminating cost-price readjustments essential to sound recovery.

The monetary legislation of 1933–1935, including the Thomas Amendment of 1933, the Gold Reserve Act of 1934, and the Silver Purchase Act of 1934, reflected a compromise between the demands of the extreme inflationists in Congress and the wishes of the administration for a managed currency system. Under it, the President starting in 1933 began to increase the price offered for gold, thereby depreciating the dollar in foreign exchange rates, and in January, 1934, he devalued the gold dollar to 59.06 cents, which was the equivalent of $35 an ounce for gold bullion. As the authority to devalue the silver dollar was not used, this made the coinage ratio 27 to 1. At the same time, all gold coin and gold certificates were withdrawn from circulation, the profit on the higher price of gold being secured to the government, the coin was converted into bars, further coinage of gold was stopped, and gold payment clauses in contracts abrogated. The Treasury offered to buy all gold presented at $35 an ounce, and this soon

[1] The power to issue $3 billion of United States notes to retire government obligations, included in this amendment, was not used and was later repealed. This amendment and a later resolution made all forms of coin or currency full legal tender.

led to such an inflow that measures had to be taken to prevent its adding to the banks' large excess reserves.

The Silver Purchase Act, reflecting the often seen pressure of inflationist and silver interests, authorized the Treasury, as seemed in the public interest, to buy silver until it constituted a quarter of the total monetary value of all gold and silver stocks or the price reached $1.29 an ounce. Silver certificates were to be issued equal to the cost of the bullion purchased. By 1942, the Treasury had added $1.5 billion to its stock of silver bullion, but long before this, as it became evident that, despite its purchases, there was little likelihood of attaining either of the goals set, the buying of foreign silver was sharply curtailed. Meanwhile the domestic silver producers' interests were well protected by the government assuring them prices that were commonly much above world prices, and then an act of 1939 obliged the Treasury to buy their output at 71.11 cents an ounce. The marked changes in the money in circulation resulting from this legislation are shown by the chart on page 764.

Combined with the legislation concerning banking, these laws as administered marked a long step toward the adoption of a managed currency policy, at first directed toward securing a higher but stabilized price level though latterly laying much more stress on a stabilized economy with full employment of labor and resources. They also resulted in shifting much of the power over the supply and the cost of money, including both currency and bank deposits, from the Federal reserve authorities, relatively independent of politics as originally planned, to the Treasury and above it to the President. Possible conflicts of policy between these two groups added to the division of authority over the banking system.

Great hopes were placed on the devaluation of the gold dollar. This combined with the gold-purchasing policy (not to mention the purchase of silver) greatly stimulated the production of gold and led to such a large and unexpected inflow that the stock, in terms of the devalued dollar, rose from $7.8 billion in June, 1934, to $12.3 billion 3 years later. Even then, though prices rose somewhat, owing partly to other causes, the results fell far short of the hopes.

The chief immediate effect was to stimulate exports; it helped to offset the effects of the depreciation of foreign currencies, but the results were in turn limited by countervailing restrictions abroad. It made it easier for foreign debtors to pay their American obligations, but it made it harder for countries trying to keep their currencies at the old gold parities and to protect their gold reserves. Temporarily, devaluation presumably had a stimulating psychological effect on business, but this soon wore off as the anticipated inflation failed to materialize. Obviously, it was of little use in overcoming the maladjustment of high wages, since the government was

also trying to boost wages. Eventually it became evident that, as long as large amounts of economic resources remained idle, there was slight prospect of much rise in the price level (see the chart on page 442).

The influx of gold and the piling up of enormous surplus reserves in the banks supported the government's policy of easy credit to promote recovery and resulted in a period of the lowest interest rates the country had ever known. As far as it went, this furthered readjustment in the cost-price relationship, but its effects proved much less than many had expected. Actually it was chiefly useful in enabling those free to do so to refund their debt at a substantial cut in the interest charges. Also the government greatly benefited in its heavy borrowing for deficit financing, since the interest charges on over $40 billion of debt were about the same as on only $25 billion in 1920. The lower interest rates substantially reduced the income of many individual and institutional groups of creditors. Savings banks had to cut their interest rates on deposits, insurance companies had to reduce dividends to policyholders or increase premium charges, and endowed educational or philanthropic institutions had to curtail their expenditures.

Relief and Public Works Measures. Relief for the unparalleled number of unemployed and destitute was a matter of necessity. The main questions were what form it was to take and how the cost was to be met. The resources of private charities were totally inadequate, and many local governments found the burden too heavy, so extensive resort was had to Federal aid, as was common in great emergencies. For those able to work, jobs on public works or other tasks were considered more desirable than direct relief: it was better for the morale; it would prevent total loss of labor time through idleness; it would provide many desirable public improvements or services; and it would serve as a pump-priming stimulus to recovery, especially in the abnormally depressed construction industries.

The policy of deficit financing of public works at such a time is commonly approved; criticism must relate chiefly to details in carrying it out. The need for speed prevented the most careful consideration of projects in the absence of previous plans. Often the labor available was not well adapted to the work and inevitably some politics, private graft, and other weaknesses of governmental work entered in, so that the cost of projects was apt to be high. Nor did the pump priming, despite the large outlay—in 6 years the Works Projects Administration spent over $11 billion on its projects—prove sufficient to ensure recovery.

In so far as public works relieved the pressure on the labor market from the unemployed, it supplemented the program for raising wages. As the general policy was to pay prevailing wage rates, it had the unfortunate tendency to lessen the incentive to get back into private employment.

Direct relief was often very meager, but it enabled many poor families to shift some of the burden of supporting dependents to the state and so afforded special relief to this group. Not a little of this form of relief came to be accepted as a permanent social policy.

The Agricultural Program. The agricultural program was one where both recovery and New Deal reforms played a part in shaping legislation. Broadly generalizing, down to about 1936 the first objective was dominant; thereafter the second was increasingly in evidence. This shift was due primarily to the marked improvement in the economic situation of the farmer between 1933 and 1936. As there was little reason to expect that the abnormally low prices of 1932 for farm staples would endure, there was good ground for helping farmers not hopelessly involved through the worst years till the usual rebound of prices occurred, thus preventing needless suffering and losses, and then gradually withdrawing the artificial support and let agricultural readjustment take the natural economic course, in the belief that this would tend to bring about the best allocation of the use of economic resources. As actually developed, however, the general policy during the latter years, with minor exceptions, was exactly the reverse of this. In many ways, it increased the artificial support given to agriculture and checked rather than promoted the readjustment to changed conditions.

The chief criticism of the earlier measures to provide temporary aid would not relate to the general policy but rather to the tendency in matters of detail to overlook the need to further the desirable long-run readjustment, as where crop loans were granted at too high a level of value or measures resulted in loss of export markets. The earlier laws often gave more help to the farmers in less need of assistance than to those in most distress. Both then and later, there was too much of a tendency to stress higher prices and ignore volume of output as essential to the farmers' prosperity and to overlook the resulting reactions upon recovery in the total national economy.

In the case of measures less concerned with helping agriculture through the depression, there was good reason, as a part of the New Deal program to help the less privileged classes, for trying to counteract certain weaknesses in the economic position of the farmer. The support given marketing organizations to secure the collective and orderly sale of farm produce could be justified on grounds similar to those used to aid the organization of labor for collective bargaining, though both involved the danger of abuse. There was also good reason to help the farmer secure access to lendable funds on equal terms with others.

The danger arose from the difficulty in determining where to draw the line between action which put farmers on an equal basis with others and

that which granted them special privileges. Similarly, there was an essentially sound idea underlying the concept of the ever-normal granary. The danger was that the use of this device, instead of being limited to lessening the fluctuations in prices between good and bad years and so securing a better distribution over the years of the use of the products, would be employed to maintain an unjustifiably high price level. Methods of conservation, admittedly desirable, were fostered by a system of payments that had far too much of the character of a public subsidy. Increased restrictions on imports of farm products only hastened the depletion of our natural resources.

The most serious criticism of the trend in the development of the agricultural program concerns its long-run consequences. The policy adopted, usually under great pressure from the various farm groups, reflected too much of the common tendency to raise prices by limiting output, even after a substantial recovery from the low prices of the depression. This meant an economy of scarcity and tended to lower the standard of living. That the great stress placed on the parity purchasing-power formula, so very favorable to agriculture, was simply because it would raise prices, became only too clear, since, whenever parity was about reached or surpassed, a new method for calculating it which would raise prices still higher was demanded. Nobody would have dared to suggest that a like formula be applied to manufactured products, for its economic absurdity would have been too obvious. Its whole tendency together with that of many other, though not all, measures was to stabilize a *status quo* supported by public subsidies, rather than to facilitate such a readjustment to new conditions as would eliminate the need for further public favors. As this policy tends to prevent the most efficient allocation of the use of economic resources, it is subject to the most severe criticism.

The Labor Program. In the labor program, New Deal objectives were dominant from the start and promotion of recovery a secondary matter. Improvement of the condition of the laboring masses was the problem closest to the heart of most New Dealers and probably few would disagree with this choice of the field where economic reforms were most needed. The question that arises here, therefore, is not one as to the desirability of the general objectives, but rather as to the means adopted for attaining them and the effects upon the recovery effort.

In the first place, it must be realized that a substantial and rapid increase in wage rates or other factors affecting labor costs, since these costs (including that involved in raw material costs) are commonly much the largest item in total cost, is certain to cause temporary maladjustments having a depressing tendency on business, unless the effects are offset by other developments. Such an increase can be carried through most easily in a

period of prosperity when prices are rising, volume of output is increasing, and there are marked gains in the efficiency of production. The chief justification advanced for initiating such an increase at the bottom of a severe depression was the theory, which secured widespread acceptance at this time, that higher wages would increase consumer purchasing power and thus promote recovery. Also the political situation favored such action. Election promises had been made; the party had won an overwhelming victory; here was a chance to promote reforms long overdue.

The first important part of the labor program was embodied in the National Industrial Recovery Act with its codes designed to set minimum wages, limit hours, and increase labor's strength in collective bargaining. Together with other features of the codes restricting competition, this greatly increased the rigidities in the price structure just when the opposite tendency was needed to further the price readjustments essential to sound recovery. That certain of the code provisions were desirable, though poorly timed, should be admitted. Many laborers gained shorter hours, and work was spread to absorb some of the unemployed; but higher wages were in part offset by higher prices, and such increase in purchasing power as was obtained proved insufficient under the continuing maladjustments to stimulate the investment needed for recovery.

After the Supreme Court condemned the NRA, the government took no action to replace the code provisions restricting competition, but it was slow in starting its vigorous attack on trusts, and resale price maintenance in states permitting it received Federal sanction. Its labor program, however, was still vigorously pushed by the administration, and it soon secured the passage of a group of yet more comprehensive measures which, aided by a shift in the personnel of the Supreme Court, generally obtained the approval of that body. After 1936, hourly earnings in manufacturing industries were regularly above those of the boom year 1929. Though by this time improved business conditions made rising wages less of a strain and there had been more time to adopt laborsaving methods, the general effect of the program tended to retard recovery and to increase the volume of unemployment; its defense would have to rest largely on grounds of social justice.

Considered from the long-run point of view regardless of the effects on recovery, the main features of the labor program provided many desirable reforms. Strengthening organized labor to put collective bargaining on a more equal basis is simple justice, provided there are safeguards to prevent misuse of the power secured. The measures to provide greater social security and to put the costs involved where they can better be borne are in harmony with present social ideals. Opinion regarding minimum-wage and maximum-hour legislation will depend largely on the standards set

and the provision for flexibility in administration. Despite the element of rigidity thus introduced, the elimination of sweatshop wages is sound social policy; more than anything else setting a minimum helps those unorganized groups of workers which are generally in the greatest need of help. That there should be some limitation on hours all will agree; the real issue is where to draw the line and what differentiations to provide for.

The feature most open to criticism in the wages and hour legislation was the rapid decrease to the basic 40 hours a week above which a higher rate of pay became effective. There were very few cases where a 40-hour week was needed for safety or the protection of health; various administrative agencies admitted that something nearer a 48-hour week might yield the maximum efficiency, but were prepared to compromise with powerful groups like the AFL that were demanding a 30-hour week. It was justified at the time as spreading employment and increasing purchasing power, yet in so far as its tendency to increase labor costs was not offset by greater efficiency and larger output, which often required time, it would tend to decrease employment and raise the cost of living. Moreover, despite its original purposes, it remained the law when the demand for labor far exceeded the supply and purchasing power became so great that it had to be restricted. In the long run, assuming that these new standards will prevail, labor will probably gain, but chiefly in the form of more leisure time; for considerable groups the higher earnings will more than offset the higher cost of living, yet there are also many groups where that outcome may be reversed.

Finally, the combined effect of numerous measures created a situation involving potential dangers that should not be overlooked. The power of labor, chiefly that of organized labor, has been greatly augmented. Yet even today organized labor represents only about half of the country's organizable wage earners. Can it be counted on to use its new powers to promote the general welfare rather than that of special groups? Admitting that its activities in the past have been beneficial on the whole, it still must be acknowledged that too often they have aided only a small group at the general expense and not infrequently they have been so shortsighted as to work long-run injury to the very group that they were intended to benefit. With the recent great split in the ranks of labor, the struggle of each group for supremacy time and again interfered with even the war effort. Stronger unions have made the increased rigidity in the wage structure a problem of still greater seriousness in the attack on the business cycle. All these dangers obviously call for the most intelligent and farsighted type of leadership if labor's new powers are to be used for the common weal.

Other New Deal Reforms. Of the other New Deal reform measures, little need be added here, since most were covered in earlier chapters and

their effects on recovery were generally of minor importance. Such influence as the banking measures had on recovery, after the successful meeting of the banking crisis, was favorable, though not very marked; the most important was the tendency to keep credit easy and interest rates low. In view of the inflationary monetary policy and the great influx of gold, the measures designed to secure greater Federal control over bank credit were the more needed, yet the fundamental difficulty arising from the dual system of state and national banks still remains. The protection of small depositors by the Federal insurance system seems desirable and lessens the likelihood of a panicky run by this group, but it will require careful supervision and has yet to face a real test of its success.

The attack on the corporation problem, and especially the evils of corporation finance, was limited in scope, partly because of the division of powers between the state and Federal authorities, so the latter had to fall back on indirect methods for controlling state-incorporated companies. As far as they went, the measures to check abuses of the investment trust and the public-utility holding company and to secure more publicity of facts about securities listed on the exchanges were certainly desirable. Experience showed the need for modifying some details in administration, but there was little justification for the assertion that legitimate business enterprise working toward recovery was appreciably hindered thereby.

In the field of transportation, progress was made in better coordinating the control of various facilities. Under the new bankruptcy law, a fairly thorough reorganization of various railroads was slowly worked out. The very substantial new subsidies to the merchant marine doubtless made a slight contribution to recovery; their primary justification came in the resulting assistance in national defense during the war.

When it comes to measures primarily designed to aid the consumer, the achievements of the New Deal were negligible, despite the President's early declaration that this was to be one of his chief objectives. After several years of vigorously pushing various measures intended to limit output, restrict competition, and support monopolistic organization, the administration finally adopted an energetic policy against the trusts. The major attack was upon the building construction industry where the government claimed that combinations of contractors, producers of building materials, and labor unions, aided by city building codes, raised costs between 20 and 25 per cent. By 1938, wage rates in this industry were above those in 1929, despite the large number still unemployed, and building materials had also been sustained at a relatively high level. The government's extensive program to build cheap workingmen's homes had been seriously crippled thereby. The results of the attack were meager, and it was soon diverted against combinations affecting war supplies. A small gain for the consumer

came from the reduction in rates for electricity or rural electrification, and a much larger gain, directly or indirectly, from low interest rates, especially those for home financing, though creditors found their income reduced thereby. A bill to strengthen the Pure Food and Drug Act finally emerged as law in a seriously emasculated form, still leaving much to be done to protect consumers against fraud and deception.

Under the New Deal, just as had usually been the case before, it was the interests of powerful well-organized producer groups—industrialists for a little while, but chiefly farmers and laborers with their great voting strength —that received most attention; the consumer, except for the group that had to be given some form of relief to prevent starvation, was pretty much left to shift for himself. It is a question whether the chief beneficiaries of the New Deal, the wage earners and the farmers, did not find a goodly share of what they gained as producers, other than more leisure time, was offset by the higher prices they had to pay as consumers. In addition, sooner or later, directly or indirectly, the consumer was faced with the prospect of paying a good share of the great increase in taxes.

The Growing Taxes, Debt, and Bureaucracy. One of the most persistent and widespread among popular criticisms of the government's program was based on fears concerning the growing debt and rising taxes. Thanks chiefly to Federal aid, the state and local governments got through the 1930's with little addition to their total debt; but the Federal debt rose from $22 billion in June, 1933, to $44 billion in June, 1940, so that total taxes, Federal, state, and local, came to absorb over a fifth of the national income. That the consequent dangers predicted were grossly exaggerated was made clear when a vastly greater increase in this burden took place during the Second World War without disaster; yet there is no denying that a heavy debt entails certain undesirable consequences. High and rising taxes created uncertainty, checked business enterprise, and hindered recovery; they added to the inflexible elements in the price structure, increased the shifts in payments from group to group, and made any necessary addition to the debt more difficult.

Yet little of this increase in debt could have been avoided if it is granted that a further increase in taxes at this time was undesirable and that assistance was to be provided for the unemployed. Most of the increase was due to relief expenditures, direct or indirect. Various work projects were more costly than the dole, but they helped stimulate recovery, cut the loss from idle labor, and provided public improvements. Moreover, about a quarter of the increased debt, being due to government loans, was offset by assets.

There was also much protesting against the increasing governmental interference in business and the growth of bureaucracy. To the extent that

this development was due to relief and recovery measures, it was temporary and, assuming that the measures were justified, it was largely necessary. In so far as it was a product of the more permanent reform measures, it was in line with a long-run tendency created by changes in the economic order and in social ideals that necessitated greater activity on the part of the government. Details of action might be criticized but not the general trend in policy. Besides, the rapid expansion of these activities under the New Deal was in part trying to make up for past negligence. That a strongly entrenched bureaucracy has certain dangers is admitted, but that does not justify ill-considered restriction of governmental activities.

The Progress toward Recovery, 1933–1940. The rebound from the bottom of the depression started in the spring of 1933 after the reopening of the banks and, aided by the NRA, continued for about 6 months when a slight reaction set in. 1934 opened with wholesale prices about 25 per cent below the 1929 level, though farm products were 45 per cent below that level. Production of nondurable goods, which never fell more than a quarter below estimated normal, was then a fifth below; that of durable goods, which had fallen to less than a third, was still less than half of normal. How to increase the output of durable goods was throughout one of the major problems of recovery. The unemployed at this date numbered nearly 11 million. The year 1934 brought little change in the situation, except for a sharp advance in the price of farm products, largely because of poor crops, to a point about 30 per cent below the 1929 level, which was about the same ratio as that for nonfarm products.

The period from January, 1935, to the middle of 1937 was marked, at first, by a moderate gain and then, during the last 12 months, by a sharp advance. By the close of 1936, nondurable goods output was at estimated normal; more significant was the rapid rise in that of durable goods to only 10 per cent below normal by the middle of 1937. Meanwhile unemployment had been cut to 5 million. In April, 1937, wholesale prices were only 8 per cent and those of farm products only 12 per cent below their 1929 levels. By the first of 1937, the value of stocks listed on the New York exchange was nearly four times the $16 billion low in 1932, and the realized national income of $64 billion for 1937 was over 50 per cent above that for 1933. On the surface, except for the very large number still unemployed, it looked as though recovery had been almost achieved.

Yet the last half of 1937 and the first of the next year brought a sudden and severe reaction. The number of unemployed doubled; production of both durable and nondurable goods slumped to about the level of 1934; wholesale prices declined a tenth and farm products, partly because of big crops, over a quarter; New York exchange stocks lost $20 billion in

value in the last half of 1937. This reaction was far more severe than that abroad.

Evidently serious maladjustments still remained. The setback has been variously attributed to a too rapid rise in costs, especially in hourly wage rates in industry which were 15 to 20 per cent above the predepression level, and in raw material costs; to the exhaustion of the 1936 stimulus from the soldier's bonus and a sharp drop in relief expenditures; to farmers' losses from drought; to the failure to secure greater recovery in the durable goods industries; to an excessive accumulation of inventories; and to a contraction of credit. At least it was clear that the previous efforts had failed to lay the basis for a sound recovery.

By the latter half of 1938, a slow gain began, aided by large crops and a revival of heavy government outlays, and by the first of 1940 production had regained the percentage of normal reached in 1937. Wholesale prices, however, continued to fall till August, 1939, when the outbreak of war in Europe brought them back to the 1934 level. Yet as late as July, 1940, over 8 million remained unemployed in private industry, a quarter of whom were being provided with work in the WPA and the CCC. Lack of greater success in reducing unemployment was the outstanding failure of the recovery program. It remained for war, the reactions of which on the American economy became appreciable only after the German successes in the spring of 1940, to solve this problem, at least for a few years, but at a cost that was staggering.

CHAPTER XLIV

ECONOMIC PROBLEMS OF THE SECOND WORLD WAR

Introduction. Before an adequate critical account of how the nation tried to meet the economic problems of the Second World War can be written, more documents will have to be published and more monographic studies made than are now available. However, it is possible to describe the general line of procedures adopted and the resulting reactions on various phases of the national economy. An understanding of these reactions is extremely important, since the problems created thereby are likely to prove among the most serious economic issues before the country for many years to come.

The general characteristics of the economic problems created by this war were basically similar to those described in the account of the First World War and so need not be repeated here. The chief difference was the vastly greater magnitude of the effort involved due to (1) the greater degree of mechanization, (2) fighting on two fronts instead of one, (3) greater demands upon American resources by other nations, and (4) especially, the country's much longer period of preparation for, and active participation in, the war, the period of active fighting being nearly 4 years instead of 19 months.

The record will show that, despite many mistakes, the country had learned and applied more of the lessons to be gained from previous experience than in the case of any earlier war, doubtless due in part to the fact that so many of those participating in the First World War effort still survived. Probably the most notable improvement was the remarkable record made in shifting resources to produce war supplies, though the length of the war was a factor in this achievement. The least improvement appeared in the methods adopted for financing the war; though the resulting inflation, at least during the war years, was distinctly less than in 1914–1918, the failure to do better created problems from which the country will suffer for many years.

Developments in the Period of Neutrality. Although the period of neutrality between the outbreak of the Second World War on Sept. 1, 1939, and the attack on Pearl Harbor on Dec. 7, 1941, was almost as long as in the First World War, vastly more was accomplished during this period in

preparing the country for warfare than in the previous period. This was due chiefly to four developments: (1) The armed services, especially the army, so utterly unprepared with plans for economic mobilization for mechanized warfare in 1917, had learned a lesson and for some years had been developing plans to meet this need. (2) During this period, foreign nations were placing enormous orders for war supplies in the United States, and these were greatly increased following the passage of the Lend-Lease Act of March, 1941, so that an extensive shift of resources to war production started early. (3) Domestic opposition to any action that might involve the country in the war, at first widespread, was greatly reduced and, among many, was replaced by alarm for the national safety after the phenomenal success of Germany in overrunning Denmark, Norway, Holland, Belgium, and France in the spring of 1940, the subsequent bombing of Britain, and Japan's alliance with the Axis in September. (4) Led by the President and supported by this growing alarm, Congress, starting in May, 1940, adopted a rapidly expanded program for national defense. By December, 1941, appropriations or authorized expenditures for this purpose, including Lend-Lease, totaled around $62 billion or about double the whole war outlay, including foreign loans, between 1917 and 1919. The result was that by December, 1941, the number of men in the army had been enormously increased, though adequate equipment even for training was lacking; the construction of a two-ocean navy was under way; and a great added impulse had been given to shifting production to war supplies.

The fact that, though a large army could be drafted in 2 or 3 months, it took 6 months to provide it with camps, a year to train it, and 2 years to equip it indicated the vital necessity for comprehensive advanced planning. The lessons learned from the lack of this in 1917 led to legislation in 1920 placing such duties on the War Department and the General Staff. It also led to the formation of the Army and Navy Munitions Board in 1922 to coordinate activities of the two services and to the establishing of the Army Industrial College in 1924 to train men for the problems involved. A comprehensive plan that was very slowly evolved with little cooperation from the navy was finally presented in 1931 to the War Policies Committee just created by Congress, which was also concerned with keeping the profits out of war. Subsequent revisions, keeping this point in mind as well as criticisms from various sources and aided by better cooperation in the joint Munitions Board, evolved a final plan in 1939. Though this plan, involving marked centralization of control, chiefly vested in the armed services, was not finally adopted as such, the planning effort had provided the armed services with a far clearer, though inadequate, idea of just what they wanted, the resources and production facilities available to meet these wants, and the needed organizational setup, than they possessed in 1917.

War Supplies for Other Nations. Until the vigorous defense program was launched in May, 1940, the shift of resources to producing for war needs was due chiefly to foreign orders placed in this country. In November, 1939, Congress amended the Neutrality Act so as to permit the sale of arms to belligerents on a cash-and-carry basis, and a rapidly rising volume of orders followed. After the heavy English losses at Dunkerque, the unfulfilled French orders and contracts were sold to the British 5 hours before such assets were frozen, and British orders were greatly increased. During 1940, the total of foreign orders placed was some $2.6 billion and from the beginning until Lend-Lease started on Mar. 11, 1941, they amounted to $4 billion. The largest orders were for planes, tanks, ammunition, ships, and machine tools. Several hundred millions were paid for the construction of plants to produce these supplies, though the finished output was just beginning to attain appreciable volume.

By December, 1940, the British means for meeting payments on the existing contracts were about exhausted and few new orders could be placed, though the position of Britain was desperate. The President then declared that "We must be the great arsenal of democracy." This was the purpose of the Lend-Lease Bill signed Mar. 11, 1941. It provided what was believed to be a more workable substitute for the Allied government loans of the First World War, most of which were still unpaid. This law authorized the President "to sell, transfer title to, exchange, lease, lend, or otherwise dispose of, . . ." any defense article (within slight limits) to any nation whose defense he found vital to the defense of the United States and on terms and conditions "which the President deems satisfactory, and the benefit to the United States may be payment or repayment in kind or property, or any other direct or indirect benefit which the President deems satisfactory." Repairing, outfitting, etc., of defense articles for foreign governments and the transmission to them of defense information were also authorized. Seven billion dollars was immediately appropriated for Lend-Lease, and in October $6 billion more.

Eventually, the aid extended under this remarkably liberal law was as vast in amount as it was varied in character. Immediately, it provided for the financing of the supplies that Britain and China so urgently needed, and after Russia was attacked by Germany in June she was soon granted assistance. By the date of Pearl Harbor, Lend-Lease contracts for $5.5 billion had been signed, though only $1.2 billion had been paid out. The real problem by this time, however, was to get the needed supplies produced and find means for shipping them, since 85 per cent of the country's arms production Mar. 11 to Dec. 7, 1941, was kept for its own forces, and sinkings steadily cut the available shipping. Still, by December, Britain in addition to munitions had been sent a million tons of desperately needed

food, a small quantity of supplies had been shipped to Russia around the North Cape and to China by way of Burma, and the establishment of airplane ferries across the Atlantic and Africa and to the South Pacific had made possible the sending of some vital aid to Egypt, India, and Australia.

The period of neutrality also saw the adoption of numerous plans for international cooperation designed to promote the best use of resources and coordinate the efforts for purposes of defense. Several measures were directed toward promoting Pan-American unity of action and assisting Latin-American countries to strengthen their defenses. In December, 1939, the President appointed a Liaison Committee to aid foreign purchasing agencies seeking supplies and to correlate their activities with our own, the organization to ensure these ends being strengthened after the defense program got under way. In June, 1940, surplus arms were sold to Britain, and in September fifty overage destroyers were exchanged for 99-year naval and air-base leases extending from British Guiana to Newfoundland. In August, the United States and Canada established a Joint Board of Defense to plan protection of the northern portion of the hemisphere, and later bases were set up in Greenland and Iceland. Following the discussion of joint defense plans at the meeting of Churchill and Roosevelt in August, 1941, the terms of the Atlantic Charter were announced, and in September a British-American mission went to Russia to plan for the aid she needed. Cooperation also took the form of extensive exchange of designs for airplane engines, tanks, artillery, etc., between England and the United States to permit each to adopt the best ideas and devices of the other and to promote standardization.

The Active Defense Program. Though foreign orders gave the main impetus to shift to war production up to May, 1940, it was the adoption of the country's own active defense program at that date which then became the main factor in the situation and was chiefly responsible for the vastly better preparedness for war in 1941 than in 1917. On May 27, the President declared an "unlimited national emergency" and promptly initiated efforts to expand the armed services and provide for their equipment and the general defense. The Selective Training and Service Act of September required the registration of all males twenty-one to thirty-five years of age. Registration took place the next month, selection followed, and by December, 1941, there was an army in training of 1,848,000 men as compared with some 500,000 in 1939 of whom only 187,000 were in the regular army. The navy, being looked upon as the first line of defense, was relatively far stronger at the start, and in the summer of 1940 Congress authorized a program designed to provide a two-ocean navy involving a 70 per cent increase in the combat ship tonnage by 1947, and possibly by 1945. By September, 1941, all contracts for this, involving 2,831 ships

costing over $7 billion, had been let. Although time was required to get the ships, in December, 1941, the navy was the strongest afloat, though placed on the defensive after Pearl Harbor, and had over 325,000 men as compared with 121,000 in 1939, beside 105,000 in the marines and coast guard.

Appropriations could be made and men drawn into the services fairly quickly; the great problem was to provide the equipment, shipping, and other supplies without which they were useless. This required far more time, yet speed was of the utmost importance to shorten the war and ensure defeat of the Axis. Particularly needed immediately, were planes, ships, and tanks. Generally speaking, the first hurdle to be overcome in supplying these and other war needs was to provide plants and machinery, the second was to ensure an adequate supply of raw materials, and the third to get the needed labor force, though the situation varied in different industries.

The first task, to settle on designs and specifications and let contracts, was hastened in various ways. In cases, award of contracts on a negotiated basis instead of after advertising to get the lowest bid speeded action and allowed better allocation. Construction for government account or with government loans facilitated quick solution of the problem of finance; provision allowing amortization of plant outlay certified as essential within 5 years in figuring income and excess-profits taxes, along with other safeguards, made private concerns more willing to accept the risks of war contracts; a clause for renegotiation helped to protect the government and saved it many billions where profits proved unexpectedly high, for accurate estimating of many costs was often impossible. Fortunately, an act of 1939 had authorized small educational contracts to familiarize producers with the problems involved in making munitions so that, when output had to be jumped, from 6 months' to a year's time was saved.

To meet possible needs for raw materials obtained chiefly from abroad, an act of 1939 appropriated $100 million a year for 5 years to build up stockpiles in this country. Up to May, 1940, only $13 million had been spent, but thereafter action was hastened to import such things as rubber, tin, tungsten, manganese, and chromite. To prevent supplies from going to Axis countries, export controls were set up in July, 1940. Action was taken to increase domestic production of steel and to secure vastly greater outputs of aluminum, magnesium, and synthetic rubber, to mention only a few items. There was also a move to conserve scarce materials by salvage, reclamation, or the use of substitutes; to cut down their use for civilian needs, and, by adoption of a rapidly expanded priorities system, to ensure their flow to the most essential purposes. The supply of food was increased by various stimuli which, aided by good weather, secured the largest crop and livestock output on record in 1940 and a further increase in 1941.

Except for the scarcity of skilled workmen for the machine-tool, shipbuilding, airplane, and munitions industries, the labor supply problem during neutrality was not serious, thanks chiefly to the availability of two large reservoirs of unused supplies: (1) the great number of unemployed estimated at 8 million early in 1940 and (2) the short working week which in manufacturing in June, 1939, averaged 37.3 hours as compared with 55 hours in 1914; for a substantial increase without reducing efficiency was generally possible. To secure better trained labor, starting in June, 1940, appropriations were made to provide vocational training for defense industries and by December, 1941, some 2.5 million had been helped thereby. At that date 5 million workers, a tenth of them women, had been drawn into war production. Some modifications in both Federal and state labor laws were secured and, despite the time-and-a-half pay for over 40 hours, the working week in manufacturing was raised to about 42 hours in the last of 1941 and for machine-tool workers to 54 hours.

Just as in the First World War, the government was slow in adopting measures to prevent loss of labor time through strikes or the constant shifting and high turnover resulting from lack of standardization of wages and working conditions. The loss of nearly 7 million man-days of labor from strikes in 1940 was more than tripled in 1941, being aggravated by jurisdictional disputes and conflicts between AFL and CIO unions. An agreement with the building trade-unions substantially reduced trouble in the construction of army camps, and the creation of the National Defense Mediation Board in March, 1941, at least helped somewhat. The most chaotic conditions developed in the shipbuilding industry, and during 1941 regional agreements to improve the situation were slowly worked out. The administration sought as far as possible to preserve the gains secured by labor under the New Deal, yet it was not until Aug. 31, 1941, that an announcement as to general labor policy intended to promote stabilization was made, and the means for putting this into effect proved far from adequate.

The development of various agencies for directing and controlling economic mobilization proceeded much as during the First World War, except that it started much earlier. Just as previously, the problems produced by lack of adequate powers and organization compelled the adoption of greater control and more coordination and centralization of authority. Throughout the war, the zeal of each agency for carrying out its own function regardless of the effect on the over-all program was a source of endless disputes and conflicting operations. In May, 1940, the Council of National Defense (the CND), inactive since 1918, was given a new Advisory Commission with members individually responsible for production, materials, labor, price stabilization, consumer protection, agriculture, or transportation. Also the Office of Emergency Management (the OEM) was

created to maintain a liaison between the President and various defense agencies. In January, 1941, this office replaced the Advisory Commission as the over-all coordinating defense organization, and most of the commission's functions were soon absorbed by new divisions. Also the Office of Production Management (the OPM) was set up under OEM to plan and speed up the output of planes, tanks, guns, ships, etc., with operating divisions dealing with production, priorities, purchases, and labor. In April, to forestall inflation and check rising prices, the Office of Price Administration and Civilian Supply (the OPACS) was created, but when the task of increasing and allocating consumer goods was placed under OPM in August to eliminate conflicts, the new Office of Price Administration (the OPA) was left with price control to protect both the government and the consumer. In July, the Economic Defense Board was established consisting of the Vice-President and seven cabinet members to coordinate defense plans to strengthen international economic relations. In August, to try and solve agency conflicts and a threatened breakdown of the priorities system, the Supply Priorities and Allocation Board was founded with centralized authority for fixing policies as to priorities and the allocation of materials, fuel, power, etc., among military, defense aid, and total civilian needs to be carried out through OPM. It promptly demanded a complete survey of needs which, beside taking 9 months to obtain, showed the utter inadequacy of the original military estimates and stressed allocation on the basis of available supplies. Among other agencies created were those dealing with transportation, communications, agriculture, petroleum, rubber, housing, health, and scientific research. Though still having many defects, the organizational setup in December, 1941, was roughly a year in advance of where it had been in April, 1917.

By the time of Japan's attack, the results of the defense program, though far from adequate, were still very substantial. Most important as far as supplies were concerned was the time gained toward reaching mass production, but the actual output of many things was already far above the level of May, 1940. Following the President's orders during 1941 for a great increase in merchant ships, contracts for 1,000 had been let by December; 123 had been delivered; a ship a day was being launched; and the number of shipways was six times that in 1937. Twenty-three new munitions plants costing $1 billion were in operation, and the machine-tool output of $800 million for 1941 was over five times the average before 1940. Within a year, the current output of guns had been increased five times and that of ammunition nine times. Though the first heavy tank was not delivered till December, the country was then turning out more light tanks, planes, guns, and ammunition than a year after it entered the First World War. About 15 per cent of the national economy was then engaged in war production.

All things considered, the defense program had placed the country between 1 and 1½ years ahead of where it had been in April, 1917. But the task ahead of it was vastly greater than before.

Financing and Price Control during Neutrality. When the defense program started in 1940, the gross national debt was at the record peak of $43 billion upon which interest charges of $1 billion nearly equaled the total debt of 1914. As expenses mounted, more revenue was required. With national income and patriotic fervor rapidly rising, it was both economically and psychologically a favorable time to initiate a vigorous tax program; yet the fiscal policy adopted was relatively weak, and it remained such throughout the war, showing only a few improvements over that of the First World War. The revenue act of June, 1940, designed to yield $1 billion, increased income and various excise taxes, and that of October levied an excess-profits tax expected to bring in a like sum. A third act in September, 1941, counted on to provide $3.5 billion more, besides imposing many new or higher excise taxes, greatly broadened the base of the income tax so that nearly 26 million returns were received for that year of which over 17 million showed a taxable income or over four times the number in 1939. Also the tax rates were made much heavier, especially those on the middle range of incomes.

As delays in production somewhat checked the rise in actual outlay, the fiscal year ending June 30, 1941, showed a deficit of only $5 billion, receipts for the year being 60 per cent of the expenditures, so the debt rose to $49 billion. Though in April, 1941, the Secretary of the Treasury suggested raising two-thirds of expenditures by taxes, the first budget for fiscal 1942 estimated receipts at half the outlay; in fact for the first half ending Dec. 31, 1941, they were less than 37 per cent, and the debt was consequently raised to $58 billion. The borrowing that the deficits necessitated was done through the sale of short-term notes to banks as current needs dictated and subsequent sales of long-term bonds, chiefly to the public. In the case of the latter, a distinct improvement is seen in the campaign launched in May, 1941, to induce people to buy these bonds out of current savings instead of by borrowing from the banks with the resulting inflationary tendencies, as was common in 1917–1919. But the campaign proved very weak, for only $2 billion defense bonds had been sold before December.

In 1940, the monetary and banking situation was very favorable for a great expansion of credit. The heavy inflow of gold raised the stock of that metal to over $22 billion before the year ended; excess reserves of the member banks then stood at $7 billion and the Federal reserve ratio at 90. The government's bonds were selling on a basis to yield around 2 per cent, and its short-term notes less than 1 per cent. Despite the government borrowing in 1941, this favorable situation continued almost unchanged

until Pearl Harbor. In the desire to maintain the low borrowing rates on government issues, various steps were taken to conserve credit. Far more of the financing required for defense production was provided by the government than in the First World War, thus greatly decreasing the demand from private industry. Because of the rapid increase in consumer credit, starting in September, definite limits were placed on installment sales of various durable consumer goods. Later in that month, the reserve requirements of the Federal Reserve System were raised to the limit allowed by the law to conserve lending power for future needs. Yet money market rates in November showed almost no advance during the year, and when war came the possibilities for expanding credit were still very great.

Unlike the First World War, a fairly early start was made to exercise some control over prices. In May, 1940, a Division of Price Stabilization was created under the CND; its functions were shifted to the new OPACS in April, 1941, and in August it became the OPA. As the general upswing of prices did not start until early in 1941, it was not till then that control measures became important. Unfortunately, there was then no authority for fixing prices—Congress spent 6 months debating such a bill before enacting it at the end of January, 1942—so reliance had to be placed on voluntary agreements, warnings, listing of ceiling prices, and such support as could be obtained from other agencies through priorities, allocations, etc. Attention was first concentrated on metals and their products, and by December half of this field had been covered by price ceilings and over a third of the value of all wholesale goods. Supporting efforts at price control included centralization of the purchases of different war agencies to lessen competitive bidding, checks on speculative buying or hoarding, and antitrust proceedings, chiefly against international cartels.

The result was that between the start of the war, September, 1939, and our entrance into it the level of wholesale prices rose 23 per cent and the cost of living 10 per cent. By the time we entered the First World War wholesale prices had risen 56 per cent and, before control was really started, 89 per cent. Up to December, 1941, uncontrolled prices rose a third more than those where control was attempted, and the prices of controlled metals and metal products, where demand was acute, rose only 10 per cent. The chief weakness in the holding line was the group of farm products which rose 54 per cent, for there, with the avowed object of stimulating production, various governmental measures tended to increase prices (see the chart on page 826). Except for the efforts to secure standardization, no control of wages was attempted.

The War Years; the Military Outlook and Growth of the Armed Services. When Japan's attack threw the United States, still far from prepared, into the war against the Axis powers on two fronts, the military

situation was anything but favorable, and for nearly a year thereafter, with a few exceptions, the outlook only grew blacker. In December, 1941, the Axis dominated all of Europe outside the few neutrals, Britain, and the portion of Russia east of a line running from besieged Leningrad and Moscow to the Sea of Azov. Britain had come through a great bombing attack magnificently, but an attempt at invasion was still held possible, and her supply of shipping to bring in food and munitions was rapidly dwindling. In the Far East, Japan already occupied northeastern China, most of the southern ports, and Indo-China, and had a nonaggression pact with Russia.

As 1942 opened, twenty-six United Nations, several then being in exile, issued their endorsement of the principles of the Atlantic Charter and agreed to devote their military resources to the defeat of the Axis. The outlook was brightened when Russia drove the Germans back from Moscow, recovering a fifth of the area lost in 1941, and in North Africa Rommel was forced back to Tripoli; but in the summer he returned to penetrate Egypt, and the Germans launched the great drive that carried them to Stalingrad and the western Caucasian oil fields. In the Battle of the Atlantic the spread of the American convoy system from May on cut shipping losses and enabled more supplies to get through to Britain and Russia, but shipping tonnage continued to be sunk faster than it was replaced till the last of the year. In the Far East, Japan quickly overran the Philippines, the Malay states, the Dutch East Indies, and Burma, occupied Siam, and threatened Australia and India. However, with setbacks of the Japanese naval offensive in the late spring making possible the start of a defensive offense, with the landing of the joint expeditionary force in North Africa in November just after Rommel's retreat started, and with the halting of the German drive at Stalingrad and in the Caucasus, the prospect improved. In 1943, following the surrender of the German army at Stalingrad, it was generally felt that on all fronts the tide of war had finally turned against the Axis. How long it would take to win the victory—many said from 4 to 6 years—depended in no small measure upon how rapidly the vast resources of the United States could be fully mobilized and brought to bear on the battle front.

Thanks to the earlier start, the expansion of the armed forces proceeded rapidly. In December, an act extended registration to all men between eighteen and sixty-five and made those between twenty and forty-five liable for military service. Within a year, with 4 million men in service the army had been more than doubled. The goal of 8.2 million men by the end of 1943, set in January, was cut to 7.7 million in November, and this was reached the following April; by June 47 per cent were overseas. On VE Day there were over 3 million in Europe and nearly 550,000 in Africa,

Persia, and India; on VJ Day there were 1.8 million in the Far East. At the peak May 31, 1945, the army had nearly 7.4 million enlisted men and 900,000 officers.

Generally speaking, it was not until early 1944 that adequate equipment was considered available. Delayed because of this, the joint landing in northern France in June was the greatest and most difficult single operation in which the army participated. In preparation for it, troops and supplies had been accumulated in England for a whole year. It was reported that in 16 million tons of supplies sent over covering a million items only six were short. During 109 days following D Day, 2.5 million troops, about three-quarters Americans, 17 million ship-tons of supplies and 500,000 vehicles were landed in France.

By the first of 1943, the number of men in the naval services had risen to 2.2 million and at the peak Aug. 31, 1945, there were 3.4 million enlisted men and 478,000 officers. The construction of naval ships was pushed to the limit. During the 5 years ending in July, 1945, 1,322 fighting ships, besides a host of smaller craft, had been added to the navy bringing the total to 1,500 as compared with 383 in July, 1940, 140 having been lost and others transferred. In the meantime, navy fire power was increased tenfold. Between July, 1940, and August, 1944, the navy's planes had risen from 1,744 to 35,000. As the war ended, the American navy exceeded the total of the rest of the world.

To secure the needed coordination of military strategy and economic mobilization programs, a combined chief of staffs was set up by the United States and Britain early in 1942 which often brought in representatives of Canada and other countries. Military missions were established in Russia and China and on occasion sent to other nations. In January, joint boards for munitions, shipping, and raw materials were created and in June boards for food, production, and resources. Occasional conferences of the nations' leaders and their staffs promoted agreements. As early as November, 1943, planning for postwar problems was started under the United Nations Relief and Rehabilitation Administration.

The Production of Munitions. In January, 1942, the President asked for a vast increase in the output of munitions for that year and, to carry the task through, created the War Production Board (the WPB), an advisory group with the powers of action vested in Donald Nelson as chairman. This replaced OPM and had powers rather similar to those granted the old War Industries Board in 1918. For the rest of the war, its duty was to assure "the most effective prosecution of war procurement and war production"; also, under it the Office of Civilian Supply (the OCS) and its successor were responsible for providing for civilian needs, except where, as with food, housing, and transport, this was delegated to another agency,

a function that the army authorities tended to ignore. Although the main immediate problem of WPB was the conversion of industries to war production, it retained much of the organizational setup inherited from OPM, but this was altered when the main problem became one of assuring each industry what it needed on a definite schedule within a precisely balanced over-all program. By the latter part of 1942, when an internal reorganization of WPB occurred, this problem had become acute, since programs were far beyond capacity and the output of different products lacked balance. Increasingly, stress was placed on allocation starting from the base of what was available and, as applied to metal products under the Controlled Materials Plan in 1943, a decided gain resulted. It was seldom found necessary to use the board's power to requisition goods or plants. In May, 1943, to settle disputes between, and unify the policies of, agencies and to issue needed directives on policy or operations to them, the Office of War Mobilization was created as a sort of supercabinet with representatives from the chief agencies concerned.

Conversion of plants to war production, especially those making durable consumer goods, was vigorously pushed where possible, following a series of orders reducing or ending production for civilian use. The outstanding achievement here was the complete shift of the automobile industry to war production—aircraft engines, machine guns, tanks, motorized army units, etc.—mostly carried out during 1942. The new Ford Willow Run aircraft plant, the world's largest, was assembling bombers 11 months after ground was broken for it. By the close of 1943, the industry was producing at the rate of $10 billion a year or about a tenth of the war output. The output of the crucial machine-tool industry for 1942 was over $1.3 billion; before VE Day the total since 1941 exceeded that for the preceding 40 years. The construction of new, or expansion of old, plants was at its peak in 1942 and by September, 1943, the outlay for this purpose during 3 years had mounted to around $20 billion, three-quarters being provided by the government. Private industry often showed fear of postwar excess capacity of plants usable for civilian purposes. By the autumn of 1942, a third of the national economy was engaged in war production. The WPB declared that, of the program for war-production facilities, 34 per cent had been completed by July, 1942, 61 per cent 6 months later, and 80 per cent by July, 1943. By 1945, the manufacturing capacity of the country had been increased nearly one-half over that of 1940. This, combined with a more efficient and complete utilization of the capacity, made it possible to more than double the output.

Besides providing plant and machinery, the output of critical raw materials and fuels had to be stepped up rapidly. For some, the peak war output was attained in 1943 when the production of copper was a fifth

greater than in 1940 and that of iron ore a third greater, but outstanding records were the 347 per cent increase of aluminum and 2,733 per cent increase of magnesium. As spectacular as it was vital was the rise in output of synthetic rubber from practically nothing in 1940 and only 22,000 long tons in 1942 to about 760,000 tons in 1944 and considerably more in 1945. Peak war outputs obtained in 1944 included an increase over 1940 of nearly a quarter in the case of petroleum, a third in the case of steel ingots

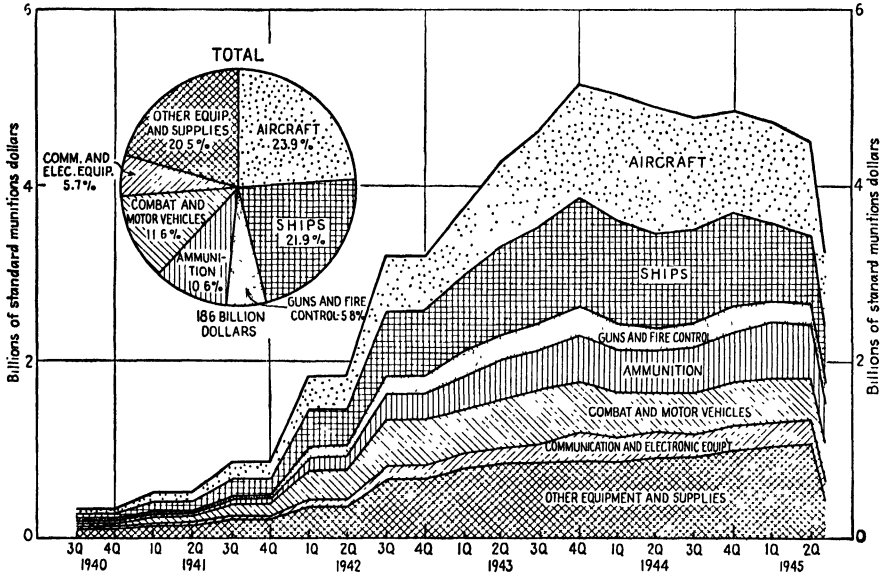


FIG. 87. United States' munitions production, 1940–1945. (Average monthly rates by quarters.)

or castings, and a bit more in soft coal. Between increasing the output and cutting use for civilian needs to half of that in 1940, the deliveries of finished steel for military purposes were raised to around 40 million tons in 1943. Through increasing electric generating capacity a quarter, switching power between systems, and running nearer peak loads, the output was increased nearly 70 per cent. The saving of daylight by shift to "war time" saved around 5 million tons of coal a year.

When the President in January, 1942, asked that the year's output be stepped up to 60,000 planes, 45,000 tanks, 20,000 antiaircraft guns, and 8,000,000 tons of ships, such goals were declared impossible of attainment and, in fact, except for ships, such proved to be the case. The output of antiaircraft guns fell a seventh below the goal, of planes a bit more, and of tanks nearly a third; yet the goals for 1943 were set much higher. The output of planes in 1943 was nearly 80 per cent above 1942, and by the

end of the war the total since July 1, 1940, had risen to nearly 300,000; total tank production for the same period was 85,000. Munitions production reached its peak in November, 1943, when, as the military outlook improved, cutbacks and shifts to civilian production were first started, but until VE Day the decline was slight (see the chart on page 806).

The rapid rise in the American output of combat munitions soon gave the United Nations a great superiority over the Axis. In 1941, this country produced 12½ per cent of the estimated world output, the rest being almost equally divided between the other United Nations and the Axis; by 1943, this country turned out 40 per cent of the total, the balance still being almost equally divided, so that the United States alone exceeded the Axis output by a third; in 1944, the percentage rose still higher. For the whole war, the United States contributed nearly half of the United Nations' total; thus, as the President had asked, it became the great "arsenal of democracy." Once such overwhelming economic resources were placed in the hands of the armed services on the battle front, victory was assured.

Shipping. To get most munitions as well as other supplies and troops to the front, ships were essential, yet for a considerable period, as the demand shot up, the supply declined. This trend constituted one of the darkest features in the outlook during 1942 when German submarines took by far their greatest toll. By March of that year, a quarter of the world's non-Axis shipping of 1939 had been sunk; the monthly peak was reached in June and Allied losses during the year were over 8 million dead-weight tons; but in 1943 these were cut by nearly three-fifths and almost disappeared by the close of 1944. The reduction in losses was due chiefly to a more vigorous antisubmarine warfare and, starting in May, 1942, an increasingly effective convoy system. During that year, an eighth of the ships carrying Lend-Lease to Russia was lost, but by the close of 1943 losses were cut to 1 per cent. Up to VE Day no transport convoyed by the navy was lost and, out of nearly 4.5 million troops sent to Europe, less than 1,100 were lost. Up to that date in all areas, the United States had lost over 6 million tons of shipping and other Allies or neutrals 32 million. Although the tide turned when construction began to exceed sinkings at the close of 1942, it took a year longer before the previous losses had been replaced and a real advance started.

As the United States was believed best able to build the enormous merchant fleet required by the United Nations, it assumed most of this burden and agreed to lend a substantial portion of its output to other nations. The carrying out of the construction program was largely assigned to the Merchant Marine Commission. In contrast with the construction of 1.2 million dead-weight tons in 1941, this program set goals of 8 million for 1942, 19 million for 1943, and, till later cut, 21 million for 1944; moreover all goals

finally set were actually surpassed. To do this, shipyards were expanded so that by June, 1943, 81 yards with 300 ways had an annual capacity of 20 million tons. To secure the needed labor force, which rose to 700,000, an intensive training system was set up, some $50 million spent to help provide housing, and for a period a 48-hour week with shifts making possible work for 24 hours a day, 7 days a week, was adopted. To speed construction, ships were designed to minimize the use of scarce materials or equipment, facilitate mass production, substitute welding for riveting, and stress prefabrication. Particularly applied to the Liberty ships, of which 2,600 were built or nearly half the total construction, a remarkable reduction in building time was secured; the two built in 1941 averaged 35 weeks; by June, 1942, the average had been cut to 122 days, and by December, 1943, to 39 days. In the First World War to build a similar but smaller ship required from 8 to 10 months. As the outlook brightened toward the close of 1943, construction began to be shifted to the faster Victory ship and other types requiring more time but better fitted for postwar trade. The daily delivery of all types rose from one in February, 1942, to three the next October, and five by November, 1943. By the end of the war, 53 million tons of shipping had been built costing the commission around $13 billion and giving the United States five times as large an oceangoing merchant fleet as it had in 1941 or over half the world's total, for the rest of the world had much less than in 1939.

As the task of conserving, regulating, and controlling the use of shipping rose, it was mostly shifted from the Maritime Commission to the War Shipping Administration set up in February, 1942. Responsible first of all for meeting the shipping requirements of the armed services, it also had to provide most cargo space for exports of Lend-Lease or other goods and for necessary imports. Previously, action under the Ship Warrants Act of July, 1941, and executive orders had provided some control of ship usage and charges, but in April, 1942, to make this complete, all American ships were made subject to requisition and operation by this administration. Careful measures to control the use of ships and maximize their cargo carriage were worked out in consultation with the Combined Shipping Board, though each country had final control of its ships and there was inadequate coordination with the use of shipping of the armed services. Besides the purchase or requisitioning of ships for its own use or that of the armed services, the administration was also responsible for the repair or conversion of ships, some of the training and provision of their personnel, which had to be tripled, the writing of war risk insurance, and the control of port facilities and related matters.

Domestic Transport. Wartime activities imposed an enormous burden on all forms of domestic transport facilities, as the total movement of

freight rose from some 600 billion ton-miles in 1940 to over 1,000 billion in both 1944 and 1945. With minor exceptions such as new pipe lines, little could be done to increase the available equipment—in fact some was diverted to other uses—and most of the added burden was placed on the railroads which by 1944 handled about 70 per cent of the freight volume. At the peak in 1944—almost equaled in 1943—they carried 740 billion ton-miles of freight or twice that in 1940, and in addition 95 billion passenger-miles or four times that in 1940. Despite the inevitable crowding of passenger trains and delays in freight, all things considered, the task was very well done, so well that, except for 3 weeks' operation by the army at the opening of 1944 because of a strike, it proved unnecessary for the government to take over the roads as in 1918.

To coordinate policies concerning different means of transport and ensure the greatest and most essential use of facilities, the Office of Defense Transportation was set up in 1941 with divisions dealing with railroads, waterways, motor transport, etc. On the railroads, equipment was maintained in better repair, freight carloads and trainloads were kept nearer capacity and their movement to ports carefully controlled to prevent the jams of 1918. The interference with customary coastal traffic threw a heavy load back upon the railroads, when commercial shipments through the Panama Canal, averaging 7.5 million tons a year, were stopped in 1941 and when tankers, which provided the East coast with 95 per cent of its oil, were mostly diverted to more essential uses. Strict rationing of gasoline, starting in the East, was later made general, and together with the provision of oil barge transport on the inland waterways and the completion of two new pipe lines from Texas to New York in 1943 helped to relieve the situation; but tankers, being a favorite prey of the U-boats, remained extremely scarce until 1944. The building of a pipe line from Portland, Me., to Montreal was to release tankers, but the need to protect Alaska was back of the construction of the 600-mile Canol pipe line in the Hudson Bay region, 1942–1944, and the Alcan highway from near Edmonton to Fairbanks, Alaska, finished in 1942. American funds also helped to add some links to the incomplete Inter-American highway.

During the war, the railroads increased the number of their employees by 400,000 or 40 per cent. In the autumn of 1941, a wage increase of about $300 million was obtained, followed in 1942 by a grant of a 10 per cent increase in passenger rates and around 5 per cent in freight rates. Since the return on the investment rose to 5.5 per cent for 1942–1943, as compared with 2.15 per cent for 1935–1939, the freight-rate boost was suspended in April, 1943. The strike of the nonoperating unions leading to army operation of the roads ended in a $200 million wage increase in 1944 and, together with a one-third rise in material costs, reduced the rate of

return for 1945 to 3 per cent and led to the restoration of the freight-rate increase.

Agriculture and the Food Problem. Various causes substantially increased the need for a larger output of foodstuffs. A man in service required about 50 per cent more than a civilian and, as with all consumable goods, it took some time to build up the quantity, estimated at 9 months' supply in this country, in transit, or abroad, to ensure a steady flow to the front, especially as more troops went overseas, for very little of their food was obtained from other countries. Lend-Lease requirements, chiefly for Britain and Russia, though somewhat smaller, were particularly urgent for fats, oils, and proteins where shortages were most acute. Though Britain, previously importing around two-thirds of her food, greatly increased her home production, the relief so secured was increasingly offset as North Africa, southern Europe, and other areas were liberated and starving people had to be fed. During 1943–1944, the armed forces got about 12 per cent of the country's food supplies and Lend-Lease 7 per cent. The situation was aggravated by the reduction in food imports arising from war operations or the shipping scarcity and particularly felt in the case of vegetable oils, sugar, coffee, tea, and cocoa. At the same time, rising wages created a greater domestic demand for food and, despite the shipments abroad, the American people actually consumed a larger total quantity of food per capita in every war year than in the prewar years, though there was a cut in the use of potatoes, sugar, fats, and oils. This was made possible by the increase in domestic production.

The task of securing this increased output as well as carrying out other features of the war food program was largely vested in various agencies in the Department of Agriculture. In December, 1942, much of this work was consolidated under a plan that in March, 1943, evolved into the War Food Administration, which was directed to ascertain all needs, carry out a program to provide supplies, assign priorities, make allocations, and purchase food needed for Federal agencies. Each year, after a survey of needs, the desirable goals for different products for the next year were announced. To induce the 6 million farmers to attain these goals, almost complete reliance was placed upon measures to assure them good prices, a policy naturally so vigorously pushed by the agricultural bloc that, when the cost of food and textiles shot up thus leading to demands for higher wages, which in turn raised other prices, some means for checking the spiral had to be sought.

The methods for supporting prices varied; loans, purchases of raw products or of processed or derived products, direct payments to farmers, subsidies to farmers or processors, all were used either alone or in combination. In April, 1941, the government announced a price-pegging plan through

purchases to apply till June, 1943, on dairy products, hogs, chickens, and eggs. In May, government loans—practically guaranteeing a minimum price—on the basic wheat, corn, rice, and tobacco crops were raised from between 50 and 75 per cent of parity to 85 per cent, which with benefit and conservation payments was expected to equal full parity. The Steagall Amendment of July authorized similar support for nonbasic crops where proclaimed necessary. In December, sugar control was extended to 1944, the domestic production quota was raised, and basic benefit payments increased a third. By that month farm prices were at 114 per cent of parity or 43 per cent above the 1940 level though wholesale prices, excluding farm products and foods, were only 12 per cent higher.

To check the general rise in prices, the Emergency Price Control Act was passed in January, 1942. Agricultural interests, however, succeeded in securing clauses in this law which forbade the imposition of price ceilings on farm products at less than 110 per cent of parity or below the market price on three different dates, whichever was the highest. As this allowed little check on farm prices, they rose to 67 per cent above the 1940 level in October just after the President demanded action on his seven-point anti-inflation program. In partial response to this, an amendment to the Price Control Act prohibited price ceilings below 100 per cent of parity or the highest price between Jan. 1 and Sept. 15, 1942, with certain modifications. This act raised the loan rate on basic products to 90 per cent of parity, though permitting exceptions, and, to offset the farmers' ever-present fear of price-depressing surplus stocks, required that this support be maintained for 2 years starting on January 1 following the termination of hostilities, which, as events turned out, meant until the close of 1948. Yet before this date it was again extended with provision for a sliding scale of loan rates starting in 1950 and a shift in the parity base years. This law provided the first comprehensive check on further increases in farm prices, and at once about 90 per cent of foods was put under control. Clinging to the old parity formula did not ensure increases of the products most needed and forced the assurance of even higher prices to get them.

Even under this law, with its exceptions and rising parities, the advance in farm prices was not stopped, and by April, 1943, they were 97 per cent above the 1940 level. It was the endless upward spiral of living costs, wages, and prices, in which farm prices were the leading factor, that then led the President to issue his "hold the line" order, and from that date until the relaxation of controls after the war there were only slight fluctuations in the general level of farm prices. In that year, the Secretary of Agriculture declared that further increases in prices were not likely to secure much added output. However, there were cases where either urgent needs or rising costs seemed to make assistance necessary to obtain the

desired production. To provide this and still hold the line, the government then belatedly began the policy of paying direct or indirect subsidies on various food products and by 1945 was spending at a rate of $1.6 billion a year for this purpose. Unfortunately, the subsidies were generally paid on total output instead of being limited to increased output. Had such a policy been adopted at the start, it would have greatly mitigated many war problems. The farmers generally opposed the policy, and in February, 1944, a bill barring subsidies was defeated only by the President's veto. Later, the farm bloc also failed in an effort to change the basis for calculating parities so as to raise them very substantially. By 1944, price support in one form or another was provided for ninety-one different farm products.

Increasing output also involved other measures besides price support. As over 4 million people moved from rural to urban areas and young men entered military service, the problem of farm labor became acute. The rise in farm wage rates by 1945 to nearly triple the 1935–1939 level somewhat checked the shift to urban industries and, starting in 1943, draft exemptions granted to farm workers rose to nearly 2 million. Youths and women were organized for summer work on the farm, and labor was brought in from Mexico and the West Indies. During the season of heavy work, about 5 hours was added to the working week. The planting of an average of 18 million victory gardens a year augmented the supply of vegetables. Despite scarcities, the number of farm tractors was greatly increased, that of milking machines was doubled, and rural electric lines substantially extended. More intensive methods of cultivation secured most of the increase, for there was little addition to the acreage planted; by 1944, 85 per cent more fertilizer and 170 per cent more lime were used than in 1939, and crop yields per acre were about a sixth greater. A series of favorable crop years, notably 1942, is given credit for about a quarter of the added war output. Through these and other means, the output per worker was raised to a point about a third above that in 1939. The net outcome of the production effort raised total farm output to 24 per cent over the 1935–1939 level in 1942, a bit more in 1943, and to 36 per cent in 1944. For that peak year, the 1945 output being a trifle lower, the increase for crops was 28 per cent and that for livestock and their products 41 per cent.

The problems of conserving food, looking after its storage or shipment, and directing its distribution largely rested with agencies in the Department of Agriculture, though involving the cooperation of others. Elaborate campaigns were started to check wastes, particularly of fats; there was a rapid development of processes and facilities for dehydrating, refrigerating, or freezing foods and putting the nutritive elements in the most condensed form, which was important for conserving both food and cargo space. As adequate storage facilities were not constructed, those available had to be

controlled and care taken that shipments went through promptly and without damage. Starting in 1942, rationing of the civilian use of the scarcer foods became necessary. Though it caused much grumbling from those who little appreciated how well off they were relative to those in countries subject to war's ravages, it involved no real hardships. Much attention was given to the food consumption of school children and industrial workers and to general dietary reforms. As a result, the Food Administrator could say in 1945 that "Our own people have had more food and better diets during the war than they ever had in peacetime."

The war years brought to the farmer, emerging from a trying decade, greater prosperity than he had ever known before. By 1945, the prices of products that he sold, the volume of which had increased a third, were double what they had been in 1940 while the prices of things that he bought had increased less than one half. In that year, the $24.6 billion gross farm income, including government payments, was 136 per cent greater than the average for 1935–1939, and the net income 175 per cent greater. High returns boosted the value of farm real estate; by November, 1945, the value per acre was 60 per cent and a year later 83 per cent above the 1935–1939 average thus exceeding the rate of increase of 70 per cent in 1915–1920. Having started from a lower point, this left the average value about a tenth below the boom figure of 1920. This was accompanied by a more rapid rise in the farmers' cash, bank deposits, savings bonds, etc., so that no later than Jan. 1, 1945, total farm assets were estimated at $91 billion ($50 billion being real estate) or 87 per cent higher than 5 years before; by 1947, this total had risen to $111 billion. Also by the end of 1945, the farm mortgage debt had been cut $1.5 billion or 23 per cent since 1940, in marked contrast with the 43 per cent increase, 1915–1919. In January, 1945, with a ratio of current assets to current liabilities four times greater than in 1940 and of total assets ten times total liabilities, or nearly double that in 1940, the farmer could look toward the immediate future, including the continued need of other countries for food, with a marked sense of security, but in the background there lurked a recollection of the difficulties after 1920.

Labor Problems. With the drain of over 10 million active men into military service and the need for getting at least that many workers in the munitions industries alone, the problem of securing an adequate supply of labor became serious, necessitating comprehensive measures for the mobilization, conservation, and control of the available civilian labor force. In April, 1942, the main responsibility for handling this problem was assigned to the War Manpower Commission which was to estimate needs, establish training programs, look after the flow of workers to the most essential jobs, and issue directives to the agencies recruiting and training man power. In June, such directives were issued. In December, the Commission was given

powers to prescribe training programs, require any or all hiring of labor for war work through the Federal employment service, and require the release of employees needed more for other work, besides being assigned administration of selective service, though this last function was taken away a year later. The idea of conscripting labor was dropped, evidently not on the ground that it could not be defended when men were drafted for military service but because of the discontent and inefficiency that would result. Though later revived, it was never adopted.

In December, 1941, the total available civilian labor force fourteen years of age and over was 53.7 million. By then, the number unemployed had been reduced to 3.3 million, and this source was subsequently drawn upon so that after February, 1943, it averaged less than 1 million. The largest addition, however, was obtained by drawing 6 million women and girls into employment. The peak in civilian employment, reached in July, 1942, was 56.9 million or an increase of 6.4 million over December, 1941; with the drain into the armed services, the number fluctuated around 51 million in the last months of the war. Along with this increase in workers, went the rapid shift to war work, estimated at 8 million in 1942 and promoted by the offer of high wages and the channeling activities of the agencies. During the last months of the war, agricultural workers were about a million less than in the corresponding months of 1941. Employment in the munitions industries alone reached its peak in November, 1943, at 10.4 million or a fifth of all civilian workers. To increase the supply of skilled workers, extensive programs for intensive training were adopted and some 11 million benefited thereby. The Committee on Fair Employment Practice endeavored to break down the barriers to the flow of labor to essential work arising from discriminations based on sex, religion, race, or national origin.

Another unused labor resource was tapped by increasing the weekly hours of work. In manufacturing industries these had already been raised from 37 in 1939 to over 41 in the last of 1941, yet in 1914 the prevailing hours had been 55. The requirement of time-and-a-half pay for work over the basic 40-hour week was a deterrent, except where the added cost could be handed on, but the administration insistently opposed any undermining of this New Deal labor gain. By July, 1942, when various agencies advised adoption of a 48-hour week in war industries, some 1.5 million were already working longer hours. In February, 1943, the President authorized a minimum 48-hour week in war industries where declared essential by the Manpower Commissioner who at once ordered it in lumbering, metal mining (except iron), and in thirty-two acute labor-shortage areas; in December, it was made mandatory in sixty-nine such areas and was adopted in a third of the areas classified as having a less acute shortage. With changes as needed, this practice lasted till the war ended. In manufacturing

industries as a whole, slightly over 45 hours a week prevailed from April, 1943, until the end.

The outburst of strikes during 1941 had caused a loss of 23 million man-days of labor. Though even this high figure was only a third of 1 per cent of the available working time, it was desirable to minimize such losses; far more serious was the disruption of essential production processes involved—a single strike affecting just one vital part might stop completion of some munition; a strike on the railroads or in the coal mines might disrupt the whole economy. Realizing this and desiring to stave off an antistrike bill, the President just after Pearl Harbor called a labor-management conference which agreed to bar all strikes and lockouts and to settle disputes by peaceful means through a mediating board. In January, the War Labor Board was set up with four representatives each for labor, management, and the public to try and settle disputes involving war work where the Conciliation Service or other existing means had failed. The no-strike pledge was generally well observed by both sides, yet strikes still broke out; some were outlaw strikes, many were by unions outside the AFL or the CIO that had not been represented at the conference and so claimed exemption from the pledge. The most serious were those of the coal miners in 1943 which the President declared broke the pledge. Twice during that year, he ordered the Secretary of the Interior to take over and operate such mines as were necessary and a similar task was assigned to the Secretary of War in December because of a threatened railroad strike. The coal dispute led Congress in June to pass the War Labor Disputes Act over the President's veto. This law required a 30-day notice before a strike, secret strike ballots, increased the government's powers to take over plants, and imposed penalties on those interfering with work in such plants. The net outcome of all this was a loss through strikes of 4 million man-days of work in 1942, 13.5 million in 1943, and 8.7 million in 1944.

To direct the flow of labor to essential war work and check the constant shifting, which by 1942 and 1943 had doubled the rate of turnover with resulting losses in time and efficiency, various measures were adopted. In January, 1942, the Federal service took over direction of the state employment services so as to coordinate their activities and secure more centralized control of the supply flowing through these agencies. A job classification of all those registered under the Selective Service Act was made, those with needed skills who were not subject to draft were urged to enter essential work. Many who were liable were exempted, areas with varying degrees of labor shortage were proclaimed, new war contracts and plants were diverted elsewhere if possible, and in acute shortage areas increasing control of recruitment was assumed. With between one-half and one million workers a month being placed by the employment service, its system of preferential

referment became important in controlling the flow of labor. To lessen the turnover of labor, it was also necessary to stabilize wage rates and working conditions and obtain agreement upon general labor policies. Subject to general directives from above, most of this task fell upon the War Labor Board, especially after control of wages was authorized in October, 1942.

It was not until after this that a fairly definite labor policy became evident. The administration throughout remained very insistent upon maintaining the standards of working conditions and other gains secured by labor under the New Deal and, with rather minor exceptions, chiefly to augment the supply of labor, this was generally done. The War Labor Board commonly granted union requests for maintenance of membership (with an escape clause) and dues checkoff clauses in their contracts as an offset against their loss of power through the no-strike pledge; where strikes occurred, it typically refused to act until work was resumed and might take away these grants. Thus aided, the strength of organized labor was greatly increased; by 1945, about 48 per cent of industrial workers were included under collective-bargaining agreements as against 30 per cent in 1940, and the total union membership had risen from 8.5 to around 15 million. In 1947, over 7 million worked in a closed or union shop, over 6 million had a checkoff of union dues, and over half as many were under a maintenance of membership clause.

Wages and the cost of living remained fairly stable until the opening of 1941 when a rapid rise started. By October, 1942, when wage control was first authorized, average weekly earnings of factory workers were 54 per cent and hourly earnings 35 per cent above the 1940 level, partly because of overtime, for straight-time hourly rates increased less than a quarter. Meanwhile the cost of living for city workers had risen about 18 per cent. In mediating wage disputes, the general policy adopted by the War Labor Board as announced in the Little Steel case in July, 1942, was to grant increases in hourly wage rates equal to the increase in the cost of living since Jan. 1, 1941, which, in this case up to the time the dispute arose in May, was 15 per cent. If carried out, this policy assured the worker whose disputes came before the board—typically the organized worker—against any sacrifice in his standard of living and, if he worked overtime, the added wages represented so much gain for longer hours. The board also granted increases "to narrow inequalities" between those doing similar grades of work in a given area or to bring females' wages for like work up to those of males.

The President's anti-inflation program, followed in October, 1942, by amendment of the Price Control Act and the creation of the Office of Economic Stabilization with sweeping power to control prices, rents, wages,

and salaries, for the first time inaugurated an all-out attack on the inflationary spiral. Control over wages was vested in the War Labor Board which had to approve increases or decreases, with certain exceptions, though no cuts below the highest rates between Jan. 1 and Sept. 15, 1942, were allowed and stabilization at the level at the latter date was to be the aim. The board's powers were also expanded to cover nearly all changes in wages and salaries in addition to those brought before it in a dispute, thus filling a serious gap and eventually extending its jurisdiction over some 25 million workers.

Inflationary forces having been allowed to gather such momentum, there was little chance of immediately stabilizing wages and living costs at the proposed level, and from then on it became a desperate struggle to minimize the advances, emphasized by the President's "hold the line" order of April, 1943. The executive stabilization order, to provide needed flexibility, allowed the WLB to approve wage increases "to correct maladjustments or inequalities, eliminate substandard living, or to aid in effective prosecution of the war," and many advances were granted on such grounds; it was possible to grant certain union demands, such as vacations with pay, without altering wage rates. Fear of loss of production from strikes forced an unwilling consent to advances in wages from the stabilization director, often with the proviso that it did not increase prices, though that was far from assured. In December, 1943, control over farm wages was shifted to the Food Administration, and ceilings below the rate of $2,400 a year were prohibited. Although the advance in the cost of living was greatly reduced and almost stopped during 1943, the President's committee reported that in September, 1944, it was 25.5 per cent above Jan. 1, 1941, while hidden costs would bring it to 30 per cent; by the close of the war, it was about 3 points higher. With this further rise, labor insisted that the Little Steel formula be abandoned, but the public members of the WLB in February, 1945, advised the President against this on the ground that up to October, 1944, hourly earnings had increased 36.7 per cent and gross weekly earnings 76.3 per cent while the cost of living had only risen 29.4 per cent. The result of all this was that, although the advance in wage rates was greatly slowed down under the stabilization program, it did not cease altogether.

In general, the increase in labor's earnings during the war far more than offset the rise in living costs. The average annual salary-wage of all nongovernmental, nonagricultural employees on a full-time equivalent basis, estimated at $2,255 for 1944, was almost 70 per cent above that in 1939; the rate of gain during the First World War was almost the same, yet it left the figure at only $1,283 in 1919. However, different groups shared very unequally in this gain. Thus in 1944, farm wage rates, which had been

greatly depressed, were 155 per cent above those in 1939, and the rates of other unorganized groups such as common labor or domestic servants were from 50 to 100 per cent higher. In manufacturing, the weekly wage of women rose much faster than that of men, and the greatest gains in take-home pay went to those in war industries particularly benefiting from overtime pay and a higher job classification. Yet there were substantial groups, such as those in the retail trades, where the increase in hourly rates barely kept pace with rising living costs, while among the skilled trades in less demand the increase was much lower. The worst sufferers were among the medium salaried class many of whom obtained little or no increase.

Science and Invention. Though no account of the extremely important contributions of scientists, inventors, and engineers toward hastening victory can be attempted here,[1] at least a few of the more notable must be mentioned, for never before had science played such a part in warfare. An early start had been made under a committee of the CND which broadly surveyed the needed lines of research together with the men and resources available for such work. In May, 1941, the Office of Scientific Research and Development was created which greatly expanded the scope of activities and secured a better coordination. Extensive exchange of information or men with Britain and Canada was arranged, use of available patents of the Axis was authorized, and, since it was known that in many fields it involved a race to beat the enemy, speed of action was stressed. Not a little effort had to be devoted to convincing the conservative armed services of the importance of the results being secured.

The most spectacular achievement, involving several years of work and an outlay of $2 billion, was that culminating in the dropping of the atom bomb on Hiroshima in August, 1945, which immediately settled the question of Japan's surrender. More important during the war were the advances in electronics and the development of some 150 different systems of radar for ground, ship, and air use. These and other devices vastly increased the effectiveness of the air forces and the antisubmarine campaign. The bazooka provided the first adequate weapon against the early superiority of German tanks, the flame thrower drove the Japanese from their caves, and the proximity fuse increased a missile's destructiveness. With combat ranging from the Arctic to tropical jungle or desert and at undreamed-of altitudes, the need for medical care became the greater, and the task of directing studies was assigned the Medical Research Committee. The most notable results were secured with sulfa drugs, penicillin, blood plasma for which civilians donated 13 million pints, atabrine, and DDT. Once approved, production of these things was rapidly pushed. The aid of

[1] For an excellent popular summary see J. P. Baxter, Jr., "Scientists against Time," New York, 1946.

psychologists was employed to improve job selection and the efficiency with which men functioned in a great variety of tasks.

The Achievement. While our Allies held the battle fronts during the dark days of 1942 as best they could with but moderate aid from us, the needed time was secured to mobilize and convert our resources and get mass production under way. Before the close of 1943, when munitions output reached its peak, this had been generally achieved. It also took time to build up the vast reserves of supplies required for a successful offensive, not to mention those needed for Lend-Lease, and it took more time to get these supplies as well as troops overseas and to the front. A goodly share of this was also accomplished before the close of 1943, the year that marked the definite turn in the tide of war.

On the eastern front, the Germans after the surrender at Stalingrad, January, 1943, were on the defensive and were steadily pushed back out of Russia and the Balkans and then in the homeland until Vienna and Berlin fell. From 1943 on, Germany was bombed as Britain never had been. Following the landing in Africa, the Axis forces, caught between attacks from both sides, were driven out by May; after the capture of Sicily and the landing in Italy, that country surrendered in September, though the Germans bitterly contested the Allies' northward drive to the end. In 1944, the long process of accumulating troops and supplies having been completed, northern France was invaded in June and the south in August. From then on, except for the Battle of the Bulge setback in December, German forces were in steady retreat and growing disintegration until the unconditional surrender, May 7, 1945.

In the Far East where, except in Burma and China, the task of defeating Japan devolved largely upon the United States, the first essential was to obtain control of the seas, for after Pearl Harbor the Japanese navy enjoyed a superiority. Thanks to an early start—for it takes longer to build up the navy than any other branch of the services—and with substantial losses on both sides, this was achieved fairly early, and by 1944 a great superiority over the Japanese navy had been attained. As this, including that of the absolutely essential air force, developed, it was possible to assume an all-out offensive in the spring of 1943. By adopting the novel policies of using floating supply bases and by-passing many islands subsequently neutralized, unexpectedly rapid progress was made. In October, 1944, troops were landed in the Philippines, Manila was recaptured the following February, and by June, following the terrific contests at Iwo Jima and Okinawa, land bases were secured making heavy bombing of Japan easy. Having lost most of her navy and shipping and facing a new enemy in Russia, who had declared war 2 days after the dropping of the atomic bomb on August 6, Japan offered to surrender on August 10, thus obviating the need for a

costly invasion. The formal signing of the surrender terms on September 1 brought the fighting in the Second World War to an end.

The ability of the Allies to hold on with some Lend-Lease aid until United States' production had filled the supply lines sufficiently to justify the offensives, in which American forces largely participated, helped in the achievement of making those forces the best equipped, the best fed, and the best clothed in history. At first, scarcity of equipment hampered operations, but as soon as front base supplies had been built up, scarcities seldom developed, except from rapid shifts in the field; there was never any such great dependence on the Allies for certain equipment as in the First World War. Though the food often was monotonous and far from appetizing, it was nearly always abundant and from a dietary point of view excellent. In medical care, all records were broken; in the army, the death rate from disease of 6 per 10,000 was but 5 per cent of that in the First World War; among the wounded reaching base-line hospitals, the death rate of 3.3 per cent was less than half that in 1917–1918, partly because of speed in evacuation, and nearly 60 per cent of the wounded were returned to duty in the field of operation. Out of total American war casualties of 1 million, some 300,000 represented those killed. The pay of servicemen was better than ever, and the 13 million surviving veterans of the war period (by 1947, the total actual and potential veterans of the war had risen to 16 million and there were some 4 million veterans of earlier wars) were provided with various aids for facilitating their resumption of civilian pursuits on an unprecedented scale. Under the GI Bill of Rights of 1942 and later additions, temporary assistance was offered for education, on-the-job training, business or home loans, and unemployment; permanent aids included pensions and disability allowances, medical, hospital, and domiciliary care, cheap life insurance, and various types of preferential treatment.

Besides providing for the needs of the country's own armed services, the American production effort also made possible very substantial contributions to the needs of the Allies through Lend-Lease. Also, after we entered the war, agreements were made to obtain reciprocal Lend-Lease from other countries, usually in the form of goods and services in regions where American forces were stationed. The total value so received was over $6 billion, six-sevenths of which came from the British Empire. The United States provided others with $46 billion of Lend-Lease of which nearly two-thirds went to the British Empire and almost a quarter to Russia; France which came next got 6 per cent and China half that. Of the total, nearly a third consisted of food and industrial materials, a seventh of ships and their equipment, and most of the remainder of aircraft, ordnance, tanks, and other vehicles. Before 1947, nearly three-quarters of the Lend-Lease account had been settled. During the course of the war, the United States

built 3,000 military and other installations abroad costing $2.4 billion, and its total outlay abroad was $13 billion.

The achievement was also such that all essential needs of domestic civilians were well provided for, though far more in the way of restrictions and rationing became necessary than in 1917–1918, and much grumbling resulted. Perhaps the greatest inconvenience arose from the rationing of gasoline, most felt in the East where it was started in 1942 but eventually extended generally. Combined with the stoppage of all production of new cars and the scarcity of tires, this resulted in reducing the number of passenger cars in operation about 17 per cent and the use of gasoline by such cars about 40 per cent. The difficulties and inconveniences of travel by all mediums were greatly increased. The scarcity of oil and other fuels forced some to live during the winter in temperatures in the 60's instead of the 70's. As previously indicated, the people as a whole ate more and better food than before the war, though there was much complaining about the moderate cuts in the supplies of fats, meats, and sugar. Although much less was heard about it, the number of middle-class families that had to give up employing a domestic servant because of the rise in her wages was one of the more serious losses for many and, with other things, reduced the family's leisure time. The scarcity and high cost of textiles forced economies in clothing and other domestic uses. Most serious of all was the rising cost of living for those whose incomes failed to rise correspondingly.

The Financing of the War. Though the policy in war financing showed some improvements over that of the First World War, this was the field where less seems to have been learned from that sad experience and its long-run consequences than any other. Only the mistakes in dealing with the postwar inflationary tendencies will produce results of comparable seriousness. The administration failed to push an aggressive policy, and Congress at times refused to grant even what was asked, despite the high general prosperity of the war years. The President's budget message of January, 1942, estimated a deficit of over $18 billion for the fiscal year ending June 30, and of $42 billion for fiscal 1943. Since it takes so long to get most tax bills through Congress, nothing was done to help fiscal 1942, and its actual deficit proved to be $20 billion. As this raised the gross national debt to $72 billion, it had been necessary in March to increase the limit on the debt from $65 to $125 billion. Later boosts eventually set it at $300 billion.

In response to the President's request for new taxes of $7 to $9 billion to reduce the deficit for fiscal 1943, Congress in October passed a law expected to yield about that sum. Though there was a tendency to advance most taxes, the chief gain was expected from the sharp increase in income tax rates, a lowering of exemptions, and the levying of a 5 per cent Victory

tax made deductible from pay envelopes, thus raising the number of returns showing a tax liability for 1942 to 28 million, or 50 per cent more than for 1941 and seven times the number for 1939. Though the total receipts for fiscal 1943 proved appreciably above the first estimate, expenses increased even more, resulting in a deficit of $56 billion, which raised the debt to $137 billion.

The budget message of January, 1943, estimated the deficit for fiscal 1944 at $71 billion based on receipts of $33 billion and expenses of $104 billion. Facing such an outlook, Congress was asked to raise $16 billion more so that receipts would cover half the outlay. A whole year passed without any final action by Congress and then, owing to unexpectedly large receipts, the sum asked was reduced to $10.5 billion. Finally in February, 1944, Congress responded with a bill estimated to raise $2.3 billion more, which the President vetoed as utterly inadequate and Congress then passed over the veto. This law raised various excise taxes, advanced the excess-profits tax rate from 90 to 95 per cent, and made the Victory tax a flat 3 per cent, but left individual income tax rates unaltered. There was no further effort to raise taxes. The following May, an act to simplify taxes eliminated the Victory tax but raised other rates to offset this, and the wage and salary withholding system was extended to deduct the full tax on incomes up to $5,000. The failure to raise more by taxes led to deficits of $50 billion in fiscal 1944 and $54 billion in fiscal 1945, at the end of which the debt stood at $259 billion. Strong pressure for tax relief after the war ended led to the act of November, 1945, made applicable for 1946, and estimated to cut taxes $6 billion. The chief features were increased exemptions estimated to relieve 12 million people from the income tax and repeal of the excess-profits tax. A deficit of $21 billion for fiscal 1946 resulted in raising the national debt to the peak of nearly $280 billion in February of that year. During the five fiscal years, 1941–1945, total net tax receipts covered only 41 per cent of expenditures. The government's outlay for defense and war purposes from June, 1940, until the close of 1946 totaled nearly $350 billion.

For the heavy borrowing that these enormous deficits necessitated, the general policy adopted was rather similar to that of the First World War, except for the notable improvement represented by the effort to induce people to buy government securities out of current income instead of borrowing for the purpose. With this end in view, starting in the spring of 1942, a more vigorous campaign to sell war savings bonds was inaugurated, monthly sales quotas were set, and subsequently quotas for the special loan drives. Eventually some 30 million people were authorizing deductions from their pay to buy war bonds. Yet, considering the great savings accumulated during the war, the total sales through September, 1945, of

$56 billion, of which 17 per cent had already been presented for redemption, were hardly notable. At the close of that year, it was estimated that private individuals had absorbed and held $53 billion or only 23 per cent of the increase in the national debt since 1939. The rest had to be obtained from banks, institutions, and other corporations.

Just as in the First World War, at the start it was the practice to sell short-term notes or certificates and bonds to the banks and then, as needs arose, to launch a series of war-loan drives to increase the sales and secure a broader distribution of the bonds. Starting in December, 1942, a series of seven of these drives was held followed by the final Victory drive at the close of 1945, between $13 and $26 billion of sales being secured from each and the goals set always being surpassed. In the loan drives, it became the policy to offer various types of securities certain of which were not available to commercial banks and to set quotas of the goal for sales to individuals and other nonbank groups, but most of the oversubscriptions came from outside the individuals group. Of the total net increase of $260 billion in government obligations and guaranteed debt between Dec. 31, 1941, and Sept. 30, 1945, individuals or partnerships owned less than a quarter at the latter date, commercial banks almost a third, private corporations and associations over an eighth, the Federal reserve banks a tenth, insurance companies a little less, and various governmental agencies most of the balance.

The national debt at its early 1946 peak of $280 billion represented a burden which many people not more than a decade before would have insisted meant little short of national ruin. It was almost $2,000 per capita as against $240 after the First World War. However, the growth in the real burden involved was greatly lessened by the unprecedentedly low rate of interest that the debt bore and by the enormous rise in the national income that had taken place. Unlike the First World War, in this war the interest rate on the debt steadily declined from 2.5 per cent in 1940 to 1.9 per cent in 1945, so that by 1946 the total interest charge was $5 billion or only five times that in 1920. The rise in the national income to $164 billion in 1946 was such that this interest charge barely exceeded 3 per cent of that income, while the 1920 ratio was 2 per cent. Of course, national income may greatly decline.

Monetary and Banking Developments. The government's enormous borrowing program inevitably involved great reactions upon monetary and banking conditions, though the large proportion of war activities financed by the government, which of course increased its borrowings, to that extent reduced the need for private borrowing. After Pearl Harbor, the Federal reserve authorities announced that their powers would be used to assure ample funds for financing the war and to maintain satisfactory conditions

in the government security market. Though this promise was fully carried out, in order to do so various modifications of the banking laws facilitating credit expansion had to be made. Also assistance was secured from various other measures that tended to increase the supply of funds from which the government could borrow. Thus, between the limitations on production of civilian goods and such control over security issues as the SEC exercised, little money was diverted to such production. This same limitation together with government financing resulted in the relatively slight increase of around $4 billion in the total loans and discounts of all banks during the war. Finally, the scarcity of so many consumer goods, together with the restrictions on consumer credits, decidedly checked consumers' outlay and increased their savings, which were further augmented by the rapid rise in the incomes of so many.

In December, 1941, with over $22 billion of gold, a Federal reserve ratio of around 90, and $12 billion of excess reserves, presumably making possible an expansion of six times that sum in the reserve system as a whole, the banks were in an exceptionally strong position. It was the practice of banks holding government deposits, the number of which was increased, when they bought government obligations simply to credit that deposit. When the total of these deposits reached a large sum and the reserve ratio fell, an act of April, 1943, temporarily exempted deposits so secured from the reserve requirements, thus permitting a further expansion of loans. As the drain on reserves was heaviest in the central reserve cities, a reduction in the reserve requirements in those cities was permitted in July, 1942, and the prohibition against new loans or dividend payments by member banks with a deficient reserve repealed. Unlike the First World War, open-market operations were largely depended on both to stabilize the price of government obligations and to bolster reserves. Early in 1942, the Federal reserve banks were authorized to purchase government obligations direct from the Treasury, though total holdings so purchased were limited. These banks stood ready to buy or sell Treasury bills at a stabilized rate, thus making them attractive for the member banks, though toward the end the latter showed a preference for longer term obligations yielding a better return, and the holdings in the reserve banks accumulated. Temporary declines in reserves were met by open-market purchases from the member banks, and it was not until 1944 that the latter were forced to seek a substantial volume of advances from the reserve banks. Despite all that was done and a loss of only $2 billion in gold, the expansion of bank credit was such that the reserve ratio steadily declined till, at the close of the war, it was barely above the 40 per cent minimum. In consequence, it was deemed advisable to reduce the requirement to a flat 25 per cent of gold certificates against both demand deposits and Federal reserve notes, as was done in 1945.

The outcome of all this was an enormous increase in both bank deposits and the money in circulation. From July, 1940, until the close of 1945, total deposits in all banks rose from $71 to $166 billion and most of the increase in this liability was represented on the asset side by the rise in the holdings of direct or guaranteed Federal obligations from $20 to $102 billion. During the same period, total money in circulation rose from $7.8 to $28.5 billion, or from $59 to $203 per capita. Practically all of this increase was in the form of Federal reserve notes having Federal obligations as collateral backing, the temporary authorization of which in 1932 being repeatedly extended and made permanent in June, 1945. This simply meant a further pyramiding of debt on debt. One outcome of the general situation was great prosperity for the banks; another was that in this same period personal and business holdings of liquid assets (excluding those of banks, insurance companies, and government bodies) more than tripled. Of the total holding of $221 billion at the close, two-thirds were personal and one-third was business holdings. Of the increase of $153 billion, a half was represented by government securities, $37 billion by demand deposits, and around $20 billion each by time deposits and currency. Such an increase in potential purchasing power without a corresponding increase in volume of production had a powerful inflationary reaction on prices. When controls were abandoned after 1945, this became an important factor in advancing prices and accentuating the postwar boom.

Prices and Price Control. As previously described, a substantial rise in prices had already taken place by the time the country entered the war, despite all that OPA with its very limited powers could do. At the end of January, 1942, after 6 months' deliberation, Congress passed the Emergency Price Control Act, which greatly broadened these powers but still left serious gaps in the line, being based on the theory of selective rather than general control. Practically, it exempted farm products from any immediate control, left wages entirely exempt, and limited rent control to selected defense areas. The objective was to maintain the price level of early October, 1941. It soon became clear that selective control chiefly directed at basic raw materials was very inadequate and OPA, through its General Maximum Price Regulation of May, accordingly set wholesale and retail price ceilings at the highest existing in March, 1942, though not thereby supplanting existing, or preventing new, specific price ceilings. This regulation extended control from 50 to about 75 per cent of the value of the wholesale price structure and was the first extensive limitation on retail prices; but it still left all wages, most rents and services charges, and 40 per cent of the food bill exempt.

Though this action very greatly reduced the rate at which prices rose, it could not stop the advance, and by October, 1942, wholesale prices were

24 per cent and the cost of living 18 per cent above the January, 1941, levels. This led the President in September to demand prompt action by Congress along the lines of the seven-point anti-inflation program announced in March, and in October the Price Control Act was amended to authorize the controls over farm prices, wages, and salaries previously described, thus filling the two big gaps in the control program. At the same

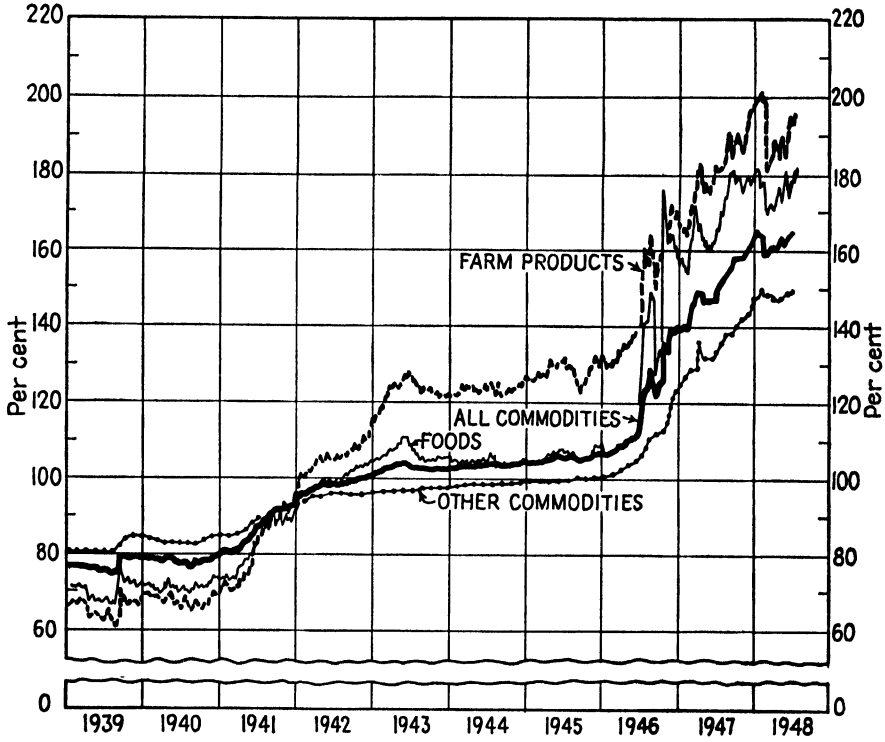


FIG. 88. Index number of wholesale prices, by groups, 1939–1948. (1926 = 100.)

time, the Office of Economic Stabilization was created with sweeping powers to direct the control program. By December, rent control was extended to cover 355 areas including 76 million people. Though further retarded, the advance of prices was not stopped; with farm prices taking the lead and others forced up by wage raises and various "adjustments," it continued till in May, 1943, wholesale prices were 29, farm prices 81, and the cost of living 24 per cent above January, 1941, levels.

This led the President in the preceding April to issue his "hold the line" order, which was carried out so successfully that after May there was little or no advance until the fighting ended in August, 1945, at which time wholesale prices were 31, farm prices 91, and the cost of living 28 per cent

above January, 1941, levels. An important factor in this achievement was the adoption of the subsidy policy for food products in 1943, for with its aid retail food prices were somewhat reduced. A similar policy of subsidies for increased outputs of copper, lead, and zinc adopted in 1942 was later declared to have saved taxpayers several billions at a cost of some $200 million. Being particularly applicable to products of the extractive industries secured under increasing costs, it was adopted for oil in 1943 and should have been applied much earlier to farm products and limited to increased outputs, even if the administrative problems involved were difficult. Though the farm bloc failed to override the veto of the antisubsidy bill, it forced the administration to limit the use of subsidies, and when in June, 1944, the price-control law was extended for another year, it secured other gains by requiring ceiling limits on cotton textiles to reflect the parity price of raw cotton and government support of the basic farm products or those for which increased output had been sought at prices equal to parity, or the average January to September, 1943, whichever was higher. In June, 1945, the act extending OPA controls for another year without seriously crippling amendments was passed only after strong opposition from many special interests.

Though the price-control effort secured vastly better results than in the First World War, the failure to accomplish still more can be attributed to much the same reasons that explain a similar outcome in most other phases of the general war effort. As excellently summarized by the Truman Senate Committee in 1943, the chief mistakes were (1) inadequate over-all planning at the start and delay in fixing basic policies, (2) conflicting authorities resulting in delays and passing the buck, (3) hesitation in adopting unpopular policies long after the need for them was clear—in short too little and too late. In the case of price control Canada, by prompt and sweeping action to control prices and wages in October, 1941, proved able to limit the subsequent rise in the cost of living during the war to less than 3 per cent. In addition to the weak fiscal policy, the failure to do better in the United States was due mainly to the delay in imposing effective controls on the price of farm products. By August, 1945, wholesale prices, excluding those of farm products and food, were only 20 per cent above those for 1940, but farm products were 90 per cent and foods 50 per cent higher. Much the largest increase in the cost of living during this period is to be attributed to the higher cost of food and clothing which made up 35.4 and 11 per cent, respectively, of the average cost of living, for each of these groups rose about 44 per cent. The rise of 122 per cent in the farm price of cotton was the main factor in increasing clothing costs, the rise in wool being about half as great. Rent, which makes up nearly a fifth of living costs, rose less than 4 per cent; fuel, ice, and electricity, which make

up less than 7 per cent, rose only a tenth; but the rise in miscellaneous items, which make up nearly a quarter, was 22 per cent. Moreover, it was the rising cost of living that provided the chief justification for raising wage rates which in turn, though not always, led to higher prices.

Though the distribution of the burden of war costs among different groups resulting from the government's fiscal policy with the consequent inflation was distinctly more equitable than in the First World War, there still were many unjust gains and losses. The efforts made to eliminate profiteering resulted in more of the gains accruing to the less well to do and fewer to the rich, while the greater success in checking inflation modified the losses of the groups suffering from that phenomenon. No small portion of the burden was met by increasing the volume of output which involved depletion of exhaustible natural resources, considerable deterioration of equipment, more constant use of plant, fuller employment, and longer hours of work. As the national income rose from $77 billion in 1940 to $161 billion in 1944 and 1945, total payments to employees rose a trifle faster and came to make up over 70 per cent of that income. The farm population gained much more relatively than any other large group, their per capita income in 1945 being more than triple that in 1940 while that of the nonfarm population increased by only four-fifths. Total interest, rental, and dividend payments to individuals rose only half as rapidly. Incorporated business enjoyed a very large rise in income before taxes, but so much of this was taken away by the income and excess-profit taxes that the net increase barely exceeded one-half. Most of this extra gain was retained in the business, for dividend payments rose only one-eighth.

Yet among corporations, just as among workers, there were marked differences in gains and losses. For the depressed railroads, the great rise in profits, though much reduced after 1943, came as a godsend; banks and other financial institutions generally flourished; trade corporations as a group did excellently; mining companies fared well; but public utilities lost slightly. Though a strong effort was made to extend war contracts to the smaller concerns through subcontracting if not directly, many small enterprises in manufacturing or trade serving civilian needs, between scarcity of raw materials or stock and price squeezes, suffered severely. Taking advantage of the situation, black-market operators gained accordingly. Though the rich, being taxed more heavily than ever, had to forego many luxuries, the heaviest losses fell on those whose wages or salaries failed to keep up with rising living costs and those largely dependent on fixed sources of income, a group estimated in 1943 to include 20 million people. For nearly everybody, there was some sacrifice of the pursuits of leisure to carry on longer and harder work; above all this burden fell upon those in

high authority. In assuming his full share, the President gave his life just as victory was in sight.

The Problems of Readjustment and the Postwar Boom. The ending of the war left the nation as well as the world facing far bigger problems of readjustment than after the First World War. The nation had failed to work out those problems adequately in the 20 years of succeeding peace; how long it will take to work out the bigger problems now confronting it only time can tell, but much will depend on what has been learned from the interwar experience, for basically the general character of the problems is very similar; also much will depend on what the rest of the world has learned, since the need for international cooperation in the effort is greater than ever.

Because this was realized, planning for readjustment in both the domestic and the international fields was started in 1943. To aid and direct relief and rehabilitation, UNRRA was then organized; in 1944, plans for an international bank and a fund to provide loans and help stabilize currencies were drawn up, and the Dumbarton Oaks Conference formulated proposals for preserving peace which evolved into the United Nations Charter of 1945. Earlier plans for domestic reconversion were greatly expanded in October, 1944, by creating a Director of War Mobilization and Reconversion. In November, 1945, when the Civilian Production Administration replaced WPA, it used many of the latter's powers over allocation, priorities, and stabilization to secure an orderly conversion. Decontrol proceeded rapidly during 1946, and most of what little remained was taken over by the Office of Temporary Controls in December.

The unprecedented speed with which some 10 million were demobilized in the 15 months after May, 1945, led to predictions of 6 million unemployed; yet the actual figure never rose above 2.7 million; by the last of 1946 when the number employed rose to 58 million, it exceeded all records. The unexpected ease with which the shift to civilian pursuits was carried out was due to various factors. Basic in the situation was the pent-up demand for consumer goods, especially durable goods such as housing, automobiles, and household appliances, and this was augmented by demands from abroad. At the same time many workers who had joined the labor force during the war, especially women and minors, withdrew while working hours were generally reduced to avoid overtime. For veterans the shift to civilian pursuits was further eased by loans, unemployment compensation up to 52 weeks, aid for resuming education or training, and various forms of preferential treatment. In the hope of sustaining a high level of business activity and lessening cyclical fluctuations the Full Employment Act of February, 1946, created a council to advise the Presi-

dent on periodic reports to be made to Congress as to the economic outlook and any measures needed to maintain full employment.

After 1946, greater business activity raised the employed civilian labor force to 60 million in the summer of 1947 and a year later to over 61 million, besides which there were 1,260,000 in the armed services. Unemployment fluctuated between 2 and 2½ million, which may be considered a normal minimum. That the postwar boom would continue so long and at such a pace had not been generally anticipated. The added impetus which it received was due chiefly to unexpected foreign developments, among which the rising need of Western Europe for American goods, the spread of Communism, and the growing fear of another world war were the most prominent.

The strength shown by the Communists in Greece, Italy, and France as well as in other parts of the world; the great difficulties met with in trying to arrive at an agreement with Russia that would restore normal life and hasten economic recovery in Europe, especially in Germany; and the seizure of control of Czechoslovakia by the Communists in 1948, convinced many that prompt action was needed to ensure the protection of Western institutions and ideals. Such action involved (1) more aid to western Europe to build up defense resources and to hasten economic recovery so as to lessen the suffering upon which Communism throve; (2) strengthening the military resources and preparedness of the United States.

For the latter purpose, a series of measures was adopted. An act of 1946 provided for an outlay of $3 billion over 5 years to accumulate stockpiles of imported raw materials essential for wartime production. In 1947, the government announced that it would retain sixty of its war munition plants in a stand-by condition and that seventy-one more would only be leased or sold on terms permitting swift conversion to war work. The National Security Act of that year created the National Security Council to advise the President on integrating domestic, foreign, and military policies relating to national security, with three subordinate agencies to deal with special phases of the problem. Accepting the lesson taught by the war of the need for one supreme authority to secure coordinated control of all the branches of the armed services, this was also provided for by creating the National Military Establishment though, as subsequent events have shown, it is not going to be easy to eliminate the desire for freedom of action or the effects of the ancient rivalries among the services. This same year also witnessed the signing of the Treaty for Inter-American Defense at Rio de Janeiro. As the Selective Service Act had lapsed in March, 1947, and volunteers had proved insufficient to keep the forces up to the authorized strength, an act of June, 1948, provided for the draft of men nineteen to twenty-five years of age (with numerous exceptions) for 21 months of

service. Also, the President was granted power to requisition the output of concerns making essential military supplies and, if necessary, to seize their plants. At the same time, Congress greatly increased the appropriations or authorizations for the military services, notably those for the air force.

In addition to the war preparations, there were also various other developments in the domestic field which added to the backlog of accumulated demands for goods and stimulated business activity. Before the close of 1946, nearly all price, wage, allocation, and other wartime controls had been abolished and taxes cut. The billions given out in various forms of veterans' aid were augmented by the issue of nearly $2 billion of terminal-leave bonds, half of which were promptly cashed, and by a series of state bonus bonds that totaled $1.5 billion early in 1948 with more in prospect. The ending of controls over consumer credit Nov. 1, 1947, resulted in the outstanding total rising to over $13 billion at the close of the year, or more than double that when the war ended. Though the money in circulation showed little change, the two years, 1946–1947, saw a net purchase of $3.5 billion of gold from abroad which increased the reserves and the lending power of the banks. Bank deposits (other than government) and loans rose substantially, but while interest rates rose slightly, starting in 1947, they still remained relatively low considering the intense business activity. Little was done to check inflationary tendencies.

The decline in business activity during 1945 consequent on the ending of the war ceased early in 1946 and was succeeded by a fairly steady rise that had not been seriously interrupted up to the middle of 1948. At the close of 1947, there were 3,870,000 business firms in operation, or over a million above the wartime low of December, 1943, that had aroused so much concern, and 470,000 above the figure for September, 1941. Farm output continued to be sustained at one-third above the prewar level; the prices of farm products rose sharply; the value of farm real estate per acre advanced till it nearly reached the 1920 peak; and farmers' assets reached the unprecedented total of $111 billion. Farmers were even more prosperous than during the war. Despite rising production costs, the realized net income from agriculture and government payments jumped to $18 billion in 1947, nearly 50 per cent above the best war years and four times that in 1940.

Two years after the low postwar point in the physical volume of industrial production was reached early in 1946, that output had increased 27 per cent and was nearly double the average for 1935–1939; the output of durable goods was more than double and that of nondurable goods less than double the prewar averages. Activity in the construction industry steadily rose, despite high costs and scarcity of materials. Contracts for residential housing, averaging over $3 billion a year, 1946–1947, exceeded those in the

1920's boom and led to a large increase in mortgage debt; the business outlay for new plants and equipment was over $11 billion in 1946 and seemed likely to be about $19 billion in 1948. Between increased business, rising prices in a sellers' market, and tax cuts, total corporate profits after taxes jumped to $17.5 billion in 1947, or nearly double the 1945 figure. Though dividends rose, the general tendency was to retain more than half the earnings in the business to meet the new capital requirements. Augmented by the rapid advance in prices, the national income for 1947 rose to an all-time high of over $202 billion.[1]

In view of the abnormal domestic and foreign conditions that accentuated and prolonged this postwar boom, the precipitate abandonment of price, wage, and most other controls during 1946, which in turn only aggravated the situation, was most unfortunate. President Truman wisely and vigorously fought against such action; but the Republicans had then gained control of Congress and he was often deserted by the conservative members in his own party. The cumulative pressure of a host of producer interests on Congress was such that the bill extending OPA beyond June 30, 1946, was vetoed by the President as utterly inadequate for the purpose; so all control then ended. Another bill, scarcely better, was reluctantly signed on July 25. In the meantime, however, prices had shot upward, and the effort to restore control under the limitations of the law proved so vain that on November 9 the President removed all wage and price controls except those on sugar and rice, which were ended during 1947. Meanwhile, the supporting allocation or rationing controls were also abandoned except those on certain transport facilities, exports, and some ten commodities. In November, 1947, the President sent Congress a ten-point program involving the restoration of various price, wage, and rationing controls to check inflation. The resulting act of December with its provision for voluntary controls was little more than a farce, though it did extend some of the existing allocation controls. The public demand for retaining rent control proved strong enough so that successive renewals extended it into 1949, but with substantial modifications, the most important tending to reduce the areas and classes of dwelling units covered and to permit a 15 per cent increase by voluntary agreement. Obviously this sad record of hasty decontrol shows that the lessons to be gathered from the experience of 1919–1920 had not been learned.

The immediate result was a rise in wholesale prices even more rapid than after 1918. In the last 6 months of 1946, they jumped 25 per cent, though the rise during 4½ years from January, 1941, to the end of the war had been held down to 31 per cent. Moreover, the advance continued till in

[1] A change in the method of calculating this item was made in 1947 and raised the figure that would have been obtained under the old method by about $12 billion.

January, 1948, prices were 47 per cent above the level of June, 1946, and 100 per cent above that of January, 1941. This brought them almost back to the peak of 1920, though, having started from a higher base in 1941, the total rise was not so great as that between 1914 and 1920. A slight drop then occurred and possibly marks the end of the sharp advance, yet the rise was soon resumed and by July reached an all-time high, slightly above the previous peak of May, 1920. With mounting labor and material costs and continuing strong demands, a further rise appears probable. The cost of living by January, 1948, was 27 per cent above that in June, 1946, and nearly 70 per cent above that in January, 1941. By the following June it had risen to an all-time high. Inevitably this postwar price rise will only aggravate the maladjustments in cost-price relationships and income distribution and the whole long chain of evils following in the wake of inflation that the country will have to face—evils the full effects of which may not be disclosed for a decade or more if we can judge from our experience after 1918 (see the charts on pages 826 and 442).

One prompt result was to set in motion a prolonged series of demands for higher wages with the accompanying strikes, both of which accentuated the tendency in a sellers' market to raise prices still higher. Early in 1946, the President authorized approval of certain wage increases, and in November all wage controls ceased. As organized labor emerged from the war freed from its no-strike pledge, stronger than ever, and enjoying the highest weekly take-home pay in history, it sought, as the cost of living soared, to retain the equivalent in real weekly earnings, despite the general reduction in hours to about 40 a week after 1945 and the consequent loss of the extra overtime pay. Since living costs continued to rise, each of the three years after 1945 brought a new round of demands for higher wages and other concessions, often backed by strikes. In 1946, the outburst of strikes led to a loss of 116 million man-days of work, which was triple any previous record, though in 1947 the loss fell to 35 million. Particularly serious were certain strikes that threatened to tie up the whole economy. To prevent this, the government was forced to take over most of the coal mines in May, 1946, and retain control until July, 1947. In 1948, a similar need was only avoided by the ability of the government to secure an injunction against the United Mine Workers, the temporary violation of which led to a fine of $1,420,000. At the same time, to prevent a complete tie-up of the railroads by a threatened strike of three operating brotherhoods, it had to put the roads under control of the army for two months till agreement was reached. Such strikes increased the shortages of many products for which people were clamoring and aroused a widespread demand for stricter limitation of trade union activities.

For the most part, by strikes or otherwise, labor was moderately success-

ful in securing better wage rates and other favorable concessions; yet, after 1945, the advance in rates generally failed to keep up with that in the cost of living. By January, 1948, the weekly wages of factory workers had risen to $52.10 or 10 per cent above the January, 1945, level (though the work week was about 5 hours shorter), while the cost of living had risen about one-third. Still, as compared with January, 1941, these wages had doubled while the cost of living was only 70 per cent higher. Thus, although there was some loss in real weekly wages after January, 1945, there still remained a very substantial gain as compared with January, 1941; as compared with 1913 they had doubled. Hourly wage rates in manufacturing averaged $1.29 in January, 1948, against $1.05 three years before and $0.68 in January, 1941. Outside the factory workers, the rise in wages was general but varied substantially. On the farms, rates continued upward and by mid-1947 were about 3½ times the rather depressed level for 1935–1939. Many groups, especially those among the lower salaried class or those lacking organization, suffered severely, as did those largely dependent on fixed sources of income. Probably most governmental employees found themselves worse off than in 1940, though the Federal authority did better by its employees than state and local units.

In a market largely dominated by sellers the common tendency was to pass most, if not all, of the higher labor costs on to the consumer, despite the President's request not to and a few concessions by large enterprises. For many, such action became a financial necessity. Railroads and various public utilities, caught between rising costs and controlled rates, began a long series of proceedings to sanction higher charges. In quick succession the railroads were granted several advances in rates, local transport companies were forced to obtain an increase in fares, telephone charges were raised, and various postal rates went up. Thus the spiral of rising costs and prices, substantially checked during the last of the war, was allowed almost complete free play. Whether labor will secure an enduring gain in real wages, as after the inflations of the Civil War and the First World War, remains to be seen.

The outstanding law resulting from the demand for stricter control of trade union activities was the Taft-Hartley Labor Management Relations Act passed over the President's veto in June, 1947. It applies to unions dealing with employers engaged in interstate commerce. Under it, jurisdictional strikes or those for union recognition and certain secondary boycotts were banned and injunction proceedings against them initiated by the NLRB were authorized. New closed-shop contracts after August 22 were forbidden and thereafter union-shop contracts could be made only following a favorable secret vote of a majority of the eligible employees. Unions having a union shop cannot charge excessive initiation fees; no

union can demand featherbedding work rules or certain discriminations by an employer in hiring or firing workers. To obtain the services of the NLRB in conducting elections or dealing with complaints of unfair labor practices by employers, unions must send that board annual reports with financial and much other information including affidavits that their officers are not Communists or advocates of violent overthrow of the government. Strikes by government workers were prohibited along with union outlays for political purposes. Unions were made liable for damage suits for losses arising from breach of contract, specified secondary boycotts, or a jurisdictional dispute. Unions as well as employers were required to bargain and to give a 60-day notice of a change or termination of a contract; if an agreement is not reached within 30 days, the government must be notified. If a strike threatens national health or safety, the President can intervene, appoint a board of inquiry, and, by securing an injunction, delay it for at least 60 days. Employers were granted full freedom in the choice of their bargaining representatives and more liberty to campaign against unionization; they were not obliged to grant foremen bargaining rights. The uses to which health and welfare funds could be put were limited and provisions made for their impartial administration. Minor changes were made to increase the efficiency of the NLRB and the Conciliation Service was removed from the Department of Labor and made an independent agency under the title of the Federal Mediation and Conciliation Service. That this law might involve drastic restraints on their freedom of action was made clear by the vehement opposition of union leaders toward it, both before and after its passage. How severe these restraints may prove in practice will depend on court decisions, possible methods of evasion, and administrative action.

The rising demand for stricter control of labor-union activities was reflected in a trend in state legislation that started even before the war, became marked in 1943, and in 1947 led thirty states to take action before the autumn of the year. Some laws granted labor more protection, but most imposed new limitations upon the unions. The latter were rather similar in character to those of the Taft-Hartley Act, though they varied considerably as between the states, and no one state took such comprehensive action as did the Federal government. The most common restrictions prohibited the closed shop, maintenance of membership agreements, secondary boycotts, and strikes by public employees; checked picketing, certain other strike activities, and jurisdictional disputes; and regulated disputes in public utilities, sometimes requiring compulsory arbitration.

As usual, war left the Federal government facing fiscal needs far greater than ever in time of peace. The $5 billion annual interest on the debt alone exceeded total expenditures for all purposes in any year of peace before

1934, and it was highly desirable to reduce the enormous debt. The decision to keep an army and navy of some 1.6 million men, or five times the strength of 1939, combined with better pay, more costly equipment, and the generous provision for veterans, together with the heavy international commitments, to be described later, involved by far the greatest increase over the prewar outlays. In fact in the budget estimate for fiscal 1949 these four items made up three-quarters of all expenditures as compared with 30 per cent of the total in 1939. Yet, despite the heavy outlay for these purposes and the tax cuts of 1945, with prosperous times yielding large receipts, fiscal 1947 ended with a surplus of $753 million—the first surplus since 1930. Also the national debt had been cut to $258 billion, or more than $20 billion below the peak in 1946, chiefly through cutting Treasury cash reserves but in part from sales of some of the $28 billion of war surplus goods and plants.

With the more favorable fiscal outlook, there appeared the usual postwar conflict between those demanding tax cuts and those who, like the President, opposed this on the ground that it would be inflationary and that a reduction of the debt, especially in prosperous times, was much more essential. Twice in 1947 Congress passed bills to reduce taxes but was unable to override the President's veto. However, in April, 1948, with its eyes on the coming presidential election and the prospect of a record surplus, but despite the large increase in the outlays for defense and world aid, Congress passed another bill over the President's veto. This act was estimated to cut taxes nearly $5 billion. Except for a cut of around $200 million in gift and estate taxes, the reduction was confined to personal income taxes and made effective as of Jan. 1, 1948. By increased exemptions or allowances and by reducing rates between 12.6 per cent on the lowest brackets and 5 per cent on the highest, it was estimated to relieve 7.4 million people from paying any such tax. The President insisted that, in view of the rising expenditures, the cut was likely to result in a deficit for fiscal 1949. However, fiscal 1948 ended with a surplus of about $8 billion and a reduction of the national debt to $252 billion.

In the case of state and local governments, the war years brought a reduction of nearly one-quarter in the $20 billion debt outstanding in 1940, but subsequently an increase appeared raising the total to nearly $17 billion in 1947. Faced with rising labor and other costs, both of these governmental units were forced to seek more income, especially after 1945. Previously, their problem had been greatly relieved by the rapid decline of relief expenditures after 1940 and the general tendency to continue many of the taxes imposed during the depression years to defray that outlay. For this purpose the general sales, use, or gross receipts tax was increasingly used. By 1947, state expenditures had risen to over $8 billion or $59 per capita as compared with $41 in 1940.

The problems arising out of the war and the postwar boom that will face various segments of the nation's economy have much in common with those that appeared after 1920 so far as general character is concerned, though in size they are greater. Another serious war would upset any prediction but, assuming peace, probably the readjustments facing agriculture will eventually prove the most serious, since it was this segment that secured the greatest relative gains and farm prices that had the greatest rise after 1940. As war-devastated countries recover and other countries increase their output, our exports will decline. How well the postwar high level of domestic consumption of farm products is maintained will depend on developments within the country. With wartime price supports extended to 1950 and in modified form still longer, together with the extension of the sugar quota system and other measures, insurance against immediate drastic losses seems to be provided. Short of unprecedented government aid, which the agricultural bloc may seek, eventual readjustment must be faced. It will be greatly eased by the vastly stronger financial position of the farmer today than in 1920. But it is to be hoped it will be worked out by methods having far more regard for changed world conditions and putting agriculture on a sounder and less artificial basis than many of those adopted between 1920 and 1940.

The very immediate outlook for manufacturing also appears favorable, based on an abnormal foreign demand, new defense preparations, unsatisfied civilian needs, and the necessity for expanding plant and equipment to provide for all these demands. Yet the current level of these demands is abnormal and cannot be expected to continue; no small portion of it is based on expanded credits; signs of the ending of the sellers' market for certain consumer goods are beginning to appear; the whole outlook might be altered very quickly. In the long run, much will depend on so increasing efficiency as to keep prices below the point of marked consumer resistance.

The housing shortage may continue several years, barring a depression, and so stimulate building. Yet the urban real-estate difficulties of the 1930's may well be kept in mind, for construction costs are high, mortgages are large, and both values and rentals would suffer in any general reaction. The conditions in lumbering and most mining will depend largely on the prosperity of the manufacturing and construction industries, but rapidly rising demands make the outlook in the oil and natural gas industries particularly bright. Most railroads and public utilities are likely to suffer from the delays in getting rate increases to offset the rising costs of operation and replacing plant and equipment, though mounting demand may mitigate the situation in the case of the electric-light and -power industry. The vast fleet of merchant ships acquired by the government during the

war is being disposed of under an act of 1946 by sale at home or abroad, the unsalable portion being either kept in reserve or junked. The expectation is that 1,000 ships of 10 million tons cargo capacity will be retained under the American flag, distinctly favorable terms of purchase being offered to subsidized lines. With rising costs of operation and reviving foreign competition, this may well involve increased subsidies.

The war left the United States far more deeply involved in international economic affairs and problems of greater seriousness than did the First World War. Moreover, international politics, having developed an acute aspect, complicated the attack on these problems even more than national politics complicated that on domestic issues. Europe's basic economic needs included the replacement of the properties damaged by war, the restoration of normal production and trade relations, and means for financing all this that would permit of the maintenance of stable currencies along with reasonable exchange rates, yet would avoid excessive taxation. Unless the depressed condition of large groups could be promptly bettered and an abnormal rise in the cost of living prevented, popular discontent would spread and radical elements gain in power.

Germany, the heart of the prewar economy of Central Europe, having been fearfully ravaged during the war, was left for the time being split in twain, her economy completely disrupted. The effort to secure the agreement with Russia required to promote her speedy unification and recovery met with only endless obstacles. Britain depended on extensive imports of foodstuffs and raw materials, but having lost most of her large foreign investments and much of her shipping, the receipts from which items had largely served to offset her unfavorable balance of trade in prewar times, lacked sufficient means for payment. By building up her exports to 50 per cent or more above the prewar volume, a balance in her international payments might be achieved, but that required time and credit. Short of that, said some, emigration by the millions was the only solution. France had suffered less than some countries from actual destruction, but cabinets were unstable, and along with Italy she experienced a serious currency inflation. In the Low Countries and Scandinavia recovery proceeded more rapidly.

As the postwar situation actually developed, the western half of Europe found that its prewar trade relations with the eastern portion under Russia's domination (which also had its own problems of reconstruction) were largely destroyed, despite some reciprocal trade arrangements. Thus, for even normal, as well as the vast abnormal, needs western Europe had to look elsewhere, chiefly to the Western Hemisphere and above all to the United States, since this country alone could provide most of the needed goods, other than certain foodstuffs and raw materials, and it alone could

assume most of the financing involved. The same held true of many military supplies desired for purposes of defense.

How great the resulting demand upon the United States was is best indicated by the country's estimated export of $35 billion of goods and services to the countries of western Europe in the two years after 1945. From these countries, the United States received less than half as much, leaving a balance of $19 billion to be paid for by other means and creating a great scarcity of dollar exchange in the debtor nations. The immediate settlement of this debit balance to the United States was made by various means. There was a net purchase of $3.5 billion of gold by this country, which brought its holdings to 60 per cent of the world's central gold reserves by the close of 1947. Some was made by the transfer of foreign-owned American investments or dollar reserves, some by private investment abroad or gifts, but a large portion had to be settled by United States government grants in the form of gifts or loans. These were also extended to other countries outside of Europe.

It was the prevalent belief, despite considerable opposition, that the United States would gain in the long run, both economically and politically, by the financial aid extended. It would gain politically by promoting the prosperity and strengthening the military defenses of the nations more nearly supporting its economic and political ideals; it would gain economically by hastening world recovery and lessening the chance of such a reaction as had engulfed the world after 1929. Also, immediately, there would be substantial gains for the groups producing the exported products, even though the supplies available for domestic use were thus reduced and the ultimate cost, which was most uncertain so far as the loans were concerned, would fall on the taxpayers. Abroad, some looked on American aid as contributing to a more equitable sharing of war losses among the Allied nations.

Up to the time it ceased operations in June, 1947, UNRRA had spent almost $3 billion for relief purposes, nearly three-quarters of which had been provided by the United States. The total assistance made available to western Europe by this country from July 1, 1945, to the close of 1947 was nearly $12 billion, of which a third consisted of grants, most of the balance being loans on property credits. Since it was then evident that continued financial aid for several years more would be required to see the process of rehabilitation through in western Europe, a survey of the needs was made at a conference in Paris in 1947, the results of which were presented to this country in the Marshall Plan. This indicated that western European countries in their current account with the rest of the world from April, 1948, through June, 1952, would face a deficit, decreasing from year to year, but totaling between $19 and $23 billion. It was proposed that

the United States assume responsibility through loans and gifts for financing some $17 billion of the total. The benefiting nations in their turn were to agree to adopt measures needed to hasten their recovery. In June, 1948, Congress, unwilling to commit itself for a longer period, made $6 billion (nearly what had been asked) available for the period from April, 1948, through June, 1949.

Another line of action taken by the United States designed to promote similar ends and to forestall such unfortunate trends as had developed after 1918 is reflected in the various efforts made to secure greater freedom in world trade. In October, 1947, under reciprocal trade agreements with twenty-two countries, a further substantial reduction in tariff duties was granted in return for cuts in duties on American products by the other countries. It was estimated this might reduce the ratio of duties paid to the value of dutiable imports to 15 per cent. This would be less than half the ratio in 1940 and even below that prevailing during the moderate protection of the 1850's. In June, 1948, Congress again extended the reciprocal trade agreements law, but, ominously, for only one year instead of for three as the President had requested. Following a series of earlier conferences, representatives of fifty-three nations meeting in Havana in March, 1948, set up the International Trade Organization with a world trade code. This code called for restricting or eliminating a large number of the devices for impeding international transactions that have been employed in recent years. To get the code put into effect by the signatories is another problem, but if this can be done it would have far-reaching effects.

Whether the gains made under the reciprocal trade agreements will be retained and whether such aid as may be extended under the Marshall Plan will prove sufficient to carry western Europe through the difficult problems of reconstruction remains to be seen. Probably political issues, domestic and foreign, of the different nations will prove to be a more important factor in the final outcome than economic forces, though the two are inextricably interconnected. A failure will only accentuate the tendencies to split the world up into economic segments and self-sufficient autarchies such as developed after the First World War. If the difficult international cooperative effort required to avoid this can be secured, it will promote peace as well as a higher standard of living both in the United States and in the rest of the world.

Chapter XLV

THE ACHIEVEMENT: THE ADVANCE IN THE STANDARD OF LIVING, 1770–1930

Introduction. In Chap. I it was stated that for the economist the primary and underlying problem in the study of economic history was how a given group of people proceeded in their effort to raise their standard of living. The foregoing account has had as its main, though not the only, objective an attempt to analyze and make clear the underlying conditions and the changes made in the economic or other social institutions by which the American people sought to obtain a better living. This was based on the belief that by studying the factors involved and their working, by watching the evolutionary process through which the existing economic order was evolved and its problems created, and by learning the reasons for past successes or failures, we would be better fitted to guide future action and promote economic progress. Some of the more general conclusions for this purpose will be given in the next chapter. Here it remains to suggest what the American people achieved by their effort, for it is only as one secures some conception of the results actually obtained in advancing the standard of living that the success of that effort can be judged.

This is the more essential because the present generation has so little conception of what living meant in terms of the concrete goods and services available to earlier generations. We take too much of the present comparative abundance for granted and have no realization of what life was like in a frontier log cabin with an essentially household economy, or when travel was mainly on horseback, candles provided the chief light, matches and modern plumbing were unknown, frequent plagues ravaged the cities, medicine was in its infancy, and the majority of people died before thirty-five years of age. The preceding chapters have repeatedly stressed developments promoting economic progress. Consequently, when one hears the statement that today a third of our families do not have even a decent standard of living, he will be led to inquire how real that progress was and, if real, what forms it took and who benefited by it? To suggest the answers, if only in an imperfect way, is the purpose of this chapter.

No pretense can be made of presenting here an adequate account of the advance in the American standard of living. Sufficient data do not exist, and for the earlier period even those available have not been studied.

Besides, even a good summary of the obtainable material might well fill a large-sized volume. Also there are great variations among the standards of different groups—among the rich, the middle class, and the poor; for each of these classes it will vary among those living in cities, small towns, and purely rural districts; and it varies among different sections of the country. Both sufficient data and space are lacking to describe the variations among all these groups at different periods of time. Still, even a rather impressionistic summary of the chief concrete additions to the American standard of living will provide a fair conception of the nation's achievement in this field of effort.

The term "standard of living" is here employed to cover the economic goods and services used by various groups in providing for their wants. It includes, besides those purchased, such as are produced for its own use by the family, and such as are provided by the state or by philanthropic and other sources. It also includes the amount of leisure gained through the reduction of the time devoted to earning a living. Though some attempt is made to suggest differences in the distribution of wealth and income and variations between the standards of the rich and of the poor or of those living in urban and rural districts, the main attention is centered upon the standard of the working people in both city and country who constitute the great mass of the population. Since around three-quarters or more of their living costs is represented by the outlays for food, housing with its operation, and clothing, most attention is given to these topics. However, the rising outlays for leisure-time activities and the increasing importance of the contributions made by the state cannot be overlooked.

To provide a clearer idea of the progress made between periods, the conditions existing around the close of the colonial era will first be described, followed by an account of the situation around 1860, and concluding with that for the period around 1930. Scarcity of data will necessitate the use of much material only approximately related to these dates, and means that many of the generalizations must be considered as tentative.

THE STANDARD ABOUT 1770

Housing. The typical dwelling on the frontier was the log cabin which, if the help of neighbors was available, could be erected in 2 or 3 days. Commonly it was about 16 by 20 feet and 7 feet high with a sloping roof covered with rough-hewn boards. Moss and clay filled the chinks between the logs. Usually there was but a single room, but if large enough a partition might be constructed and the section under the sloping roof made into an attic reached by a ladder. The floor, if not of dirt, was of puncheon slabs. In a large opening at one end was the fireplace with the chimney on the

outside, commonly built of stone but often of twigs plastered with clay. Usually only the open door let in the light of day; if a window was made, it was filled with cloth or greased paper and had a wooden shutter. Though well-nigh universal on the frontier, the log cabin was common in the more remote rural sections elsewhere and was customary for slave quarters in the South.

Typically the moderate-sized frame house replaced the log cabin in time as the population in any locality became sufficient to support a sawmill. Most of the farm population and those making up the middle and lower classes in towns and cities lived in such houses. In the larger cities, however, especially in the middle colonies, houses of brick and sometimes of stone were fairly common, partly owing to local fire ordinances; they were also to be found scattered through all parts of the country where the raw materials were readily obtainable. The frame house used heavy timbers, had clapboard sides, and a sloping shingled roof. Ordinarily it was 1½ or 2½ stories high and contained from four to seven rooms besides an attic. Often, especially in the milder climates, the kitchen was built under a sloping roof in the rear or in a separate structure. Adjoining might be a storage shed, chiefly filled with firewood in the North, and also including a privy, unless this was in an outhouse. The foundation was of brick or stone and a cellar under at least a portion of the structure provided cool storage space for food. The chimney, commonly of brick, was at one side or sometimes in the center, in which case it might have fireplace openings in more than one room on a floor. The floors were of heavy, broad planks, and the walls usually plastered, but possibly left bare or only whitewashed. The exterior might or might not be painted. For the windows, small, leaded glass panes were common, but by no means universal.

Of the houses of the rich we possess much more authentic knowledge. Some of the planters' and merchants' stately mansions still survive; at least the pictures of a few, such as Washington's home at Mount Vernon or the Vassal house (later Longfellow's home) at Cambridge, are familiar to most. Built of either brick or wood, often three stories high, with ten or more fairly spacious rooms, two or more chimneys were needed for the many fireplaces. Paneled walls might be found in the chief rooms or perhaps the recently introduced foreign wallpaper.

House Furnishing and Equipment. The furnishings of the log cabin, being almost entirely homemade, were both crude and meager. Poles caught in the wall and supported by posts provided the frame of a bed; fir boughs laid on tree branches, or possibly a rope, served for mattress and springs till something more comfortable could be obtained. Table and chairs, chests and shelving were homemade, and much tableware besides. The metal utensils for cooking or eating, possibly a few items of pewter or

crockery, and the essential gun, ammunition, knives, tools, and farm implements that could be transported were among the few things brought to the frontier home. Table and bed linen, if not brought along, might be made in time, but bearskins or other furs could be used on the bed. The open hearth fire provided all the heat and most of the light, unless tallow candles were made. Water had to be brought from the nearest spring or stream.

Although those living in settled districts, both rural and urban, had far more in the way of convenience and comfort, this varied greatly with the family's means. Doubtless much of the simple furniture of the poor was homemade, but local cabinetmakers could provide cheap and plain chairs, tables, beds, bureaus, and chests made of pine, birch, or maple. The chairs were hard and straight, but feather beds contributed both comfort and warmth for sleeping. For cooking, which was done at the open hearth or in bake ovens, utensils of iron, brass, copper, and tin were in general use. Wooden plates and bowls were widely used for tableware and considerable pewter, but relatively little china or glassware. Dry gourds served many purposes in the handling of liquids. The board floors were commonly bare, though some might be sprinkled with fine sand and others have matting or a few rag rugs. Light linen draperies might adorn the windows, but walls carried little in the way of decoration.

For the vast majority of homes the fire in the kitchen hearth provided all the heat; only by remaining near it could one be comfortable in cold weather. For living rooms the introduction of the Franklin stove about the middle of the century proved a great blessing, for it radiated vastly more heat than the usual fireplace and its use rapidly spread, except among the poor. Few could afford a fire in their bedrooms, and the prospect of retiring to a chilly bed could be mitigated only by resort to the use of charcoal warming pans. In cold churches, footwarmers lessened the discomfort in listening to prolonged sermons. Cold rooms might produce a vigorous race of such as survived, but they certainly led to many an untimely end; and the number of those who, like John Adams, wished that they could spend the chill winter months in hibernation must have been legion.

Commonly, all water had to be brought in from a spring, well, or stream. Soft rain water gathered in barrels as it ran from the roof gutters was useful for washing. Hot water had to be prepared in large iron kettles swung in over the open fire. For a hot bath, wooden or tin tubs might be available, and in cold weather this operation was likely to involve the preempting of the kitchen. The lack of all plumbing made sanitation and sewage disposal burdensome problems.

The cost and poor quality of lighting was a great incentive to the habit of working from sunrise to sunset. Pine knots burning on the hearth fur-

nished all the illumination for many a home, but candles were the main reliance of most, both rich and poor, and they were made in nearly every family, usually of tallow. Oil of various types, usually that of the whale, was burned in small dishes with little lighted wicks like those of classical times, but gave only a furtive light. Matches being unknown, fire was obtained from lighted coals when available, otherwise by the tedious process of kindling a spark from a flint or a powder pan.

Though rich as well as poor suffered from poor heating, lighting, and no plumbing, the former could at least secure other more luxurious home fittings. By this period, mahogany was rapidly displacing the early oak and the later walnut of Queen Anne's time as the fashionable wood for fine furniture, and the designs of Chippendale and his contemporaries were in vogue, though some preferred the more elaborate mode of the French. Some fine furniture was imported, but most was turned out by colonial cabinetmakers. Oriental rugs, then known as "Turkey carpets," were beginning to appear in homes of the rich, along with imported wallpaper. Also from abroad came the heavy satin and silk window drapes, the elaborate crystal chandeliers and sconces, and the ornate clocks. Family portraits by colonial artists adorned the walls. Besides much pewter, the rich were using fragile china and glassware as well as the more durable delftware. Serving the double purpose of ostentation and a ready source of cash, a substantial amount of silver, mostly of colonial make, decorated their tables and sideboards, and some were importing the cheaper Sheffield plated ware recently made available.

Food and Drink. As regards food, the outstanding features of the general situation at this period were (1) its comparative cheapness and abundance, (2) the heavy dependence on household or local products, (3) the very limited means for preserving foods, (4) the lack of variety in so far as the masses were concerned, especially in the cold months.

Frontier settlers, being almost completely dependent upon what they themselves could produce or find in the environment, were likely to suffer most, both from lack of variety and scarcity, especially in the early years. The food and any livestock that they brought with them, supplemented by the wild game, fish, nuts, and berries of the region, commonly had to suffice until their little clearing yielded some grain and vegetables. Crops were uncertain and failures frequent until experience revealed the products and methods of cultivation for which the soil was best adapted, and it might require several years to prepare much land for good cultivation. These were commonly years of severe hardships and endless toil, with the food problem the most pressing of all.

For the masses, bread was indeed the staff of life. Commonly made of corn or wheat, in one form or another, it was a substantial element, often

the chief element, of a goodly portion of the meals. Meat was cheap and, in limited quantities, generally available, far more so than among the lower classes in Europe. Pork in one form or another was much the most common meat, beef and veal were widely used, but mutton and lamb enjoyed little popular favor. Poultry and their products were found nearly everywhere and dairy products almost as frequently, though less common in the tidewater South; much the same was true of fresh fish. Nuts and berries were obtainable in all rural regions. Outside the cities, those who were not shiftless kept a cow, tended a garden patch, and had a few fruit trees. The careful Dutch and German farmers of the middle colonies usually excelled all others in the quality and variety of their garden and orchard products; too many sadly neglected the variety of food thus obtainable. Those in the larger towns or cities who did not raise what they required found ample supplies of products of the region in the local markets.

Few imported foodstuffs were widely used by the masses, the chief exceptions being salt, molasses, and the rum made from the latter. Cane sugar was still expensive, and most people used molasses, wild honey, or maple sugar for sweetening. Tea was widely used except among the poor, coffee had not then attained its modern popularity, and chocolate was consumed by relatively few. Though the colonists in general drank freely, most had to be content with cider, rum, some whisky and, especially in the middle colonies, beer; the imported wines and brandy went to the tables of the upper class; the same was true of the imported semitropical fruits and spices.

Lack of many means for preservation further limited the available food. There is little indication of the use of ice in the storage of food at this period; the main reliance for keeping food fresh was the cellar or cold running water. To prevent perishable foods from spoiling, they depended largely on salting, pickling, drying, and preserving. Such meat as could not be promptly used after slaughter was salted, smoked, or pickled; the same treatment was given fish when not packed in ice. The cost of sugar limited preserving among the poor, but it was extensively employed in many families, and the drying of such fruits as could thus be saved was general.

Under such conditions we may assume that the meals of most people, though commonly substantial, were likely to be simple and monotonous. Bread and milk probably constituted the essential portion, if not the whole, of the breakfast and the supper for a great many. This was all that was listed by several Boston writers in 1728 in discussing that provision for a "middling" family. At the Harvard commons in 1765, where board was 5*s.* 10¾*d.* a week, breakfast consisted of bread and butter with the choice of milk, coffee, tea, chocolate, or beer as a beverage. At supper bread and

milk appeared again, perhaps accompanied by a stew or pie including meat left over from the midday dinner. At noon the students were given a pound of meat, boiled or roasted (on Saturdays fish), two potatoes, pudding, cabbage or greens in season, bread, and cider. Meat, in some form, could be expected by most for at least one meal along with the common vegetables of the locality in season. The combination of these in stews and substantial soups was very common and helped to vary the monotony and to make use of leftovers. Dessert was apt to be a pudding, bread or hasty puddings being very common, but pies were frequent. Fresh fruits and berries in season afforded a welcome change. The food provided for the plantation slaves consisted chiefly of corn meal, hominy, or rice with an allowance of salt pork and a little molasses, plus such produce as the slave was allowed to raise for his own use.

Despite the conditions limiting variety, the wealthy and many of the middle class had a considerable range of choice afforded them at their meals if one can safely judge from travelers' accounts. For breakfast, bread in various forms, eggs, pancakes or fried hominy, several cold meats, pies, and a choice of beverages. For dinner, which was likely to come around 2 or 3 o'clock, there might be soup, fish, roasts, fowl, several vegetables in season, pastries, pudding, and fruits, a variety of wines or other liquors, and numerous relishes or preserves. Tea might be provided late in the afternoon and at 8 or 9 in the evening a substantial supper with numerous kinds of bread, cold meat, and drinks.

Clothing. The chief features of the clothing of this period were (1) the marked contrast between that worn by the working classes and that worn by those groups thought of as the gentry. (2) The garb of the workers was as simple, plain, coarse, and eminently practical as that of the gentry was the reverse, especially that for dress occasions and that of the men as well as that of the women. (3) By far the greater portion was made in the home; only the well to do patronized the tailor, the dressmaker, or the milliner and could afford imported things.

Along the frontier, the clothing of the men was appreciably influenced by that of the Indians. A loose hunting shirt of coarse linsey or deerskin was held together by a belt, to which various things could be fastened, and a cape gave added protection from wet and cold. Breeches and leggings of similar material covered the hips and legs, deerskin moccasins replaced shoes, and caps were of felt or fur. The women had dresses of linsey (linen warp and wool woof), crude shoes, if any, and a kerchief for head cover.

The clothing of the laboring class was mostly homemade and designed primarily for economy and utility. The material used was generally coarse linen or a mixture of flax and wool, often leather in the case of men. Workmen wore long shirts or blouses, supplemented, when warmth was required,

by a vest or coat, knee breeches, wool stockings, and coarse shoes. A felt hat and, for working hours in many trades, a long leather apron completed the outfit. The women wore short skirted gowns of wool or linsey-woolsey or, in summer, of calico with a linen collar or colored kerchief about the neck, wool stockings, and coarse shoes. For "Sunday best" either sex might have garments of a better quality but of very similar character, except for the features designed to facilitate work.

Concerning the garb of the rich, especially that for dress occasions, contemporary accounts and portraits provide far more information. The dress of the men, in marked contrast with that of later times, rivaled that of the women in its brilliance of color and costliness with silks, satins, velvets, embroidery, braid, lace, ruffles, and fine linen. The long-tailed coat, cut away in front, displayed a brilliant vest and linen shirt with ruffles and lace; silk or satin knee breeches, silk stockings, and low shoes with silver buckles adorned the lower limbs. Though the wig was going out of fashion after 1770, the hair was powdered, curled at the sides, and done up with a ribbon in a short queue at the back. For outdoors, a broad-brimmed three-cornered hat and a long woolen coat gave protection against the weather. Even the less formal garb for the home, such as the flowing silk morning gown or the turban, was likely to be colorful if less ornate, and probably made more use of wool. A velvet suit lined with satin might cost £38; one of fine cloth was £8.

Among the women the styles of the French court were reflected in their formal dress. The brilliant silk gowns were made with a close-fitting bodice and long flaring skirts with flounces and ruffles, opening in front to display an elaborate underskirt of like material. Lace, ruffles, and embroidery abounded. Silk stockings and small high-heeled slippers covered the feet. The high hairdress then in vogue with its elaborate puffs, curls, powder, ribbon, and artificial flowers might require hours of the hairdresser's service. To protect it outdoors, the ample calash or long hooded cloaks were used. In warm weather, outdoors or in the home, bright gowns of chintz or fine cambric might be worn and perhaps a Leghorn hat; simpler materials of wool or linen set off with a lace collar and cap and an apron might be used for household duties.

Medical Care and Public Health. In the almost primitive state of medical science at this period care for the public health was meager. Most doctors were trained under an apprenticeship system; some came from abroad and a few went to Europe for such training as was obtainable. The first medical faculty in the country was organized in Philadelphia in 1765; the only other before independence was in New York in 1768. Bleeding, purging, blistering, and using emetics were the most common forms of treatment for a wide range of diseases. Barbers commonly did the bleeding

but, except for this, doctors had to act as surgeons and often as dentists, and had to operate without an anesthetic. Midwives, if available, presided at childbirth, and trained nurses were unknown.

Practically all the sick had to be cared for at home; the few public institutions affording such care were only for the poor. Philadelphia started the first hospital solely for the care of the sick about 1750 and New York the second about 1775. Except for the measures to prevent the spread of highly infectious diseases, which were purely defensive, such as quarantine and the pesthouse, there was almost no public action to promote health, sanitation, and hygiene. Such plagues as smallpox, typhus, or the devastating yellow fever, commonly brought to the city ports by ships, carried off victims by the hundreds and flight to the country was the chief recourse.

How much a generation living under such conditions suffered from misery and torturing pain the generation of today can scarcely comprehend. The fact that, in addition to this suffering, one born into that earlier generation faced the average prospect of dying before he was thirty-five suggests one, perhaps the greatest, deficiency in the standard of living of that day.

The Contribution of the State and of Philanthropy. Turning from certain general classes of goods or services which enter into the standard of living to the class provided by the state, we find that even at this period it included a wide range of things, though meager as compared with the situation today. Some, like defense and justice, were provided because of their essential character and because government was set up as the only practical means by which they could be secured; others were provided, often as a supplement to private action, because demanded by the currently dominant social ideals. Governmental activities varied greatly from the large cities to towns, rural districts, and the frontier where they were negligible. Most lived under conditions where they were very slight. As the more important have been detailed in an early chapter, a summary statement to help round out the picture will suffice here.

The performance of those functions commonly recognized as the duty of the state, such as providing for defense, the maintenance of law and order, protection of personal and property rights, and care for the poor, was fairly well carried out according to the standards of the day, except in the frontier regions. Road construction and maintenance were inadequate, so that overland travel and transport were difficult and costly. The per capita outlay as late as 1790 of only 1 cent a year for postal service suggests how meager this service must have been. In the colonies with an established church, its services were a function of the state. For education the state did almost nothing outside the meager provision in New England and such control of the instruction of the poor as was attempted elsewhere. Parochial schools and the few denominational colleges supplied most of the rest of

the schooling not obtained under private instruction. Obviously the percentage of illiterates must have been very high.

In the larger towns or cities, a wider range of governmental activities was not only necessary but economically more feasible. Public pumps provided the only water not supplied through private initiative and, sewerage systems being unknown, the disposal of sewage, garbage, and refuse was a serious problem. Even in the cities only the most important streets were paved, and at night the wayfarer usually had to carry his own lantern. A citizen's watch looked out for fires at night; volunteer companies manned the few fire engines available, and citizens formed in line to pass along their leather buckets of water, assuming water was at hand, though the supply was seldom adequate. The provision for public health, as previously indicated, was slight and that for public recreation nil. The insignificant contribution of local government to living is indicated by the per capita expenditure of New York City even in 1790 of only $1.87 a year—just one-hundredth of what it was in 1935.

Leisure Time and Facilities for Its Use. The colonists enjoyed little leisure time, whether considered by the week, the year, or the lifetime. For most, labor from sunrise to sunset was customary and, where possible, it often continued into the evening hours. Though the pace was moderate, there was little relief for man or woman until the Sabbath intervened. Then, as far as possible, labor was commonly suspended, and among the stricter sects the day was given over largely to religious activities. Holidays during the year were few, and among the masses vacations were almost unknown. Nor did the course of the typical life provide much more in the way of leisure. For most children work began at a tender age, and play was reduced to a minimum; cultural education was given little time and vocational training commonly took the form of an apprenticeship. Full-time work once started generally continued till incapacity or death intervened. Among the well to do the children might start work later; the wives might have more leisure, though still performing many household duties; but these men also usually worked to the last. Thomas Cooper knew of but one gentleman of leisure in rich Philadelphia as late as 1793. Even the Southern planters, the nearest approach to a leisure class, found much that interfered with their sports and recreation.

The facilities available for leisure-time use in the more cultural pursuits other than religious were very limited. Few possessed many books besides the Bible. Free public libraries were unknown, and such collections as that started in Philadelphia by Franklin or those in New York were available to few. Weekly newspapers existed in the larger places, but their cost was prohibitive for most; an enduring domestic magazine had yet to be founded. The first American novel was still to be written, and few English novels were

to be found. The little reading done by most was likely to be serious, primarily religious and secondly political in character with a sprinkling of the classics. The group that could be considered well read was small but notable. Theatrical productions, sometimes by foreign troupes, though still forbidden in Boston, could occasionally be seen in other cities; vocal or instrumental concerts were not uncommon. Art collections and museums were still in the future. Travel for any distance, except on business or to a new settlement, was rare; where water transport was not available, it was usually on horseback, though stages ran on the few great highways. A European trip for education was confined to the rich and one for pleasure extremely rare, especially for women.

For the less serious activities of leisure time, the chief reliance was on those of a noncommercial character. Children with the time for them, engaged in sports and games not unlike those of today. Among adults dancing and card playing were widely indulged in when religious scruples did not check them, and picnics and drives also provided relaxation. Horse racing and cock fighting with the accompanying betting were especially popular in the South. Hunting and fishing prevailed generally, and in the North winter sports could be enjoyed. Taverns and, to a less extent, the country general store provided the most popular social gathering centers for the men. In the purely rural districts, after-church visiting was common, and the work connected with house-raising, husking bees, and quilting bees was accompanied by social features.

The Cost of Living. The few scattered facts available permit of only the crudest inferences as to the distribution of wealth and income or the cost of living at this period. The colonial men of wealth were mostly merchants, plantation owners, or holders of large landed estates. Although there was a substantial increase in the number and size of large fortunes in the quarter century ending in 1775, there were very few, if any, which then exceeded $500,000. Washington, considered one of the richest men of his time, left about that when he died in 1799 and probably had less in 1775. In 1781, Gabriel Manigault of South Carolina, possibly the richest colonist, left an estate, including 490 slaves and 43,532 acres, valued at $845,000. Most of the land in great estates was relatively undeveloped and had only a speculative value. The years of the Revolution brought large gains to some, as well as heavy losses to others, and apparently mark the emergence of the millionaire class.[1]

Of the proportion of those making up the middle class we have no basis for judging, and we can only guess that, among the masses of laborers, artisans, and small farmers who owned homes, such property as they possessed was likely to range between $200 and $1,000 in value with an

[1] Possibly John Robinson of Virginia who died in 1766 should be ranked as a millionaire.

average of under $400. Of the total, real property made up much the greater portion. Of the small value of the personal property owned by most, the record of wills bears eloquent testimony. The care with which a silver spoon, a silk dress, a bed, a chest of drawers, or a head of livestock was bequeathed shows a society where scarcity made little things important.

Concerning the cost of living there is equal uncertainty. Washington's expenses while serving as President averaged nearly $27,000 for the years 1790–1792, but were doubtless greatly increased by his official responsibilities. At this date, Thomas Cooper "could not find on enquiry that the most expensive persons in Philadelphia and New York lived at an expense beyond £2,000 sterling a year." Though it was said that a minister could enjoy a comfortable living in Boston on £100 a year about 1740, it would have required somewhat more by 1775. In 1768, the yearly expenses of a student at Princeton, including board at 6*s.* 6*d.* a week, lodging, firewood, candles, washing, and tuition, were estimated at £23-13-0 or about $63. The fact that wages of common labor were around 35 to 40 cents a day and those of artisans from 60 cents to $1.25 provides the safest basis for estimating the cost of living for the masses. Such workers, owning their home and probably getting some food from their garden, might be expected, assuming full employment, to have from $100 to $350 a year for what they had to buy and for any saving. On the more nearly self-sufficing farm, the actual cash outlay was probably between $20 and $50 a year. The cost of living at the bottom stratum is suggested by the fact that bids were made to supply board and lodging for the poor for a year at from £5 to £8 per person.

THE STANDARD ABOUT 1860[1]

That the great economic development of the country between 1770 and 1860 made possible a very substantial advance in the general standard of living of the people is unquestionable, even though the available data for the later period are still so far from adequate that most generalizations must be considered as tentative.

Housing. For housing in frontier sections wherever timber was available, the familiar log cabin was still in wide use, as it was also among the poor whites and slaves of the South. In Illinois in 1818, a two-room log cabin cost $50 and a barn $100. When settlers spread over sections of the prairie where trees were scarce, the sod house or dugout was likely to provide the first type of abode, unless a near-by railroad brought in Eastern lumber. Thick prairie sods piled on one another constituted the walls on top of which poles were spread and covered with sods. A strip of heavy

[1] For this period I have drawn extensively on the doctoral thesis of my former student, Edgar W. Martin, "The Standard of Living in 1860," Chicago, 1942.

cloth or hide served for a door. If a good slope of ground was handy, a smaller dugout could be made, and its size increased by a sod extension. In the California gold diggings, fir bough shelters, canvas tents, and later rough plank lean-tos or cabins provided shelter.

The great mass of the people living on farms or in towns and the outskirts of cities dwelt in frame houses. In the state of New York in 1855 three-quarters of the dwellings were of this type with an average value of $750; a seventh were of brick averaging nearly $5,400 in value; and nearly 7 per cent were still log cabins with an average value of $40. About 1840, the much lighter balloon frame began to replace the old heavy timbers with their expensive mortise and tenon joining, and the still earlier improvements in sawmills helped to cut the cost of lumber. The usual structure was 1½ to 2½ stories high and contained from four to eight rooms of moderate size. Shingles and painted clapboards covered the exterior; the interior walls were plastered, and planks, usually of pine, covered the floors. Windows, now freely employed, had larger panes of glass set in a wooden frame that opened up and down instead of outward. One, or perhaps two, brick chimneys provided outlets for the heating equipment.

In the East in the early 1850's, a small country cottage or farmhouse could be built for $200 to $500, a simple frame house of five to eight rooms for $350 to $1,000, and a more pretentious residence for $3,000 and upward. Lincoln's substantial home in Springfield, which so many know in picture, was built in 1839 as a 1½-story house, bought by him for $1,500 in 1844, and a full story added in 1856 at a cost of $1,300.

In some of the larger cities or factory towns, the growing congestion had led to the rise of the tenement house, the evils of which appear to have been at their very worst around 1860. Philadelphia could still claim to be a city of homes. Conditions in Baltimore, Boston, and some of the mill towns were very bad, yet far surpassed in New York, where most of the great immigrant influx after 1845 had landed. In the country as a whole, fourteen out of fifteen dwellings were occupied by single families, and there were 5.53 inhabitants per dwelling; in Boston this figure rose to 9.3 and in New York to 14.6. In the latter city in 1865, some 15,000 tenement houses sheltered nearly 500,000 people, over half the population, and 15,000 lived in cellars. Rent for a single room ran from $4 to $7 a month, and it might be shared by more than one family. Never in the country's history have the housing conditions been worse.

By this time, the houses of the middle and upper classes in the larger cities were assuming a more modern appearance. Crowded together on narrow lots, often 20 feet, with a small open space in the rear, built of brick, frequently with a brownstone front, they were usually three stories high, and had an English basement. The rooms were high, commonly 10 to 12

feet, and apt to be dark. In the less crowded outskirts and towns, these groups built more commodious mansions set in spacious grounds, often with a stable and carriage house in the rear. Very few had both town and country houses.

House Furnishing and Equipment. The chief gains in home comfort by this time came from the improvements in equipment and furnishings rather than from the structure of the dwelling. Among these, as far as general use was concerned, those for heating easily ranked first. From about 1830 on, the use of the modern stove, burning wood or coal and built for use as a kitchen range or designed for living-room heating, spread rapidly. The output of stoves rose from 25,000 in 1830 to 1,000,000 by 1860. The use of the great open hearth in the kitchen dwindled; in the living room the fireplace opening was commonly blocked up, and the pipe from the stove set out from the wall might be carried through second-floor rooms to radiate some heat and mitigate the bedroom chill that still prevailed, except as warm air rose from below, sometimes through register holes cut in the floor. The cheerful heat of an open fire became either a luxury for the few or a necessity for those lacking stoves. Even the migrant to the frontier was likely to carry a cooking stove with him.

For the well to do central heating was now available either in the more widely used form of the hot-air furnace or the steam or hot-water heater. Both required a cellar and so increased the tendency to extend this excavation under the whole of the house. Steam heating was used chiefly for large buildings, and 1846 is said to mark its first use in a hospital and a hotel, though in the latter only for the public rooms and not the bedrooms. Even in large buildings, its use was uncommon until after the Civil War.

The advantages of plumbing, though largely confined to the city upper class, were also becoming available to this generation. Hot and cold running water for the kitchen, the washbasin, and the bathtub, together with the water closet, promoted health as well as comfort; but their cost and the scarcity of city water systems limited their use. Lacking such a system, an elevated house water tank might be used, generally filled with the aid of a pump, and sewage was usually carried off into an underground vault. A boiler tank attached to the kitchen stove provided the hot water, though a constant supply was seldom assured. The built-in bathtub was customarily of wood lined with metal.

Hotels were apt to lead in the introduction of these as with many other innovations. The Tremont House, erected in Boston in 1829, and generally called the earliest modern, first-class hotel, had baths and water closets in the basement. Bathrooms off the upper hallways and occasionally attached to a private room first appeared in New York in 1844, but in the 1850's were usual in the best hotels. In private houses, however, such

facilities were available to but few. In 1856 in New York, less than 1,400 baths and 10,400 water closets were connected with the city water system; Boston and Philadelphia were better equipped relatively; in Albany in 1859, with 62,000 inhabitants there were 19 private baths and 160 water closets. It may be presumed that in small towns and on farms such equipment was practically unknown.

In lighting also this period brought many improvements. First in rank was the lamp with a glass shade, which eliminated the flicker of the candle and gave a stronger light. First employed on Argand burners just before 1800, the glass lamp was later developed for use with whale, coal, or other oils. Camphene was also extensively used near the close of the period. The great era of the kerosene lamp started only with 1860; candles continued in frequent use for many years longer. In the cities, gas became available, starting in Baltimore in 1816 and in Boston, Philadelphia, and New York soon afterward. By 1860, it was being produced in nearly 400 localities. At first it was used chiefly for street lighting, then in public buildings and hotels, but rarely in the better homes until after 1840. Though gas cooking stoves had been devised, very few seemed to prefer them. Friction matches became available about 1827, selling at around three for 1 cent. Though matches were much cheaper and in wide use by 1850, many thrifty souls still rolled wastepaper into tapers to be used in carrying a flame from one place to another; in fact, this practice was not uncommon two or three decades later.

Of the other innovations in furnishings and equipment, only a few can be noted. Aided by the lathe and new types of saws, inexpensive factory-made furniture was obtainable, constructed of the cheaper woods and usually painted. For the better grades, walnut and rosewood were supplanting mahogany, and Victorian designs were replacing those of the Georgian and Empire periods. The advent of upholstered furniture and the spring bed added greatly to the comfort of such as could afford them; in the 1850's hotels equipped with the latter felt it was worth advertising. About then, the product of the power loom provided relatively less expensive carpeting for the parlors and dining rooms of the middle and upper classes, but straw matting or rag rugs were more likely to be found in the bedrooms. Thanks to the cylinder printing press, wallpaper was brought within the means of most. Cheap cotton fabrics now served the masses for window curtains and in most homes displaced the more costly linen on beds and dining tables.

For the tables of the masses cheap, heavy, queen's ware, or crockery and glassware could be bought. Many used the varied domestic pressed-glass products turned out after the 1820's, but the expensive fine china and porcelain had to be imported. In the 1850's, the new electroplated ware was rapidly displacing Sheffield plate. Kitchen utensils of tin, stoneware, and

glass were replacing those of wood, copper, pewter, or gourd. The factory system of the Connecticut clockmakers turned out an excellent yet inexpensive product which was in wide use. For the windows, roller shades could be bought, and for the much-needed protection against flies wire screens or the far cheaper cotton netting. Even then, netting to protect the food on the table was widely used. The rich could now replace the old spinet, melodion, or organ with a grand piano. Along with cross-stitch or painted mottoes, cheap colored prints might decorate the walls of the humblest; the more prosperous often had family portraits in crayon or oil or an oil landscape. The invention of the daguerreotype in 1839 marked the beginning of photography, which was rapidly developed in the 1850's.

Food and Drink. There seem to have been less striking changes in the people's food between 1770 and 1860 than in the provision for many other needs. As the West was opened up and better transport facilities introduced, the surplus foodstuffs brought to the East or the South provided a greater abundance, especially of meat products. Cheaper transport and other developments reduced costs, notably in the case of such imported products as sugar, tea, coffee, and semitropical fruits. The advance in the methods of food preservation was very limited in the scope of its actual effects. Some increase in variety and abundance and in certain cases a reduction in cost, making a product available to the masses, were the chief gains.

The main advance in food preservation came from a much more extensive use of ice, at least among the upper classes. Artificial ice was not manufactured on a commercial basis until later, but in Northern towns and cities local companies were organized to cut ice, store it in sawdust-packed icehouses, and distribute it through the summer. From about 1800 on, ice was shipped to Southern ports. In Boston 9 pounds of ice delivered daily for five summer months cost $5. In 1856, New York was said to use 300,000 tons a year, St. Louis and Cincinnati 25,000, and Charleston and Mobile 15,000. Refrigerators were now available for storage, but doubtless beyond the means of the poor. By this time, too, progressive Northern farmers were more commonly laying in a store of ice. Foreigners often commented upon the extensive use of ice, the frequency of ice cream, and especially the peculiar American fondness for ice-cold drinks. Presumably, however, little ice was used by the poor, especially in the South, and, except for oysters and fish, long-distance rail refrigeration service only developed in the 1870's.

The first commercial canning of food is supposed to have started in Boston in 1821, but there was little growth of the industry till after 1840 when the region about Baltimore developed considerable canning of oysters and some canning of tomatoes and fruits. Perhaps 5 million cans of food were put up in 1860. Preserving was appreciably stimulated by the lower

price of sugar which was 8 to 10 cents a pound by 1860. For the preservation of meat or fish, methods similar to those of earlier days were used, but were being applied on a large scale, chiefly to hogs, as the Western packing industry arose.

Apparently few new food products were introduced during this period. Sorghum was added to the list of sweetenings, but the consumption of cane sugar rose to about 30 pounds per capita. Both tea and coffee were much cheaper and less likely to be adulterated, and coffee now far surpassed tea in popular favor. Similarly, whisky was displacing rum and, more slowly, beer replaced cider. Drinking, though still widespread, appreciably declined after the temperance movement of the 1820's. The meat consumption, estimated at 178 pounds per capita for 1840, was high; pork in one form or another retained its predominance, but the proportions of beef and lamb in the total had risen while that of wild game had declined. Shipments of early vegetables and fruits from the South to Northern cities had started on a small scale before 1840 and increased by several months the season of their availability. Bananas had been added to the list of imported fruits, and many foreign delicacies could be bought by the rich.

How far these changes affected the actual meals set before different groups is largely a matter of surmise. In frontier and back-country sections a few more products from outside, such as sugar and coffee, were likely to reach them, and the pioneer settler commonly required less time to obtain an adequate food supply from his farm.

For the meals of the masses, the chief change seems to have been an increase in the variety of food and some gain in the proportion that was fresh. The frequency of the simple meal of bread and milk was greatly reduced, and mixtures such as stews and heavy soups, though still extremely common, were somewhat less in evidence. The consumption of meat among the masses had greatly increased, and common laborers were likely to have it in one form or another at two, if not three, of their daily meals. To immigrants this was conclusive proof that they had reached a land of plenty. The far more common use of potatoes, and to a less extent of tomatoes, was in contrast with colonial days. Sugar, coffee, and butter were common elements in the laborer's fare, and the use of wheat in place of corn in baking had greatly increased. Apparently the fare of plantation slaves remained much the same as in colonial times. Even at that it was said to be as substantial as that of most European laborers, and free workers in general undoubtedly fared far better than their foreign brothers.

Travelers' accounts and hotel menus suggest that the meals of the upper classes provided the same marked abundance and still more variety than in colonial times. Hotels vied with one another in the wide range of choice offered their guests. Instead of having all the food placed on the table at

once, as in colonial inns, the better hotels introduced service under the menu system, and there was a trend toward attempts at a French cuisine which improved the cooking. In most hotels, the American plan still prevailed. In the cities, dinner continued to be served around 3 in the afternoon and supper about 7 in the evening.

Clothing. The most noticeable changes in the clothing during this period were (1) the effects of the introduction of cheap cotton as a textile fiber and its displacement of most linen and not a few wool fabrics, (2) the effects of the reduced cost of textiles made in the new factories, (3) the beginning of the manufacture of ready-made clothing, chiefly men's wear, (4) the shift in the fashion for men to simple and somber garb, (5) the much less obvious distinctions to be seen between the dress of the rich and that of those of moderate means or even those among the masses.

On the extreme frontier, the dress of men still retained features of the earlier days but, along with that of women, it was increasingly made up of cheap cotton or wool fabrics and shoes from the factories of the East. After 1830, there was a rapid decline in the home production of all kinds of cloth, and by the 1850's little remained. With its passing, cotton had generally displaced linen except for limited uses, chiefly among the upper class. Cotton flannel for underwear, except where warm wool seemed desirable, rapidly grew in popularity. The advent of the circular knitting machine about this time also drove out another line of homemade products, especially hosiery. During the 1850's, the use of the new sewing machine rapidly spread through the homes, but in the factories it was mainly employed on cheap cotton workingmen's clothing and overalls. After Goodyear's discovery of the process for vulcanizing rubber in 1839, such things as rubber coats, suspenders, overshoes, and rubber boots came into general use. Though fabrics of silk were being reduced in cost, they still were luxuries.

The change in the style and character of men's attire between 1775 and 1860, particularly in the upper class, was remarkable, not only for its revolutionary effect but also for the rapidity of its spread, since the chief alterations had been made before 1830. Outstanding was the replacing of the brilliantly colored silks, satins, and velvets together with the frills and braid by somber woolen cloth relieved only by the white of the frilled shirt showing above the low-cut waistcoat. Fine broadcloth was used for dress and coarser woolens for other purposes; in the 1830's worsteds began to rise in favor. A brief return to a little color occurred in the brilliant velvet or cassimere waistcoat of the 1850's. Soon after 1800, the cut of men's suits began to assume a more modern form. Long trousers, at first rather close-fitting and later loose, began to replace knee breeches about 1812. For evening dress, the swallow-tailed coat with low-cut vest and expanse

of white shirt front came in. In daytime, the man of affairs wore the long-tailed black cutaway or later the Prince Albert and with it a tall beaver hat or possibly the broadbrimmed black felt of the South. In summer flannel trousers or a suit of linen or of light nankeen might be worn. For the common man when not at work, the short sack coat sufficed, while at his labors strong cotton jeans or a pair of overalls was donned. Until late in the period, when the modern collar and brighter ties first appeared, the upper class wore a stock, usually with a narrow black tie, about the neck. The trend toward democratic garb was also extended to treatment of the hair. Powder and curls disappeared first, and by the 1820's the queue was also vanishing. By the 1850's, moustaches and full beards or whiskers with various trims were generally popular.

For the women of the upper class, bright-colored fabrics of silk were still used for dress occasions. A close-fitting bodice or perhaps a sack was worn over a corset with a long silk skirt which, as the crinoline or hoop skirt and the Empress Eugénie styles came into fashion in the 1850's, attained enormous dimensions and was decorated with flounces, fringes, or lace. For less formal wear, dresses of fine muslin or cambric were available and much use was made of crepe or cashmere shawls. Bonnets, Leghorn hats with big flopping brims, or the more fashionable small, flat, French hats were in vogue. The extravagance of the dress of a woman of fashion was frequently criticized, but the feature most likely to cause comment today was the enormous amount of material required, an amount including underclothing with its many petticoats or skirts, which has been estimated at six or seven times the yardage now customary.

For the vast majority of womenfolk, however, inexpensive grades of woolen and cotton fabrics, especially calicoes and ginghams or even some of the old linsey-woolsey, had to serve most purposes, and the garments were likely to be made up in the home, possibly with a seamstress's aid. Yet even among this group, a much larger proportion than formerly became the proud possessors of a silk dress carefully saved for special occasions. An English traveler writing in 1859 observed that "all classes were well dressed" and that workers after finishing their day's labor generally changed their garments and "were as neatly attired as those in higher stations." Although the distinction in the dress of women of different classes was more marked than in the case of men, it was much less sharp and obvious than in 1770. Also the dress of the working classes was distinctly better than that of similar groups abroad.

A fairly typical provision of clothing for the male slaves is said to have included a suit of coarse wool or mixed wool and cotton for winter and two cotton suits or perhaps trousers and gingham shirts for summer, two pairs of boots, three shirts, and a felt hat. The women received two dresses of

striped cotton, three shifts, two pairs of shoes, and a knitted sack. House servants, of course, were better fitted out.

Medical Care and Public Health. The progress in providing medical care and protection of public health during this period was very moderate. Two score or more new medical schools had been opened by 1860, but the limited medical knowledge handicapped the training even in the best; most students learned as apprentices. After about 1835, states began to establish boards of medical examiners, but few were effective. The founding of the American Medical Association in 1847 was a landmark in the organized effort to promote better medical practice. A growth in knowledge and skill was indicated by the appearance of more specialized practitioners such as surgeons, dentists, and opticians, though systematic training schools for nurses were still lacking.

The 1860 census indicated that for every 100,000 people there were about 175 doctors and surgeons, 26 nurses, 18 dentists, and 1 optician, showing only too clearly that most had to depend on the general practitioner for all kinds of medical service. Far too frequently, the doctor's advice was either unavailable or unsought; people fell back on the traditional home remedies or used the patent medicines and various quack products that were sold in enormous quantities and with practically no legal hindrances at this period. Even the typical medical practice was such that in 1860 Oliver Wendell Holmes declared that "if the whole materia medica, *as now* used, could be sunk to the bottom of the sea it would be all the better for mankind—and all the worse for the fishes."

Hospitals increased slowly, and as late as 1873 there were only 149 hospitals and allied institutions in the country, a third being for the insane. The 35,000 beds provided about one for each 1,150 of the population. They were primarily designed for, and used by, the poor; few paid for treatment, and typically all who could afford it were cared for in their home. In most hospitals there was little or no segregation of those suffering from special types of ailment such as infectious disease or mental trouble, though a few specialized institutions, in addition to the insane asylums and pesthouses, had appeared. The larger cities had lying-in hospitals; a few had eye and ear hospitals; and there were several institutions for the care of the deaf, dumb, and blind. Outpatient departments were often maintained for the poor, and from about 1800 on dispensaries for their aid existed in the larger cities. The discovery of anesthetics, first used in a hospital in 1848, marked the beginning of a new era in the relief of human pain.

Progress in the protection of public health was slight; in fact the modern public-health movement with its emphasis on prevention of disease only started, both here and abroad, in the late 1850's. The first public-health organization of national scope was formed in 1857. The first state board of

health was created in Massachusetts in 1869. From about 1800 on, the larger cities began to establish something like boards of health, but their activities were limited and their actual authority slight. Some progress was made in the handling of garbage, keeping streets cleaner, and strengthening the regulations governing the sale of food and the local markets. A few cities secured a public water system and a sewerage system serving at least a portion of their area; but what is called the first comprehensive system was adopted in Chicago just before 1860.

Combating the many epidemics that continued to sweep through the cities was one of the chief activities of the local health authorities. Vaccination against smallpox, which had started in 1798, was accepted very slowly, and with minor exceptions, was not yet compulsory; but it had substantially reduced the prevalence of that disease. By the 1850's, epidemics of typhus fever were under fair control and those of cholera less severe, though in 1849 over 5,000 had died of this disease in New York; even in the 1870's, yellow fever might carry off the inhabitants of a city by the thousands. The meager medical achievement of this period is best indicated by the fact that the expectation of life at birth (judged by Massachusetts figures) was increased only about 4 years between 1789 and 1855 and was just under 40 years at the latter date.

The Contribution of the State and of Philanthropy. During this period the agelong trend toward the expansion of governmental activities was least marked in the case of the Federal government, where it was checked by the dominance of the strict constructionist party. It was more in evidence in the states, though here, except for internal improvements, it was largely of a regulatory character. It was most marked in local government, though chiefly in the rising cities where both regulatory measures and those for supplying goods or services were rapidly expanded. There was also a substantial growth in private gifts to support religious, charitable, and cultural institutions.

The essential functions of all government were carried out with fair efficiency according to the standards of the day. The frontiersman was still subject to scattered Indian attacks, and the rapidity with which Western settlements arose caused delay in providing a properly functioning government. Favored by its geographic isolation, its growing political power, the achievements of the Monroe Doctrine, and the policy of political isolation, the nation reduced the burden of defense to a minimum.

Road construction and maintenance were left entirely to local governments and were apt to be stinted, though the building of wooden bridges over all but the large streams marked a distinct gain. The postal service was rapidly extended, improved in quality, and rates greatly reduced. The former severe attitude toward crime and the treatment of criminals was

much modified under the influence of the penal reformers. Especially important was the states' general assumption of the responsibility for providing free public schools; for secondary or advanced training they did little and the facilities provided by religious and philanthropic institutions were the chief reliance. On the other hand, following the complete disestablishment of all churches, the state had finally withdrawn from religious functions, and these were left to the various denominational organizations whose activities were strongly sectarian in character.

The markedly increased activities of the cities were due chiefly to growing necessity, but in part to the rising spirit of democracy and humanitarianism. By 1860, some sixty-eight public water-supply systems supplemented the slightly greater number of private systems, the total having been almost doubled during the decade. Sewerage systems, usually inadequate, were practically confined to the large cities. Paved streets and sidewalks were more generally provided and commonly lighted at night, by gas if available, otherwise by oil lanterns. By 1860, in at least two cities paid firemen had replaced volunteers and fire engines, hydrants, and hose were replacing the fire-bucket line. A fairly adequate police force provided better security for life and property. Municipal markets were common, though their regulation still left much to be desired.

There were some 48,000 small, common, or Sunday-school libraries in the country in 1859 with 8 million volumes and 2,000 to 3,000 other libraries with some 4.3 million volumes, mostly in colleges or other institutions. The free, tax-supported public library was only just appearing. Some cities had created public parks but, except for the space thus provided, little was done to promote recreation. The Wadsworth Athenaeum of Hartford, Conn., opened in 1842, is said to have been the first building in the country devoted exclusively to art; public art museums were almost unknown in 1860. The Smithsonian Institution was organized in 1846.

The best summary measure of the meager contribution of government to the standard of living in 1860 is provided by the per capita expenditure figures. In the city of New York, the outlay, including interest on the debt, was $10.52 per capita, almost six times greater than in 1790 but only an eighteenth of what it was in 1935. In Boston, the outlay in 1860 was nearly $20 per capita. The expenditure of the Federal government for the fiscal year 1860, excluding debt retirement, was $3.74 per capita; the total outlay of state and local governments has been estimated at $3 per capita. The total per capita for all units of government was around a fifteenth of the figure for 1936.

With one church for every 580 inhabitants in 1860, the general provision for religious services, except in the less populous sections, was fairly ample, even if it did not meet the wants of all the numerous sects that had arisen.

The Sunday school was then a flourishing institution as well as the home and foreign mission society, and for many the church served as a great social center. Even to suggest the wide range of services provided by the many charitable and social service organizations of the time would be impossible here. They represented a sacrifice, both of money and of personal service, which in the aggregate made a substantial contribution to human welfare.

As fortunes grew, philanthropic gifts for various purposes increased, both in frequency and in size. Much the largest giver of whom we know before 1860 was Stephen Girard who in 1831 left nearly $7 million for public benefactions, most of it going to Girard College. Educational purposes attracted the largest gifts and were prominent among the donations of George Peabody, notably those for the Southern Education Fund which by the time of his death in 1869 amounted to $3 million and brought the total of his public gifts to nearly $9 million, a record up till then. Peter Cooper put $600,000 into the Cooper Union; Matthew Vassar founded Vassar College with $400,000; a like sum from John Jacob Astor in 1848 provided for the Astor Library. Notable, because of the rarity of gifts in its field, was the bequest by William Corcoran of his art collection and a building fund, though the resulting gallery in Washington was not opened till 1874.

Leisure Time and Facilities for Its Use. That the growth in leisure time secured by 1860 appears to have been extremely moderate has been previously indicated. On the farms, where three-fifths of the people still labored, the hours from sunrise to sunset probably remained the usual working day with a little relief in winter. In the cities, a few crafts had a 10-hour day, but for most city or factory workers from 65 to 70 hours a week was fairly typical. Prolonging the period of education brought the chief reduction in years free from work, but this was slight. It could still be said that, with a few exceptions, there was neither a leisure class nor any class that had much leisure.

By 1860, the facilities available for the use of leisure time were much more varied than in 1775 and also more generally accessible. This was due chiefly to the far greater commercial organization of the activities catering to both the cultural and the less serious pursuits of leisure. That it now paid private business to do so much of this indicates the greater wealth and time available for such pursuits, especially in the large communities.

Of the facilities for the more cultural pursuits, those for schooling have previously been noted. They are best summed up in the facts that the average American about 1860 was getting about 434 days of schooling, and even in 1870 a fifth of the population was illiterate. As far as the availability of reading matter could satisfy the general thirst for knowledge, so often

noted by foreign travelers, the situation had vastly improved. Far more important than the limited library facilities already mentioned, was the advent of abundant and cheap printed matter. Daily newspapers sold for 1 or 2 cents a copy and their average total circulation in 1860 was about 1.5 million copies. There were also nearly 3,400 weeklies, monthlies, and quarterlies catering to a wide range of tastes. Book publishing had become an important industry, and in 1856 some $16 million worth of American books was sold, including many pirated from English authors, and $1 million worth of imported books. Anthony Trollope in 1860 could write of Americans that, "As consumers of literature they are certainly the most conspicuous on earth. Where an English publisher contents himself with thousands of copies, an American publisher deals with ten thousands."

Lectures were at about the height of their popularity at this period, and men eminent in literature or science, both native and foreign, made extensive tours. Theatrical performances abounded in the larger cities, with admission charges from 25 cents up, and troupes toured through more moderate-sized communities. Although performances of a high character were given, the tendency was to appeal to the masses, and the vaudeville, variety show, magician, and Negro minstrels were extremely common. Foreign troupes offered a short season of grand opera in a few cities with admission from 25 cents to $1.50; singers like Jenny Lind or Adelina Patti could be heard in concerts; local organizations in some cities afforded orchestral, chamber, and choral music; the New York Philharmonic Society gave the first professional symphony concert in 1842. The circus was making its annual round from the 1830's on, and Barnum's had started its famous career. A very few individuals had started art collections.

Travel for pleasure and sight-seeing was now relatively easy, quick, and inexpensive, the railroad rates varying from 3 to 8 cents a mile, but was not much indulged in except for the frequent short excursions. Summer resorts such as Saratoga, Newport, or the Virginia Hot Springs had developed and were well patronized by those of means. Trips to Europe were becoming a little more frequent among the upper class, but usually had specific educational objectives.

Among the less serious leisure-time activities, nearly all those of any importance in earlier years still provided the chief forms of amusement. Horse racing, wrestling, and cockfighting were frowned upon in some places because of the betting connected with them. Athletic sports were beginning to receive more attention and among them baseball, started in 1839 (also dated in 1842), took the lead. Though not yet organized on a professional basis, intercity games were played, and by 1858 there was a league of some twenty-five clubs, while the first intercollegiate game occurred the next year. Rowing contests between colleges had started a few years earlier and

also football games. A great interest in fancy skating developed just before 1860, and the recent influx of Germans led to the formation of a group of *Turnvereins*. Still athletic activities were very limited. Henry Adams, later writing of conditions about 1850, said, "Boston at that time offered few healthy resources for boys or men. . . . Sport as a pursuit was unknown." In 1858, Oliver Wendell Holmes said, "I am satisfied that such a set of black-coated, stiff-jointed, soft-muscled, paste-complectioned youth as we can boast in our Atlantic cities never before sprang from loins of Anglo-Saxon lineage."

For the young ladies, no sport more vigorous than croquet was thought of, but they received lessons in dancing, music, drawing, and china painting. Among the upper class, formal social calls were the order of the day. The men now had social clubs of their own as well as the fraternal orders which by then had a considerable membership. Sewing circles, reading clubs, and church social affairs provided for gatherings of the ladies. The saloon had generally displaced the tavern as the resort of drinkers and was widely patronized, despite the wave of local option and prohibition laws in the North after 1840, most of which proved ineffective or were repealed. In the rural sections, the old type of social gathering still prevailed, but as population grew and roads improved, the isolation was modified by more frequent gatherings at church functions, drives to the county seat, or trips to the agricultural fairs.

The Cost of Living and Distribution of Wealth. Data concerning the cost of living and the distribution of wealth just before 1860 are so scattered that any generalizations must be uncertain. The Civil War wrought such marked changes in prices and in wealth or income distribution that data for the years after 1860 may not reflect what was typical just before that date.

That the period between 1770 and 1860 witnessed a rapid increase in the number and size of large fortunes is clear. The first millionaires probably emerged from the revolutionary struggle, and we can safely assume that large fortunes grew at an unusually rapid rate between about 1795 and 1807. Not a few of those added in the speculative 1830's disappeared in the crash that followed, but the golden 1850's must have added many more. Much the largest fortune of which we know previous to 1860 was that of John Jacob Astor who left some $20 million when he died in 1848; Nicholas Longworth left about $13 million in 1863. Previously, the estate of around $8 million left by Stephen Girard in 1831 appears to have been the largest. One journal asserted that around 1843 there were not five men in the country worth $5 million and not twenty worth over $1 million. About 1850, various estimators ranked 25 men in New York, 18 in Boston, and 9 in Philadelphia as millionaires; but few were credited with over $2 million. A few years later another estimate for New York listed 91. How many

Southern planters would have ranked in this class we do not know, but probably very few. The 2,300 families owning 100 or more slaves in 1860 suggests the number of Southerners having considerable wealth.

Since they provide the only comprehensive data obtainable, the income tax returns are important, despite the limitations arising from the Civil War changes, evasion, and the omission from taxable income of various items, including dividends or interest received from banks, trust companies, savings institutions, insurance companies, and railroads, which were taxed at the source. For the fairly prosperous year 1870, there were 276,000 returns of taxable income of $1,000 or more. Over 9,000 showed taxable incomes above $11,000; 44,700 incomes from over $3,000 to $11,000; nearly 41,000 incomes from over $2,000 to $3,000; and the remainder, two-thirds of the total, had taxable incomes between $1,000 and $2,000. The striking thing is the small number with enough taxable income to make a return, but it is also to be noted that these returns seem to indicate a greater concentration of income than has prevailed in the country during the past quarter century.

The cost of living for different classes at this period has to be inferred from what we know of their incomes, supplemented by scattered facts concerning the cost of food and shelter. As the upper class did most of the saving, we may surmise that an outlay of much over $10,000 was not common among the rich, but it doubtless rose much higher in a few cases; the outlay of most in that class probably fell between $5,000 and $10,000. Though where to draw the line is an arbitrary choice, the outlay of what may be considered the middle class probably included the range from $800 to $5,000 with a possible median around $1,200 to $1,500. With wages of common labor at $1 to $1.25 a day and of skilled labor at $1.50 to $2.25, we have more definite limits within which to estimate the outlay of the laboring class, which may be set at between $200 and $800. The wages of women were relatively low, in the East often $3 to $5 a week, and for domestic servants $6 to $10 a month.

The cost of food and housing accommodation probably constituted from 70 to 90 per cent of the total outlay of the vast majority. At the best hotels, board and lodging were $2 to $2.50 a day with much lower rates by the month; at small hotels and country inns, rates of $1 to $1.50 a day were common. In most city boardinghouses, charges ranged from $2.50 to $6 a week, though the best might ask up to $12, and in smaller localities they were lower. Students in the academies or colleges might pay $2 to $5 a week. The poor could obtain such accommodations by the year at from $50 to $150. Despite the decline in the variety of products turned out in the rural household, it is probable that the cash outlay of most farmers was between $50 and $250 a year.

THE STANDARD ABOUT 1930

The fairly comprehensive statistical data now available make possible a much more accurate idea of the standard of living in recent years than could be secured for the earlier periods. However, there is less need for elaborating upon this, since everybody knows the standard of his own economic group and at least something, though commonly not very much, of that of other groups. Yet few of the present generation fully appreciate the remarkable gains that have been made in the period since 1860. Thus the main purpose of the following account is to make clear what the chief of these gains have been, for in no similar period of time has the advance made in the standard of living been so great or so widely diffused. Though some of the data given will relate to the years of depression, the intention is to portray conditions that were fairly typical of normal times.

Housing. The chief change in the character of people's dwellings during this period was largely a product of the shift of population from rural to urban centers and the growth of great cities. Though the log cabin lingered in parts of the South, elsewhere dwellings typical of the frontier had gone. The structures built by the most poverty-stricken, whether on farms or city outskirts, were crude plank shanties. The frame house typical of farms, towns, and city outskirts had not greatly altered in its essential features. Commonly from 1 to 2½ stories high, it showed a trend toward greater compactness; rooms were smaller and ceilings 1 or 2 feet lower. Although the brick chimney remained, cement was commonly used for the foundation and other purposes, and manufactured roofing material was driving out wooden shingles. Better insulation of walls and roof was introduced along with various types of manufactured wallboard. An adjoining or near-by garage became common.

In large cities, ordinances now required fireproof construction, at least in most sections. Here the more recently built homes were 1-, 2-, or 3-story brick structures stretching back on narrow lots to a small open space in the rear, often with one apartment to a story. The drive against the worst features of the tenement house, starting in New York in the 1860's, slowly spread to other cities, greatly lessened these evils, though much still remains to be done. As choice residential sites rose in value, there was more pressure to erect taller buildings, six to eight stories being about the maximum in 1860. This was made possible by the advent of the elevator, first used for passengers in 1859, and by resorting to steel frame construction starting about 1890.

Out of this arose the modern skyscraper hotel, office, and apartment structures which became so numerous in the building boom of the 1920's. Luxurious apartments became the city dwelling of a growing proportion

of the rich; others chose to build elaborate mansions the cost of which might run into the millions. Increasingly the city dwelling was supplemented by a near-by country estate or more distant summer and winter homes. Even among the middle class, a summer home, ranging in character from a camp cabin to a cottage or an abandoned farm, and located in an attractive natural environment, became fairly common.

Fortunately the census now provides comprehensive data concerning housing. In 1940, about a fifth of the total of 34.8 million dwelling units occupied was on farms, another fifth was rural nonfarm, and the remainder was urban. Two-thirds of all dwelling units were single family structures, but in urban localities alone just under one half. The owner-occupied dwelling units in urban centers had a median value of $3,501 and the rural nonfarm units a median value of $1,715. In these two groups combined, 33 per cent were valued at less than $2,000, 43 per cent from $2,000 to $4,999, and only 4.5 per cent at $10,000 or more. Of all dwelling units, 44 per cent were owner occupied, but in urban centers alone only 37 per cent. The former figure compares with 48 per cent for 1890, and that for 1860 must have been appreciably higher. The period evidently saw a distinct decline in home ownership and, not being by any means confined to the poorer classes, this must be due partly to a decreased desire for such ownership. However, prosperous times and government aid in financing raised owner-occupation to 55 per cent of all dwelling units in 1947. Of all urban and rural nonfarm dwelling units occupied by tenants in 1940, 45 per cent rented for less than $20 a month, nearly 40 per cent from $20 to $39 a month, and only 1.4 per cent for $100 or more. Of all residential structures, 82 per cent were of wood, over 11 per cent of brick, and over 4 per cent of stucco, but in urban localities alone these figures were 71, 20, and 6 per cent, respectively. In 1940, the population per dwelling unit occupied was 3.78 as compared with 4.93 in 1890. The median number of rooms per dwelling unit in 1940 was 4.73, and in only a fifth of the units was there more than one person per room. The median age of all units was 25 years.

House Furnishing and Equipment. As during the preceding period, the greatest improvement in housing conditions came from better equipment and furnishings and their more general diffusion, at least among urban homes, for those in rural districts did not share proportionately in many gains. By 1940, central heating was provided in 42 per cent of the occupied dwelling units and in 58 per cent of those in urban districts; nearly 47 per cent depended on stoves, chiefly those occupied by the poor or those in mild climates and in rural regions generally. Nearly 55 per cent of all occupied units used coal or coke for fuel, 23 per cent wood, 11 per cent gas, and nearly 9 per cent oil. The rapid spread of central-heating systems operated with greater ease and efficiency was one of the greatest

gains. The new fuels, such as oil and gas, and automatic devices for control substantially reduced the cares of the householder. Though few could as yet afford it, air conditioning marked the beginning of another step in advance.

Important for both health and comfort was the greatly increased use of modern plumbing, though its usual dependence on water and sewage systems meant that it was mainly confined to urban homes. The rapid spread of electricity through urban areas from the 1880's on brought to the home not only light but also power and heat. For lighting, where available, it quickly displaced gas and the bothersome kerosene lamp; as power it drove washing machines, vacuum cleaners, sewing machines, dishwashers, or refrigerators with infinite saving in household toil; and it supplied heat for numerous gadgets from the stove, flatiron, toaster, and room heater to the curling iron. Gas, aided by the abundant natural gas output and pipe lines, secured a dominant position in cooking in urban regions and a growing use for several other household needs. The outlay for this new equipment for heating, plumbing, and lighting was no small factor in the increased cost of dwellings.

How generally these improvements have been installed is shown by the 1940 census figures. In urban dwelling units, 96 per cent had electricity, 91 per cent indoor flush toilets, 92 per cent baths or showers, 73 per cent gas for cooking, 58 per cent central heating, 56 per cent mechanical refrigeration, and 5 per cent electric cooking. But in the case of rural farms the situation was far less satisfactory for there only 18 per cent had running water in the dwelling and 11 per cent pumps, 12 per cent had a bathtub and 11 per cent indoor flush toilets, 31 per cent had electricity, 15 per cent mechanical refrigeration, 10 per cent central heating, and for cooking nearly 4 per cent had gas and under 3 per cent electricity. Subsequently, as elsewhere noted, the farm uses of electricity greatly increased. For rural nonfarm dwelling units, the general situation was somewhere between the farm and the urban conditions.

The changes wrought in housefurnishings, even if outwardly striking, were of far less human significance. Outstanding was the tendency to make rooms more livable and the furniture more comfortable and to secure a more general dispersion of these benefits among the masses. Upholstered furniture was much more widely used and beds made easier. The significantly named "living room" replaced the stiff, dark parlor; color tones became much lighter, and increasingly sunlight was sought rather than excluded. Hardwood floors covered with rugs or easily removable carpeting came into favor and were employed in most rooms while tile and linoleum might be chosen for bathroom and kitchen. On the table, attractive but inexpensive china and glassware replaced the coarse heavy products of

former days. Lighter and brighter draperies were popular. Pianos became a much more common possession, nearly 6 million being in use, phonographs were numerous, and by 1947 over 94 per cent of the dwelling units had a radio. By 1948, television was rapidly spreading, and it was expected that 800,000 receiving sets would be in use before the year ended. A modern kitchen with its equipment would seem a veritable earthly paradise to the housewife of olden days.

Food and Drink. As regards food, the chief gains arose less from greater abundance than from greater variety obtainable through the year, the marked improvement in diet due to the study of nutrition, and the ever-widening use of the knowledge thus provided. Greater variety was secured chiefly by better and cheaper facilities for the transport and preservation of food. The manufacture of artificial ice, starting early in the period, and its final extension to the home were important landmarks in this advance. Refrigeration for long-distance transport, both by land and by sea, starting in the 1870's was another. The canning industry received a great impetus from the Civil War and thereafter expanded rapidly, aided by the study of food chemistry and the greatly lowered cost of tin and glass containers. Soon an endless variety of food products was made available in this convenient form. As early as 1917, a survey indicated that a quarter of the outlay for vegetables and a fifth of that for fruits were for canned products. By 1942, civilians consumed 278 million cases of canned fruits, juices, and vegetables. Meanwhile refrigerated transport and, very recently, new freezing processes were making fresh meat, fish, vegetables, and fruit more generally obtainable through most, if not all, seasons of the year.

The characteristics of the meals eaten were also changed by other developments, such as the decreased proportion of physical work done and the rising proportion of urban dwellers. Though most of the meat consumed was now fresh, its use per capita of 141 pounds in 1940 was about an eighth less than a generation earlier. Of the total, lamb and mutton made up less than 7 pounds, veal a trifle more, beef nearly 55 pounds, and pork 72 pounds. The consumption of fish was probably around 13 pounds per capita. The consumption of cereal products had also decreased, but that of poultry and dairy products, vegetables, and fruits had risen, along with the use of cheaper substitutes for butter and lard. Notable was the rise in the use of sugar in all forms to above 100 pounds per capita, or over three times that in 1860, while the use of coffee doubled, reaching 13 pounds. The use of tea—less than 1 pound per capita—showed little change, but that of cocoa or chocolate in various forms rose rapidly.

The persistent temperance agitation brought some decline in excessive drinking, though in 1940 the per capita consumption of alcoholic beverages was estimated at almost 14 gallons and the per capita annual outlay there-

fore at $25, the total being $3.3 billion, a sum which then ranked with the total outlay, both public and private, for medical care or that for education. By 1946, the outlay for alcoholic beverages had risen to nearly $9 billion, due chiefly to increased taxes. Malt liquors, chiefly beer, the consumption of which was 12 gallons per capita in 1940, became by far the most widely used, and whisky remained the favorite among hard liquors. Manufactured nonalcoholic beverages attained an enormous sale. Increasing governmental regulation checked the worst evils in the adulteration or the sale of deleterious foods and drinks.

Altered conditions of work and living also wrought other changes in meals, though chiefly in urban sections. Except for those doing hard physical work, breakfast became a much lighter meal from which meat, possibly excepting a bit of bacon, was apt to disappear. The heavy meal of the day was shifted to the evening and a midday luncheon took its place. This also tended to become relatively light: for many a hurried sandwich and drink at a lunch counter, for laborers what they brought from home in a lunch pail; for the upper class also a moderate selection of light foods. The evening dinner after work was over became the substantial meal of the day for most urban dwellers; this too, especially among those of means, was likely to be simpler and lighter, though more appetizing, than formerly. In cities, with the growing tendency to reduce homework and the increased employment of women, there was a decided growth in the number of people eating in restaurants.

Despite the marked gains, it was said in 1940 that about a third of the population was not getting the kind and the amount of food necessary for strength and health. This was attributable chiefly to lack of means for buying the requisite amount of dairy products, fruits, and vegetables, but also to uneconomical buying, lack of intelligent dietary planning, and poor preparation of meals. However, by 1947, with rising income among the masses, a decided improvement over the prewar level had been attained, the greatest gains being an increase of from one- to two-fifths in the total consumption of fresh milk and cream, meat, eggs, canned fruit, and canned vegetables, in rising order.

Clothing. As the clothing commonly worn by various economic groups today is sufficiently familiar to most to obviate any need for much description here, only the more significant changes since 1860 need be noted. One of the most striking was the great increase in the use of silk fabrics among the masses up to about 1930 when rayon came in, only partly due to a substantial reduction in their cost. Another was the rapid growth in the proportion of clothing that was bought ready-made—a shift particularly marked in the case of women's wear and by no means confined to the purchases of the lower class. The yardage required for women's apparel

was but a small fraction of what it had been in 1860, a change of substantial importance in reducing its cost. This gain was somewhat offset by the more frequent purchase of new dresses as the tendency to follow changing fashions became common among the lower classes. There was also a great growth in the various services provided by the beauty parlor, which was used by nearly all classes of urban women. For men, after about 1920, there was a distinct decline in the use of more formal dress, and a gain in comfort for summer wear with the introduction of light fabrics made of cotton or rayon as substitutes for wool.

These various changes largely dispelled the more obvious and striking distinctions in the dress of the different classes, so marked in former times, especially in the colonial period. Differences in the quality of goods, excellence of fit, and refinements of style of course remained, and the wardrobe of the well to do was far more varied and extensive than that of the masses; yet without close observation the street garb of a young man or woman dependent on a very moderate wage might appear very similar to that of scions of the wealthy families. Though much less marked, such changes were also in evidence in the rural region.

Medical Care and Public Health. In the field of medical care, this period brought a phenomenal advance, perhaps greater than in all previous history; certainly it was one of the most important gains, if not the most important, made in raising the standard of living. Basically, this gain was the combined product of scientific advance and growing wealth, for wealth was given for medical research as never before, and it required a very large sum to provide the medical care to put this scientific knowledge into general use. The discoveries of Pasteur and the subsequent development of bacteriology were revolutionary in their effects since, by establishing the causes of various diseases and promoting better methods of treatment, it was possible to attack disease at its source and to check its spread. One after another leprosy, tuberculosis, yellow fever, cholera, smallpox, diphtheria, malaria, hookworm, and syphilis were thus put under more effective control.

The work of Lister and others in the prevention of infection, along with vastly improved means for diagnosis and the discovery of better anesthetics, helped to cut the fatalities in major operations from 50 to 60 per cent to between 5 and 10 per cent. Among many other gains those in dentistry and the treatment of mental or nervous diseases may be mentioned. Medical schools advanced correspondingly and took over the training of doctors in cooperation with hospital clinics. From about 1875 on, the states began to enforce higher standards, and by 1900 a marked improvement had been secured. Regular hospital training for nurses started in 1873 and was rapidly extended. By 1940, there was one doctor for every 796 in the

population, or about twice the proportion in the chief countries of western Europe, and specialists were more widely available than ever.

Besides the resulting gain in quality of hospital care, the growth of hospitals and the services that they rendered was also important. By 1942, there were 6,150 registered hospitals with a total of over 1,365,000 beds, or nearly 9 per 1,000 of population, and nine times the ratio for 1870. They represented in 1935 an investment of some $3 billion and involved a yearly operating outlay of $750 million. In 1937, the hospitals gave over 9 million patients 350 million days' care. In addition, over 2,400 hospitals maintained outpatient and clinic departments. After about 1875 the old attitude that hospitals were only for the poor became completely reversed and all classes sought their services. Recently 45 per cent of their operating cost was met by patients' fees, 47 per cent by taxes, and the rest by endowment or other sources.

The total consumer outlay for medical care of all kinds, about 1935, was estimated at $2.2 billion, in addition to which governmental and private institutions spent some $650 million, making the total per capita outlay $23. This is below the minimum cost for adequate care even when purchased on a group basis, a plan that is rapidly spreading. By 1948, the Blue Cross Plan for meeting hospital bills covered 30 million, and other group plans covered almost as many more. One estimate placed the cost of proper care (excluding dentistry and medical supplies) on the fee for service basis at $75 per capita in 1936, or more than three times the 1935 outlay. Despite the recent great gains, it is obvious that this field offers one of the greatest openings for future improvement.

Growing scientific knowledge and greater concern as to existing evils gave a marked impetus to the public-health and hygiene movement, which was only just getting under way in 1860. New York started a health department in 1866, Chicago in 1867, and by 1873 thirty-two cities had one. The first state board of health was founded in Massachusetts in 1869, by 1886 thirty-six other states had acted similarly, and now one exists in every state. In 1872, the American Public Health Association was formed and in 1912 the United States Public Health Service, the activities of which have since been greatly expanded. By 1942, full-time county health units served three-quarters of the population. After the 1870's, when several serious outbreaks occurred, the ravages of the old plagues almost ceased. Increasingly, the emphasis in the activities of health officials was shifted from quarantine and alleviative measures to sanitation, safeguarding of food, and other preventive regulations.

Although the contribution of better medical care and public-health activities toward a higher standard of living in the form of relief of human suffering and misery cannot be measured, it must have been very great.

That which took the form of the prolongation of human life can be measured, and it provides the surest proof of the remarkable achievements of the period in this field of effort. In 1860, the expectation of life at birth was about 40 years; a moderate gain raised it to 45 years around 1900; thereafter the cumulative effects of many improvements brought a remarkable advance until the child born in 1946 could, on the average, look forward to a life of 65 years. The increase during this period in the expectancy of life of 25 years, or over 62 per cent, far exceeds in rate anything in previous history.

The Contribution of the State and of Philanthropy. Since the expansion of governmental activities has been covered previously, it will suffice here to summarize those chiefly significant for their contribution to the standard of living. In so far as the Federal government broadened its activities, it was chiefly to give additional financial aid for functions inadequately provided for by state and local governments. This was facilitated by the steady decline of the opposition based on a strict construction of the Constitution and a more liberal interpretation of that document by the Supreme Court. Limiting the list to goods or services provided that were important for consumption purposes, we may note those for highways, education, recreation, health, child welfare, social security, and relief. The expansion of state activities in this field, largely supplementing what was done by local authorities, took much the same direction. Highway construction, education, notably in the secondary and college fields, public health, including care of the insane, and, in the 1930's, relief were prominent among the things for which provision was made.

As previously, however, it was among the local units of government and chiefly in the larger cities that the greatest growth of such activities occurred. The facilities for free education were expanded to include high school, night school, vocational schools, and sometimes college. Streets were improved, better lighted and cleaned, their traffic was controlled, and garbage removal became common. Public water and sewerage systems were widely built and not infrequently an electric-light and power plant. The growing provision for care of the sick and protection of health was supplemented by a great extension of the facilities for recreation and amusement. Public support of libraries became common and was sometimes extended to art museums and music.

Since the increase in the cost of tax-supported activities was due very largely to the growing outlay for goods and services contributing to consumers' needs, the rise in per capita governmental expenditures or in the taxes collected well suggests the expansion of such activities during this period. Thus in New York City the per capita expenditure of $189 in 1935 was about eighteen times that in 1860. In 1940 Federal, state, and local

taxes amounted to $109 per capita or nearly sixteen times the estimated figure for 1860. Previous to 1940, total taxes were taking around a fifth of the national income, and the added public outlay based on borrowed funds increased the total to nearly a quarter. Thus the character of governmental activities and expenditures has been made an important factor in the current standard of living.

Moreover, a major feature of that importance is the effect of the combined action of the system of taxation and the forms of expenditure in determining what groups pay for, and what groups receive the benefit of, the resulting contribution to the standard of living. To the extent that the taxing system has been progressive in character, it has served to raise the standard of living of the masses at the expense of the well to do, while the growing outlay of governmental units has tended to ensure the use of a larger portion of the national income for purposes deemed vital in promoting social welfare.

A similar result has followed from the remarkable increase in the number and size of private gifts for public purposes. As private fortunes grew in size, gifts by single individuals totaling $100 million and upward became more frequent than those of $500,000 or more had been before 1860. The known total of public gifts made by John D. Rockefeller was over $530 million, and those of Andrew Carnegie were $350 million. The practice of establishing foundations, which may be said to have been started by George Peabody in 1867, became common, and in 1945 over 500 were known to exist with a capital fund estimated at over $1.8 billion.

The community-chest plan, started in Cleveland in 1913, gathers smaller gifts from a large number of people and also promotes a better coordinated distribution of their use. Nearly 500 of these organizations in 1938 obtained $83 million from some 9 million contributors, and in 1945 over $200 million was secured. Local charity organization societies became a common medium through which many subscribers provide discriminating assistance to those in distress, and innumerable charities were established for specialized purposes. Philanthropic gifts were chiefly for purposes of education, health, charities, libraries, scientific research, and promotion of the arts. Gifts to religious institutions were also numerous and the churches, although continuing their customary services, showed a marked tendency to put more stress on social welfare in their activities and less on sectarianism.

Leisure Time and the Facilities for Its Use. Probably to be ranked next in importance to better medical care as a contribution to the standard of living during this period, was the great increase in leisure time. By 1930, something like 20 hours a week had been added to the leisure time of the average man since 1860. The following depression brought another gain and by 1940, when the census showed that half of all the wage and

salary workers labored 40 hours or less per week, it represented a further gain of 5 or more hours. Thus the total gain may be estimated as equal to about 2½ days of labor in 1860. The gain was not equally distributed, however, for on the farms over 52 hours a week prevailed as against 72 in 1860, while in manufacturing the 1940 average was 38 hours; also, in general, the intensity of work had been substantially increased. Meanwhile the days of work per year had been cut by added holidays, by the growth among the upper class of the habit of taking one or more vacations, and by the spread of the custom of granting vacations of 1 to 4 weeks to employees. Another and much greater addition to leisure came through the reduction in the years of life devoted to work. With the prolongation of the period of education, the average child did not start full-time work till between sixteen and eighteen years of age; for a growing proportion, this period was substantially prolonged. Finally, as retirement before death became more common, leisure was procured for the last of life. The recent social security legislation together with other pension systems greatly increases the number that will be financially able to retire.

The total of all these additions to leisure time represented a remarkable achievement. It also greatly accentuated the problem as to the best use of that time and the need for facilities for such use. The common assertion that Americans have so generally devoted themselves to money getting that they do not know how to use their money and their leisure wisely when they have secured them, though less true today than formerly, still finds far too much justification.

That such a growth in leisure time combined with a rising per capita income, should result in a marked expansion of the facilities provided for the use of leisure time was to be expected; as was also the tendency toward the commercial organization of those engaged in offering such facilities, especially those used in the less cultural pursuits. For the more cultural pursuits, there was less effective economic demand, but more frequent provision by the state or by private philanthropy.

Among the latter class, the facilities for education have previously been noted. In 1940, the average American twenty-five years of age and over had had over 8 years of formal schooling, or about four times as much as those living in 1860, and those then of school age were getting on the average several years more. The reduction in illiteracy from 20 per cent of the population in 1870 to 4 per cent by 1930 obviously meant a great gain for those able to profit from the increased facilities for reading. Around 1935, there were over 6,200 public libraries in the country, where, it was estimated, about one in five of the population was a registered borrower. Their total circulation was some 450 million and the operating expenses 37 cents per capita. Still, 37 per cent of the population, almost all in rural regions, was

said to be without library facilities. Reading matter in the form of newspapers, magazines, and books has been put out in a steadily rising volume. Newspapers are estimated to reach 90 per cent of the reading population and magazines 45 per cent. The sales value of the output of these three groups in 1939 was over $700 million.

Lectures, if somewhat less popular than formerly, are still extensively attended. The theater has lost some ground, especially among the masses, before the astounding rise of the movies which have over 90 million admissions a week and provide regular entertainment to the smaller communities that never had any before. Permanent opera organizations with the world's best talent are maintained in two or three cities and appear elsewhere on tours. Several cities sustain symphony orchestras, and musical recitals are more frequent than ever.

The rise of the modern public art museum may be said to date from 1870 when both New York and Boston took the step of organization. Growth was slow, being dependent largely on private support, but today a score or two of fairly comprehensive museums exist, and less pretentious collections may be found in over a hundred other places. Some men of wealth accumulated magnificent collections, many of which ultimately were made available to the public in one form or another, while a growing number among those of moderate means found joy in the most moderate assemblage. By 1930, there were also over 400 historical museums and 150 devoted to science or industry. The increase of both leisure and wealth proved a great stimulus to the collecting spirit, which found an outlet in all sorts of hobbies from antiques to postage stamps.

Particularly important for their reactions upon the use of leisure were the radio and the automobile, partly because of the amount of time they were used, partly because their advantages were available to most of the large group living in rural regions, as was not the case with many of the other innovations of the period. The variety of the radio programs was another advantage, and there was also the possibility of listening to them while engaged in various other activities, notably work about the home. By 1948, 94 per cent of all dwelling units had at least one radio.

The automobile was usable for both work and pleasure, and its rapid spread since 1914 can be attributed to the fact that for many it became more of a necessity than a luxury. It was estimated that, in 1937, 54 per cent of the families owned a car and nearly 3 per cent had two or more; in 1945, there was at least one car on 62 per cent of all farms.

The average annual expenditure per family on autos in 1935–1936 was estimated at $114. What proportion of this should be attributed to leisure-time use is uncertain but probably at least one-quarter. For 1930, the total outlay on motor cars for both touring and short daily pleasure trips is sup

posed to have been nearly $2 billion. Clearly, the auto has made travel for pleasure available to the masses as never before. The total outlay for pleasure travel of all kinds has come to be much the largest of the items devoted to distinctly recreational purposes, making up in 1930 $6.5 billion of the estimated total of $10.2 billion so spent. Though travel abroad became far more common during this period, it was still practically confined to the wealthy, a small fraction of the middle class seeking its educational advantages, and some immigrants revisiting their fatherland.

Among the developments affecting the less serious uses of leisure time, one of the most striking was the growth of interest in physical recreation and sports. The organization of sports, beginning in the schools, was continued in the colleges; then private clubs or business enterprise provided facilities for those who, as active participants or merely spectators, retained their interest in sports in later years. Increasingly, local communities provided parks, playgrounds, and beaches and expanded their facilities; also state and Federal parks became common. In addition to the indoor exercise facilities provided by private clubs, the Y.M.C.A., and the *Turnverein*, outdoor sports were made available at the country clubs which spread so rapidly after about 1900, stimulated by the increasing interest in golf. By 1930, there were nearly 6,000 golf courses, about a fifth being public or fee courses. Nearly 1,000 tennis clubs belonged to the national association, while courts were to be found in nearly every town.

Meanwhile the commercial organization of sports and sporting events advanced rapidly. The lead here was taken by baseball, which by the early 1870's was said to have become the great American sport. The first professional team was formed in Cincinnati in 1869 and a national association in 1871. Though many other sports originally amateur have developed a professional branch, such as bicycling, skating or, more recently, football, hockey, and tennis, baseball has easily maintained its preeminence in popular favor. Since the First World War, boxing has been viewed with more favor than formerly. Commercial provision for billiards, pool, and bowling is widely available and is entering the field of skiing, which has recently become a popular winter sport.

Among other leisure-time diversions, dancing and card playing became more widespread than ever. Night clubs and cabarets became a prominent feature in the night life of cities; after the repeal of prohibition, the saloon returned to its former status. In rural sections, the automobile made access to the entertainments provided by the nearest town or city easier, and the frequency of social gatherings decreased; in social circles elsewhere the practice of making formal calls waned, and entertainment generally assumed a more informal character. Little serious effort was made anywhere to stamp out the resorts of vice, and gambling and betting remained wide-

spread. The Federal government met with fair success in its attack on lotteries, but by 1945 pari-mutuel betting on horse races had been legalized in eighteen states where $1.3 billion were wagered, and probably a larger sum was bet through illegal devices.

The Cost of Living and Distribution of Wealth and Income. After the lapse of the income tax in 1872, it is not until its revival in 1914 that we have comprehensive data on the distribution of incomes; our knowledge of the distribution of wealth has in the main to be inferred from that. Scattered estimates give a hint of the largest fortunes that were developing in the intervening years. The first to exceed $100 million of which we know was that of Commodore Vanderbilt who died in 1877. A list of reputed fortunes drawn up in 1889 places that of John Jacob Astor, third of the name, at $150 million, though this was probably too high, and those of five more at $100 million; 64 others with from $20 million up are named, and the list is admittedly incomplete. A more comprehensive list in 1892 named over 4,000 individuals believed to be worth at least $1 million. After 1900, a new high peak was reached somewhere above $500 million, but it is doubtful if this was ever attained in more than two cases. In more recent years, the effects of the income, estate, and gift taxes, to say nothing of the 1930's depression, have greatly checked the growth of large fortunes and also tended to disperse the older accumulations. Dr. King estimated that in 1936 there were 9,037 families having property worth $1 million or more, and 502 with at least $5 million.

The income tax returns available since 1914 are of little use in indicating the number or size of large fortunes since they include salaries and profits or losses from the sale of capital assets. The returns for 1914 indicated nearly 8,000 individuals with net incomes of $50,000 or more. During the next decade the number ranged from 10,000 to 20,000, and the peak of 43,000 was reached in 1928. The depression cut the number to under 8,000 in 1932, but by 1940 it was over 14,000 and in 1944 over 37,000. Net incomes of $1 million or more probably numbered around 60 in 1914, fluctuated between 20 and 200 for the next decade, and reached the peak of 513 in 1929. By 1932, there were only 20, but there was a recovery to 52 in 1940.

Far more important, however, was the general distribution of income among all classes, and estimates are now available that give a fairly accurate idea of the situation in recent years. Of the two accompanying charts, that for 1929 on page 880 shows the situation in a very prosperous year and covers the incomes of unattached individuals as well as those of families. In both charts, the estimated rental value of houses owned by the occupants and the value of supplies produced on farms where they are consumed

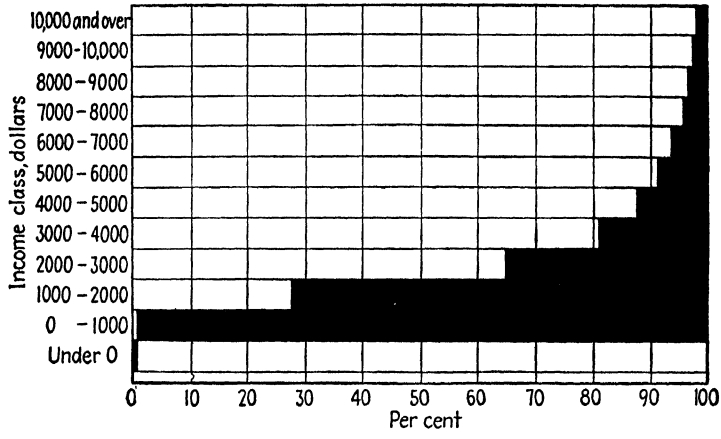


FIG. 89. Distribution of income (in economic units) of families and unattached individuals by income classes, 1929. (*Based on M. Leven, H. G. Moulton, and C. Warburton; "America's Capacity to Consume."*)

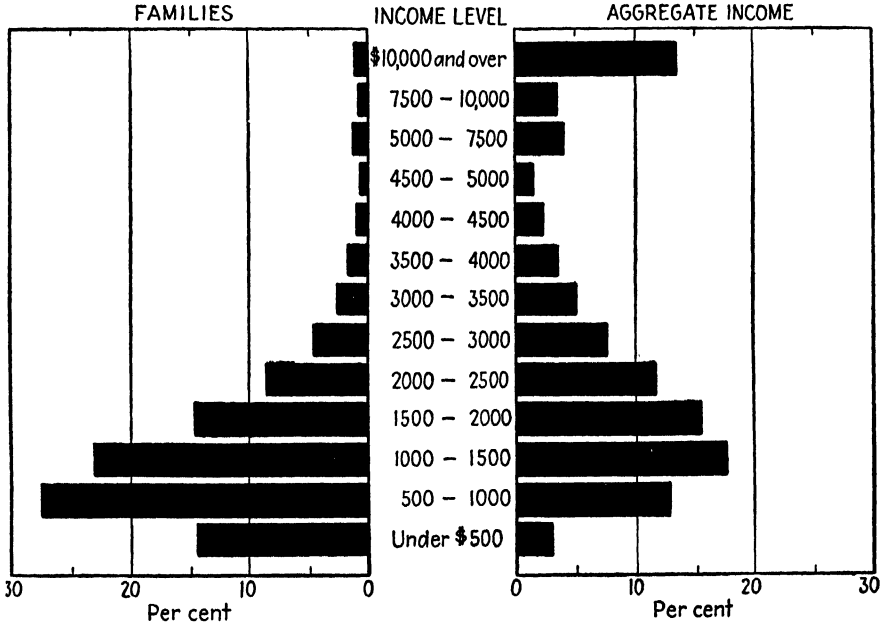


FIG. 90. Distribution of family income in the United States by income level, 1935–1936. (*National Resources Committee, "Consumer Incomes in the United States."*)

are included as part of the estimated incomes, as is obviously necessary to secure a fair view of the situation.

The chart for 1935–1936 (page 880), when some effects of the depression were still felt, covers family incomes only, because the family is the significant unit, and the inclusion of the incomes of single individuals tends to distort the picture for most purposes by raising the averages. This chart

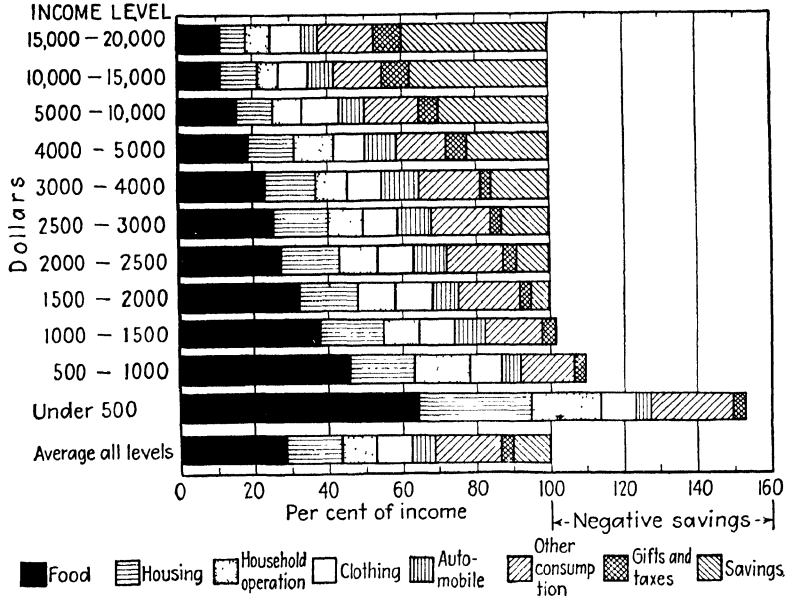


FIG. 91. Percentage use of income by American families at different income levels, 1935–1936. (*National Resources Committee, "Consumer Expenditures in the United States."*)

covers 29,400,300 families or 91 per cent of all consumers, whose aggregate income was $47.7 billion or four-fifths of total consumer income. It is important to note that, if this aggregate income had been equally divided among these families, each would have received $1,622; as it was, half the families received less than $1,160. The lowest 40 per cent of them had incomes below $970 and received 15 per cent of the total income; the next 40 per cent had incomes between $970 and $2,050 and received 35 per cent of the total; the upper 20 per cent with incomes above $2,050 received half the total. However, the subsequent rise in incomes was such that in 1947 half the families (including single-person family units) were estimated as receiving money incomes before taxes of $2,920 or more. According to this government estimate, the 8 per cent of all family units having $7,500 or more income received 30 per cent of the total money income, and the 31 per cent of the units having less than $2,000 income received 9 per cent

of the total. However, the latter group included over half of all farm operators, and they received substantial nonmonetary income from their farms.

With this picture of the distribution of income in mind, we can now turn to inquire how it was used by the recipients and thus secure a general idea of the cost of living for different economic groups and the relative impor-

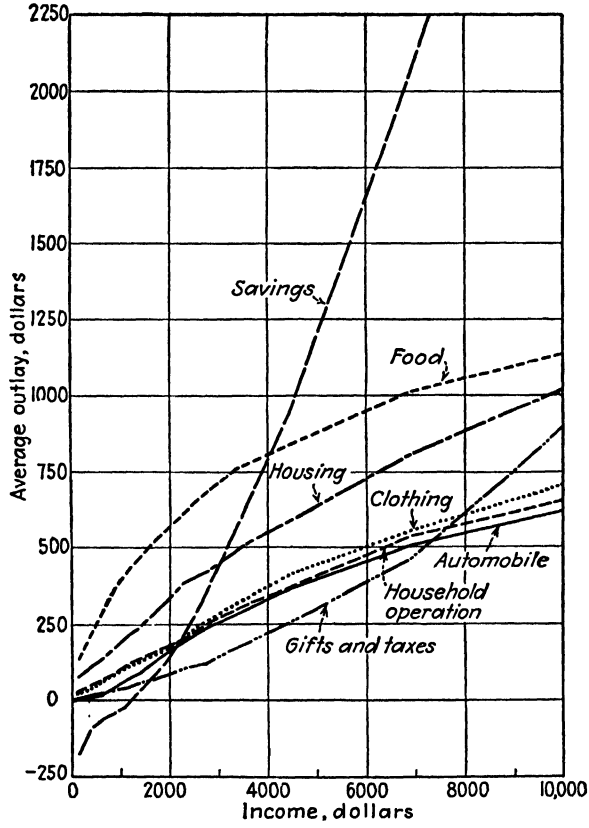


FIG. 92. Average outlay of nation's consumer units for major categories of disbursement at different income levels, 1935–1936. (*National Resources Committee, "Consumer Expenditures in the United States."*)

tance of the chief elements, as far as covered by this private outlay, which entered into their standard of living. The chart on page 881 showing the percentage use of income up to the $20,000 level by families in 1935–1936 indicates that in the lowest income groups the outlay was typically in excess of income and that practically all of the saving, which rose to 40 per cent of the income in the top group, was done by those in the upper income groups. The outlay for food, housing, and house operation averaged over half of the income for all groups; but the proportion used for these

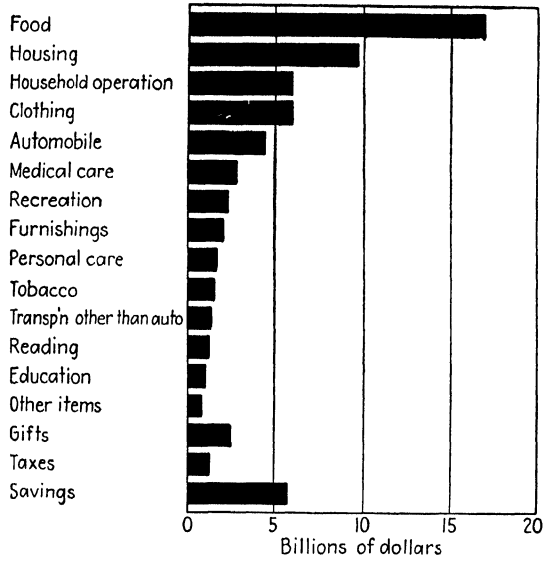


FIG. 93. Aggregate disbursements of American consumers by major categories, 1935-1936. Total, $59.2 billion. (*National Resources Committee, "Consumer Expenditures in the United States."*)

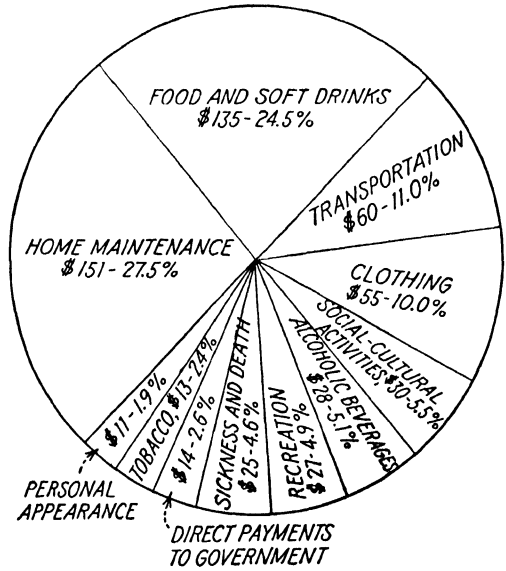


FIG. 94. What the average American consumer purchased by classes, 1937. Total, $549 per capita. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

purposes rose from only a quarter in the high income group to a point exceeding income in the lowest group.

The average absolute outlay of different groups, both family and individual, for the main forms of disbursement is shown in another chart on page 882; a third chart (page 883) is useful as giving the aggregate disbursements of American consumers for each of the main categories, thus indicating their relative importance in total consumer outlay. It may be noted that of the $50 billion remaining for all consumption purposes, after deducting the disbursements for savings, gifts, and taxes, over one-half was used for food and housing alone and a tenth each for household operation and clothing, so that less than three-tenths, or just over $13 billion, was left available for all other forms of consumers' needs. A fourth chart (page 883) shows how the average outlay of all consumers, totaling $549 per capita, was distributed among different uses. A later government estimate for 1942 placed this per capita outlay at $620 and the per capita savings at $197.

A different basis for classifying expenditures for consumer purposes distinguishes the outlay for services and that for commodities of varying degrees of durability, and is of significance as suggesting the possibilities in the fluctuations of consumer demand during the business cycle. The study of Kuznets covering the years 1919–1935 indicates that 40 per cent of the outlay for consumer goods was for perishable commodities, 31 per cent for services not embodied in new commodities, 17 per cent for semidurable goods, and 12 per cent for durable goods.

That different forms of consumption may tend either to increase or to decrease future production must not be forgotten, but such tendencies are commonly so obvious as to require no discussion here. Nor need it be stressed that, although more abundant consumption is the great economic objective—always remembering that economic goods are only means to more ultimate ends—it is more abundant consumption over the generations that will be the economic goal of any farsighted people.

Summary. Looking back over this long record we may now ask, What have been the outstanding contributions to a higher standard of living? Although accurate evaluation of such complex things is impossible, at least three contributions seem to stand out above all others: (1) the increase of leisure time, not only per week but per lifetime, (2) the prolongation of life expectancy and the decrease of human suffering from disease, (3) the spread of education. These greatest gains it should be noted are all intangible in character; the direct results are embodied in the lives of human beings, not in material goods. Though fundamentally due to the interaction of many things, and first of all to the progress of science, they could not have been

made so generally available without the great increase of the economic means by which they were supported.

There were also substantial contributions that directly, at least, took a more material form. Among the three categories of goods that absorb much the greater portion of consumer outlay, the chief gain in food was in variety and improved diet rather than in quantity. The very marked gain in housing was not so much in the mere element of shelter as in the equipment for heating, plumbing, and lighting and lessening the drudgery of housework; the gain in furnishings largely took the form of greater comfort and attractiveness. In clothing, the gain due to lower cost took the form of more abundant and varied wardrobes with less distinction between classes. But an additional and important gain arose from the decreased proportion of consumer outlay that was absorbed by these three categories of essentials. The proportion thus made available for other purposes is estimated to have risen from about 8 per cent in 1775 to 26 per cent in 1935–1936; no small share of this was added to the outlay for the various pursuits of leisure time. Finally, there were the gains from the growing activities of government which were of particular significance as tending to give the great masses a larger proportion of socially important consumers' goods and services than they would otherwise have obtained.

The standard of living thus attained by the American people is commonly believed to be the highest in the world, certainly the highest in any great

INDEX NUMBER OF THE STANDARD OF LIVING IN DIFFERENT COUNTRIES, 1925–1934

Country	Rank	Country	Rank
United States	100	Sweden	47
Canada	97	Germany	47
New Zealand	94	Belgium	43
Great Britain	77	Norway	39
Switzerland	74	Austria	37
Australia	71	Japan	26
Netherlands	63	Poland	25
France	50	Italy	25
Denmark	49	U.S.S.R.	23

nation. International comparisons of the standard of living are beset with many complicating factors, owing to the divergent conditions and habits in different countries as well as to the lack of sufficient data, and so must be recognized as rough approximations. The most recent calculation, that

of Colin Clark,[1] ranks the standard prevailing in different countries during the period 1925–1934, as measured by the real income per capita of the working population, as shown in the preceding table. Less complete data give India an index number of 12; that for China is still lower. Clark's study indicates that, on this basis of measurement, the standard in the more advanced nations of Europe is from two-fifths to three-quarters that in the United States; in most of the rest of Europe, as well as in the greater portion of South America, it is between a quarter and a third of the American standard.

Despite the great American achievement in raising the standard of living, it is sometimes asserted that a third of the people are still ill fed, badly housed, and poorly clothed, besides lacking other elements of a decent standard. It must be realized, however, that such statements rest upon a conception of what is needed which includes much that never would have been included in the concept in 1770 or 1860. Just as our idea as to what is a decent standard today includes much that was undreamed of in earlier times, so our idea of what constitutes a minimum standard has risen; that very rise which causes us to condemn the standard prevalent among a large group today is largely a product of the gains made in advancing the standard of the people as a whole.

It should also be noted that even this underprivileged group has secured a substantial, even if not the desirable, share in the chief gains in the standard of living. Of the gain in leisure time, they secured a large portion of that obtained by most; in the case of more education, almost as much might be claimed; even in the case of better medical care, where the proportionate gain was very much smaller, it still was very substantial. Also, the progress made by this group in securing a better provision of the more material goods was very marked.

Although the existence of what is now considered a low standard of living among a large group should not lead us to overlook the great achievements of the past, it obviously suggests how large and serious a problem still confronts the country. That there is yet much that could be done to alleviate conditions by securing a better distribution of income is plain. Yet, when we face the hard fact that even the extreme measure of an equal distribution of income would provide everyone with only what might be considered a minimum of decency—even less if it decreased productive efficiency—we must realize how much the hope for long-run progress, just as in the past, depends on improving the processes of production.

[1] CLARK, COLIN, "The Conditions of Economic Progress," London, 1940. An important historical and analytical study.

CHAPTER XLVI

SUMMARY AND SOME CONCLUSIONS

Introduction. Having finished the general survey of the economic history of the United States, we can now profitably look back over that record as a whole and, unconcerned with the details of development in special fields of economic activity, endeavor to secure a summary picture of the general outcome in the growth of wealth and income. Also, we are now in a better position to make a summary analysis of the main factors contributing to the results achieved and so to secure a clearer view of the conditions that have dominated our economic development. Finally, by surveying this past experience to learn the most common causes for mistakes and failures in the efforts at social guidance, we can attempt to formulate a few conclusions that should prove of value as a guide in our endeavor to secure a better social control of our economic development in the future.

The Growth of the National Wealth. The figures on national wealth, especially those before 1900, provide only a rough approximation to the facts. The census has estimated the total for 1790 at $552 million in the money of that time. By 1860, the total, including slaves but excluding nontaxable property, was over $16 billion which would be equal to $39 billion in 1926 dollars. If we use the 1926 dollar equivalent to avoid distortion due to changes in the price level, the total, including nontaxable property, rose to $192 billion in 1900 and to $347 billion in 1922, the last year for which the census made a report. A later estimate placed the figure for 1937 at $322 billion in current dollars, or $342 billion in 1926 dollars.

The enormous growth in total national wealth is particularly significant for its bearing on national security, since it has made the country by far the richest nation on earth. Even before the First World War the national wealth was estimated as almost equal to that of England, Germany, and France combined. In an age when control of wealth and productive capacity has become a more important factor than ever in the conflict of nations, this has greatly enhanced the political power and prestige of the United States. Without these resources, the outcome of the Second World War might well have been very different.

More important as contributing to the economic well-being of the people is the growth in national wealth per capita. The estimated wealth for 1790 gives $171 per capita for the free population; the corresponding figure for

1860 is almost $590, or $514 for the total population, which was equivalent to about $1,240 in 1926 dollars. Later figures, in 1926 dollar equivalents and including nontaxable property, are about $2,520 in 1900, $3,360 in 1922, and $2,640 in 1937. Presumably the decline in the 1930's had been much more than made up by 1945.

Concretely this wealth, as is shown by the chart just below, is made up of a great variety of economic goods. Some are being used up from day

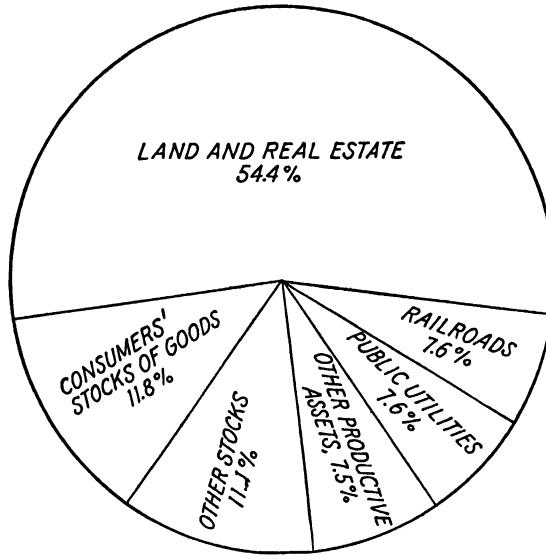


FIG. 95. The various forms of the wealth of the United States, 1936. $307.6 billion = 100%. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

to day by both producers and consumers; much the largest portion consists of more durable objects the greater share of which is made up of producers' goods. The outstanding fact is that over half the total is made up of the value of land and buildings, whereas tangible personal property is but a small proportion of the total.

This wealth is mostly the product of the continuous process of saving that has been going on for generations. The chief exception would be that portion of land values which could not be attributed to some improvement. How great that portion would be cannot be determined, but most of it would be found in the urban land values; even there the value added by public and private improvements is large while in the case of farm lands it is generally believed to make up most of their value. This rising per capita accumulation of wealth, chiefly in the form of durable producers' and consumers' goods, which each generation passed on to the succeeding genera-

tion was obviously an important factor contributing to the rising standard of living.

The Growth of the National Income. The national real income per capita is the most inclusive and important statistical measure available for estimating the progress made in raising the standard of living. Measurement of the national income is difficult at best, partly because the data available, though far better for recent decades than for the earlier period, are still far from adequate and partly because of the problems involved in deciding just what should be included in the estimate. Without attempting

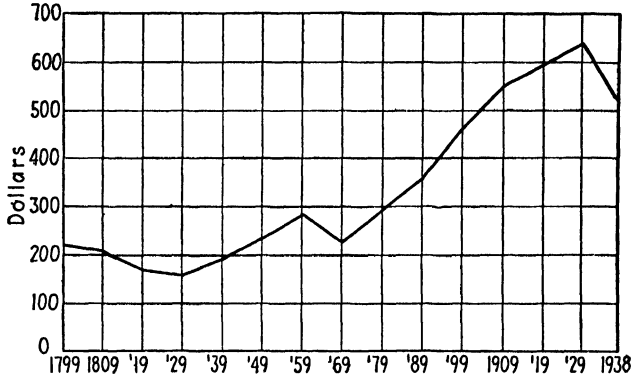


FIG. 96. Per capita realized production income adjusted to cost of living, 1799–1938. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

to discuss the latter here,[1] we may simply note that much the largest item omitted in these estimates is the value of housewives' services, an item which Kuznets estimated at $23 billion for 1929 or equal to over a quarter of the national income. Also, it should be noted that, since national income covers only economic goods and services, it takes no account of leisure time, which was an element included in our definition of the standard of living.

Recent estimates by the National Industrial Conference Board provide the best available survey of the national real income per capita over the period since 1799; admittedly they are only rough approximations for the first half of the nineteenth century but much more dependable for the twentieth century. To eliminate the effects of shifting price levels and so show the change in the quantity of goods and services obtained with the rising per capita income, figures are given in 1926 dollar equivalents. As shown on the above chart, starting in 1799 at $211 there was a down-

[1] For a discussion of these problems see S. Kuznets. "National Income and Its Composition, 1919–1938," New York, 1941.

ward trend to $166 in 1829 and then a rise to $300 in 1859. Following the Civil War setback, there was a long period of rapid advance to $459 in 1900, $545 in 1914, and the peak of $625 in 1929. It dropped to $472 in 1933, but by 1938 had recovered to $533 or about 2½ times that for 1799. This gain is the more impressive since it was made despite the great increase in leisure time secured during this period, not to mention the unemployment during the 1930's. A comparable figure for 1947 would probably be between $900 and $1,000, or far above any previous point.

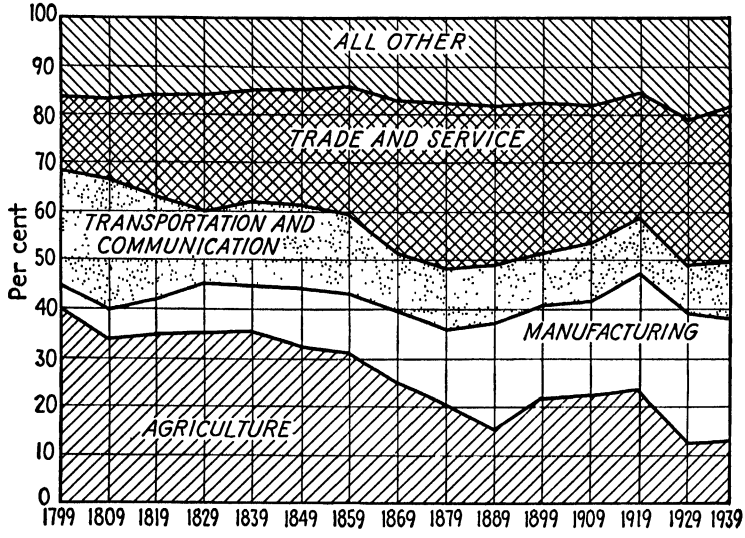


FIG. 97. Percentage of total realized production income contributed by different branches of economic activity, 1799–1938. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

Some additional light on the trend for the period since 1850 is provided by the independent estimates of Colin Clark. These endeavor to measure the real income per capita of the working population rather than that of the total population and include additional estimates for changes due to the shorter working week or to unemployment. Most significant is the increase of 63 per cent in the per capita real income of the working population between 1850 and 1900. The subsequent increase up to the peak in 1929 was only 18 per cent, and by 1937 most of this last gain had been lost, though it was more than regained during the Second World War. The marked decline in the rate of gain since 1900 was due chiefly to the reduction in the normal hours of work but also, in the 1930's, to greater unemployment, for productivity of real income per hour of work increased. Up to 1900, this increase was rapid and only moderately offset by shorter hours. After making little advance up to 1914, hourly productivity again

rose rapidly, but the effects of this gain were substantially decreased by the sharp cut in working hours and then by unemployment. It is important to realize that the great increase in leisure time has not been obtained without a substantial reduction in the potential real income of the people.

The changes that occurred in the concrete forms of this real income were described in Chap. XLV and so need not be summarized here, but the long-run changes in the relative importance of the chief branches of economic activity contributing to the national income should be noted. As indicated by the chart on page 890, the chief changes since 1799 are the decline in

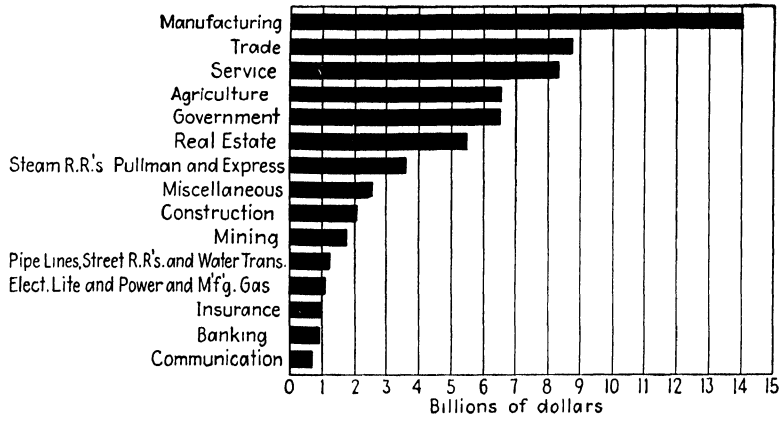


FIG. 98. Average volume of all income payments for industries, 1919–1934. (*Based on figures of the National Bureau of Economic Research.*)

the relative contribution obtained from agriculture and the marked growth of that obtained from manufacturing and from trade and services. Such a trend is fairly typical of countries experiencing rapid economic development. At first, the extractive or primary industries are dominant; as a nation becomes industrialized, the extractive industries decline in relative importance, particularly if they have to face growing competition from newly opened regions. As transport costs are cut and specialization, both regional and personal, increases, the activities involving exchange of goods and services, sometimes called the "tertiary industries," grow in importance, while an increase in wealth also leads to a marked expansion of personal services. The outcome of this trend is shown in more detail by the chart on this page covering the period 1919–1934.

It is also desirable to analyze income with reference to the proportions contributed by the chief factors of production, even though no complete classification on this basis is obtainable and estimates are best confined to the present century. The important fact indicated by the chart (page 892) showing the realized private production income for the period since 1899

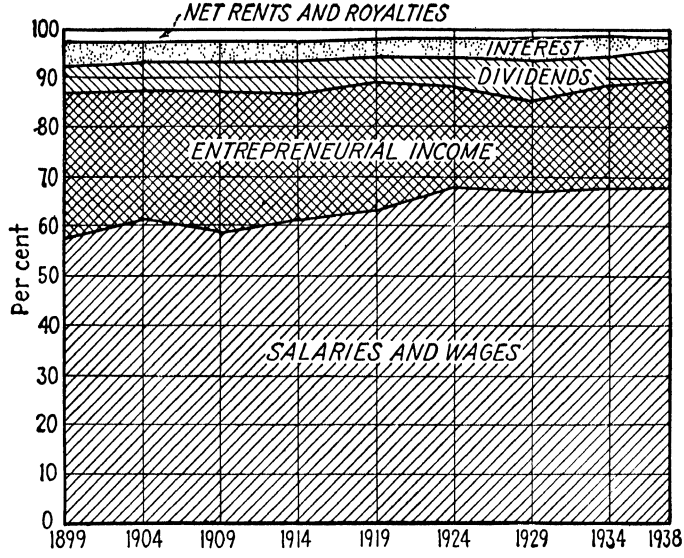


FIG. 99. Realized private production income, 1899–1938, percentage by sources. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

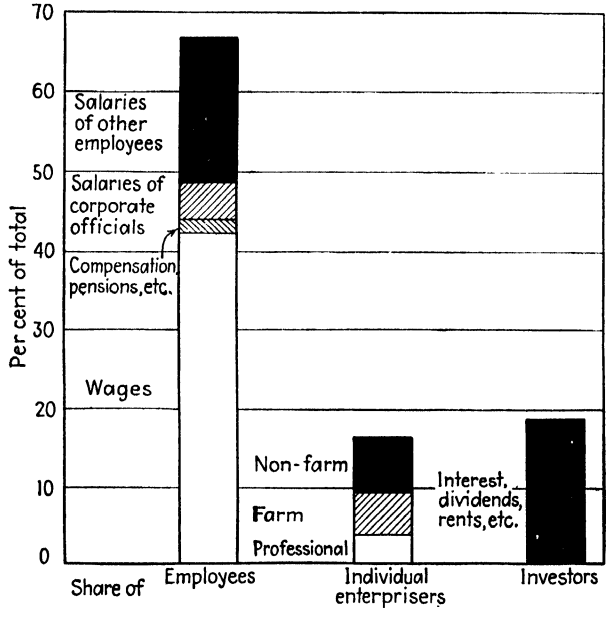


FIG. 100. Division of income from productive activities among major claimants, 1929. (*Reproduced from M. Leven, H. G. Moulton, and C. Warburton, "America's Capacity to Consume."*)

is the predominant proportion of the total that is due to salaried and wage-earning workers. On the average their labor yielded about two-thirds of all production income during this period. The proportion going to them showed a marked upward trend, 1914–1924, and then remained fairly constant, but later estimates indicate the proportion rose to nearly three-quarters during the Second World War. The chart also indicates that the return on invested capital in the form of interest, dividends, rents, and royalties averaged about 12 per cent of the total, though there is a widespread popular impression that it is much larger and Kuznets estimates rent, interest, and dividends as averaging 19 per cent of the annual national income, 1914–1938. The entrepreneurial income representing the return obtained by single individuals or partnerships in all forms of private enterprise from farming to merchandizing and professional services, includes the return on such capital as they owned as well as that for their labor. The decline shown in this share from nearly 30 per cent of the total to around 20 per cent is chiefly a product of the more rapid growth of production under the control of corporations. The chart for the prosperous year 1929 (page 892), based on a slightly different calculation, is of interest as showing in more detail the division of the shares among the different groups.

The Chief Factors in the Growth of the per Capita Real Income. What does our survey of the country's economic history indicate to have been the chief factors responsible for the growth of the per capita real income? In Chap. I it was stated that the answer to such a question was the main immediate objective of the study of economic history when approached from the economist's point of view, the ultimate economic objective being to learn, from the analysis of the causes for past successes or failures in the efforts to raise the standard of living, how to secure more effective social guidance of future efforts directed toward that end.

Chapter I also outlined the chief factors that determine the amount of real national income and its distribution, and the following summary historical survey of the main developments affecting those factors will adhere to that outline. Accordingly, the developments reacting upon the quantity and quality of the four factors of production will be summarized first, then those affecting the economic and social order under which these factors were used for purposes of production, and, finally, the developments affecting the distribution of the income thus produced.

It should be remembered, however, that back of these developments there was the basic institutional framework within which they took place and also the motivating force of the desire to raise the standard of living. In that framework the continuance, with but slight modifications, of the systems of private property, freedom of individual initiative, and a competitive economic order combined with the great economic opportunities

opened up, provided unusual incentive and scope for private enterprise. The general framework of government remained relatively fixed, but more democratic processes helped to give effect to the broadening social ideals of the people. The mode of living chosen by the American people involved an ever-increasing dependence on economic goods and services for its fulfillment. The simple life of the ascetic made no appeal to most; the decreased labor required to provide the absolute necessities of life did not lead to the use of the greater leisure thus made possible for abstract contemplation; the more most people had of economic goods and services the more they wanted, and the increased leisure was commonly devoted to pursuits requiring still more economic goods and services. Thus there was practically no decrease in the motivating force behind the effort to advance the standard of living.

Developments Affecting the Four Factors of Production. The most obvious contribution to the growth of the factor, natural resources, came through the territorial expansion of the country, mostly between 1800 and 1850. Although these acquisitions were important in adding to both the variety and the quantity of the nation's resources, many of them did not attain economic significance until much later. It required exploration, often aided by advancing science, before the existence of some resources was made known, and this process is not yet finished. Scientific and technological advance gave value to many resources once considered useless. Similarly, the westward movement of population, the introduction of cheap transport facilities, and other improvements were necessary before the resources of many sections became of value. A prodigal policy in the disposition of the public lands, at least until after 1900, hastened the development of these resources.

In the course of time, however, many of the original resources became seriously depleted. Much of the stock of wild game, fish, and fur-bearing animals has disappeared; in many sections, even where it was not an obstacle to farming, the valuable timber has been cut off or destroyed by fires, with no adequate provision for reforestation; enormous quantities of nonreplaceable oil, gas, coal, and minerals have been extracted, and much fertile soil has been washed away or exhausted. This heavy toll from our natural resources has distinctly diminished the great advantage the country once possessed in the comparative cheapness of this factor of production.

Labor, using the term in the broad sense, makes much the largest contribution to the national income; hence the developments affecting the supply and quality of this factor are particularly important. The growth in the country's labor supply was determined, first of all, by the growth of population which in turn was a product of the natural rate of increase resulting from the birth and death rates and the net immigration or emi-

gration. The outcome was a phenomenal rate of growth in population, approximately one-third every decade down to 1860, though by the 1930's it had fallen to about a fifth of this rate. As a result, by 1860, the population nearly equaled that of France or Germany; today it far exceeds that of any other country but Russia, India, and China. The constant inflow of immigrants, among whom the percentage of males of working age was high, resulted in an abnormally large proportion of active workers in the total population. Much of the cost of raising the immigrant portion of this group was borne by other countries.

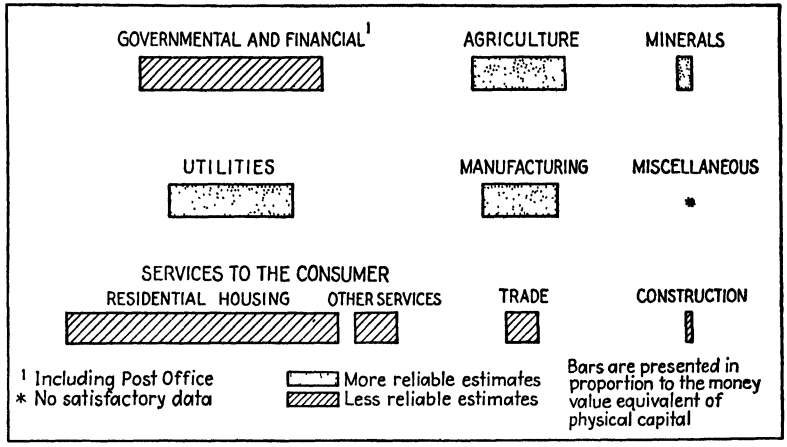


FIG. 101. Physical capital employed in segments of the American economy, 1935. (*National Resources Committee*, "*The Structure of the American Economy.*")

Among those able to work, a large percentage did engage in economic activities until the prolongation of the period of education began to reduce it, for the desire to acquire wealth was widespread and the leisure class very small. Not only were the hours, days, and years of leisure relatively meager until quite recent times, but the intensity of work was fairly high. Also, except in various crafts requiring much manual dexterity where we have always been weak, the general quality of the workers has been high. For this, the unusually extensive provisions for public education should be given much credit, while numerous other conditions have been such that there was more chance of developing an individual's full capacities for work than in most countries. As a result, the labor supply has been considerably greater and more efficient than would be typical of older countries possessing an equal number of inhabitants.

The growth in a country's supply of capital depends primarily upon its savable fund and the effective desire of accumulation. The great increase that took place in the country's annual savable fund was a product of all

the innumerable developments that raised the per capita national income. Despite the fact that a steadily growing amount per capita of this savable fund was being diverted to maintain a rising standard of living, the savings steadily rose. This was due to various things. The maintenance of peace and order with the careful protection of property rights gave greater assurance that those who saved would enjoy the fruit of their abstinence. Education developed foresight as to future needs and generally created a desire to provide a higher standard of living for one's self and one's children. At the same time, the growth of various financial institutions, such as savings banks, investment trusts, and life insurance, provided better facilities and aids for saving than ever before.

Although most of the accumulating capital resulted from domestic saving, some came from foreign investments in this country, which rose from about $400 million in 1860 to around $6 billion in 1914. Of course this contributed to the income of the American people only as its use yielded a return greater than the sum paid the foreign investor. Though some American capital had gone abroad before 1914, the First World War witnessed the country's shift from the position of a debtor to that of a creditor nation, and the results of the Second World War greatly strengthened the creditor position. This shift indicated that the country's era of relatively scarce capital had passed and that Americans could generally count on obtaining this factor of production at least as cheaply as their foreign competitors. Though the return on investments abroad is not a part of the national product, it has added to the income received by the people and can be used either for saving or for raising the standard of living.

The growing accumulation of capital was largely embodied in relatively durable producer's goods: factories, warehouses, office buildings, machinery, transport facilities, and endless other goods of similar character. Most of these goods were constantly being worn out or becoming obsolete, though at greatly varying rates. As they were discarded, they were commonly replaced, usually out of earnings set aside for the purpose, by new goods of an improved character. It was in this manner that much of the advance in science and invention was applied in the processes of production, and in this sense there was a constant improvement in the quality of capital goods. Whereas the growth of the fund of capital tended to increase the national money income (though somewhat offset by the decline in interest rates), these improvements in the quality of capital goods, although not without effect upon the money income, were chiefly important in reducing the costs of goods and services and so increasing the real income of the people. Thus each new generation inherited from the preceding one a greatly augmented supply of capital goods of a constantly improving quality to be used in providing for its economic wants. The advantage thus

accruing to the present generation as compared with that of their grandparents can hardly be exaggerated.

The development of the supply and quality of the factor of entrepreneurship is difficult to determine in the absence of any satisfactory basis for measurement. It is significant, however, that by 1900 there was a widespread belief that American business leaders were the ablest in the world and many foreigners came over to study their methods. The great resourcefulness, energy, initiative, and daring of the so-called "captains of industry" were widely acknowledged if not always acclaimed. In developing this entrepreneurship various conditions in the environment played a part. The mobility, democracy, and educational facilities of economic classes helped to develop latent business ability. The unusual economic opportunities in a new and rapidly growing country provided incentive and great scope for the employment of such ability, and a predominantly laissez-faire policy allowed much freedom for individual action. The rapidity of the country's development, by so frequently justifying the optimistic, speculative hopes, helped to engender the spirit of daring enterprise. These same conditions tended to lessen the inertia, the extreme conservatism, and the adherence to tradition inimical to the adoption of new methods and ideas. Finally, the general spirit of work and the absence of any social taboo upon engaging in business drew a larger proportion of the ablest men into business than in many other countries. Seldom if ever have conditions been found more favorable to the development of individual business enterprise than in the United States of the nineteenth century.

The Development of the Economic Order. The efficiency with which the available supplies of the factors of production are combined is determined by the existing economic and social order. Obviously this order reacts upon these factors just as they in turn react upon it. We now turn to a summary of the chief developments in this order tending to increase the productive capacity of the country, as described in more detail in all that has preceded.

Among the most important of these developments were the improvements in the facilities for carrying on the processes of exchange and marketing since, by giving greater mobility to the factors of production or better knowledge of the available supplies, they promoted the use of these resources in the place and for the purpose where their productivity would be the greatest. Outstanding in their effects were the improvements in transport and communication facilities. The mobility of individuals and commodities was thereby enormously increased; goods which, formerly, it did not pay to transport 100 miles can now be shipped halfway around the world with a speed that has been similarly increased. Even more remarkable, perhaps, were the advances in communicating facilities through such

means as the telegraph, the telephone, radio, and cheap printing. Today the morning paper provides news of the previous day from all over the world and is available to the masses; in 1750, it took weeks and months for such news to spread abroad and few could afford a newspaper. Today one can talk from the Atlantic to the Pacific or across the seas in a few minutes and promptly settle business transactions that formerly would have required months and involved substantial risks. Thus the market areas have been expanded till in many cases they are not only nation-wide but world-wide in scope. As a result, the economic advantages of territorial specialization and division of labor have been enormously increased.

These changes made the development of an efficient marketing organization a more complex as well as a more important problem. The endlessly ramifying mechanisms of the marketing organization for different kinds of goods or services include all the means employed to gather the information and the goods and to bring together the buyers and sellers. Though few things have secured such a highly developed organization as those which were evolved for dealing in money, securities, grain, cotton, copper, and similar commodities, and the facilities for trading in other things vary greatly, there are few cases where they are not vastly superior to those formerly available.

The development of financial institutions has contributed its part in facilitating the processes of exchange as well as in providing a more efficient organization for carrying on other work of the economic order. In place of the inadequate and uncertain money of earlier times, the country has secured an ample supply of specie and the various forms of paper money have been made relatively stable, except in times of war and its aftermath. The rise of various institutions, especially banks, greatly expanded the means for extending credit, thus facilitating the transfer of control over productive resources to those who could make the most economical use of them. However, it must be confessed that we have not yet learned how to control the use of credit so as to prevent its throwing the whole economic system out of gear.

In addition, the banks and trust companies have developed an endless variety of services for facilitating all sorts of financial transactions. Together with the stock exchanges, the brokers, the mortgage houses, and investment bankers, they have provided adequate facilities, unfortunately not free from abuse, to handle the greatly increased volume of security issues so essential to large-scale business enterprise. Savings banks and life-insurance companies have arisen to offer facilities and inducements for saving. Many other forms of insurance now make possible an even distribution of numerous financial losses and thus add to the stability of business undertakings and the security of individuals.

Finally, there is to be noted the remarkable development of the economic functions of the government. The Revolution freed the country from English control and enabled it to establish the type of government deemed best adapted to the people's desires. The adoption of the Constitution provided a more efficient means for furthering this objective, as did the subsequent steps toward democratization in both state and Federal government. How manifold have become the positive governmental activities in providing goods and services as well as those of a regulatory character need not be repeated here. In the main, it has been necessary to assume these new activities as best could be done under the distribution of powers set up in the Federal and state constitutions. Since this governmental framework has proved far less susceptible to change than the economic order, a growing lack of adaptation has resulted and the efficiency with which the state might carry out its economic functions has been impaired.

Although these various developments in our economic organization have greatly increased the economic productivity of the country, the gains have not been entirely free from certain disadvantages which at times impaired the potential productivity. As the organization became increasingly intricate and the growing interdependence of the parts necessitated a more effective coordination of the whole, the task of securing such coordination became far more difficult. The resulting dangers were most clearly reflected in the business cycle with its attendant evils and losses. Except as it had its initiating cause in war, this problem arose from the growing complexity of the economic order and inadequate control of credit and the circulating medium. The problem of coordination was also aggravated by the great growth in the use of fixed, specialized capital goods, making it hard to adjust output to fluctuating market demands and in turn tending to undesirable forms of competition and not infrequently to monopoly. That the competitive system results in a certain amount of duplication and waste is commonly recognized, but this is assumed to be an element of cost in obtaining the greater gains of progress through the process of selection provided by the competitive struggle. This must be the main justification for the continued acceptance of the system. Yet the question may still be raised whether, in certain economic activities, conditions have not become such that the wastes are excessive and measures to curtail them are needed.

In addition to these various developments in the United States, there were those throughout the rest of the world, many of a similar character, which also made a very substantial contribution to the rise in the American standard of living. Basically, this contribution was a product of the trend toward a more nearly world-wide specialization and division of labor, carried out chiefly through the mechanism of international trade, but also

resulting in greater mobility of labor, capital, and entrepreneurs and the more rapid diffusion of advancing knowledge. Immediately greatly facilitated by the vastly improved means of communication and transport over land and over sea, there lay back of it all the developments affecting the economic growth of other nations and their international relations.

In Europe, the rapid increase of population and wealth that accompanied the industrialization of the western portion provided a market for the expanding output of cotton and foodstuffs in the United States and a supply of cheap manufactured goods for American imports, as well as the cheap labor and capital so eagerly sought by the United States. As other continents were explored, developed by settlement, or opened up to trade, new sources of supply for raw materials or foodstuffs became available—wool, hides, coffee, and copper from South America; silk, tea, jute, tin, rubber, and vegetable oils from the Far East; gold, diamonds, and cocoa from Africa; nickel and wood pulp from Canada, to mention only a few. In time these regions as well as Europe also provided a market for the rising output of American manufacturers. Though some of these developments proved unfavorable to certain American interests, such as the increased output of products competing with American exports or the rise of tariff barriers, and the United States often failed to take full advantage of the potential gains by erecting tariff barriers of its own, the net result was a substantial addition to the American standard of living.

Developments Affecting the Distribution of Income. Although the per capita income of a nation is fundamental in setting definite limits to the standard of living, the way in which that income is actually distributed is also a factor in the situation, since marked inequalities will tend to lower the total satisfactions yielded. Just what distribution would produce the maximum, considering the varying wants of men, cannot be determined; but nearly everybody would agree that it would be one involving less inequalities than have existed heretofore. We therefore need to summarize the changes reacting upon the basic institutional arrangements that control distribution, particularly those tending to alter the general pattern of income distribution, even though these fell far short of having the revolutionary character of those occurring in the field of production.

In this country from the first, the institutional bases of the conditions governing the distribution of wealth and income have been the rights of private property and comparative freedom of individual enterprise in an essentially competitive economic order. It was assumed that these would provide the incentive needed to increase the national income and, through the competitive struggle, promote the survival of those best fitted to serve economic wants and so further economic progress. That, under the existing conditions, this institutional setup was of the greatest importance in in-

creasing the real income of the nation, even though it often worked imperfectly, has already been indicated. Its effect on the distribution of income was equally, if not even more, important.

Because the institution of private property still remains unchanged in all its essential elements, we are apt to overlook the many ways in which the right to do as one likes with one's own property has been curtailed over the course of time. The use of a wide range of specific types of property has been moderately circumscribed. Thus city building and health codes

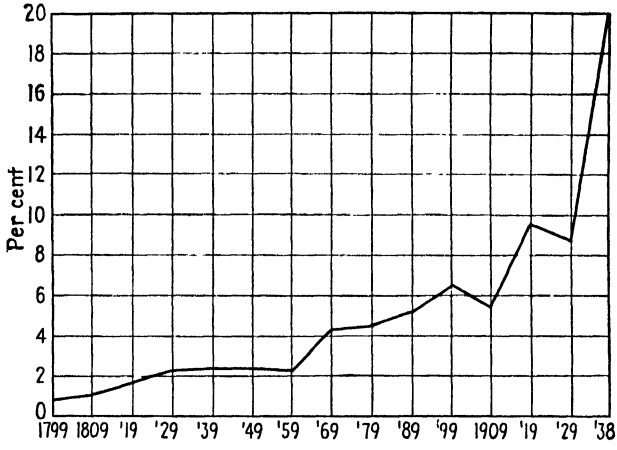


FIG. 102. Realized income from government, 1799–1938. Percentage of total realized income. (*Reproduced from National Industrial Conference Board, "Studies in Enterprise and Social Progress."*)

involve detailed regulation of the character and use of real property, and the disposal of property by will is carefully limited by law. The right of the state to take property by taxation has always been recognized, but the extent to which this right has been employed and used to alter the distribution of real income has greatly increased (see the chart on this page). The right of eminent domain has also been granted for a growing variety of purposes. At times, practically if not in the technical legal sense, the state has not hesitated at action that destroyed private property values on a vast scale, as in the abolition of slavery, the adoption of prohibition, or the recent devaluation of the dollar. On the other hand, the Fourteenth Amendment of the Constitution, as interpreted by the courts and supplementing the Fifth Amendment, has proved a great bulwark of defense against many attempted inroads on such rights. Thus private property remains only rather slightly modified as one of the basic institutions of the economic order.

Much the same could be said concerning freedom of private enterprise,

though here the growth of governmental limitations has been distinctly more marked. Some pursuits have been forbidden altogether, and a rapidly growing number are debarred to those unable to secure the requisite license. Previously, only a small proportion of the restrictions on freedom of action in business have been noted, mostly instances of Federal, some of state, but very few of local government interference. We need only recall the laws regulating banking, insurance, railroads and other public utilities, shipping, labor conditions, stock or commodity exchanges, trusts, and public health to suggest the expansion of such restrictions wherever it was deemed socially desirable.

Finally, the competitive system, though still basic in the economic order, has undergone substantial changes. In fact, the system never provided many markets where conditions approximating perfect competition prevailed; more or less imperfect competition has been the rule rather than the exception. Yet the scope and intensity of competition have varied substantially from period to period, steadily increasing until near the close of the last century, since when the trend has been reversed. Yet the end of the competitive system still seems more distant than many claim.

Our history shows that the government has often sought to alter the conditions under which competition was allowed to operate. In industries like public utilities where the wastes of competition appeared to outweigh the gains, the system of regulated monopolies was adopted. In other cases a monopoly was granted to provide an incentive to effort, such as a patent, copyright, or the early grants for bridges, manufactures, and railroads. Until very recently, however, the popular fear of monopoly has been such that legislation more frequently sought to prohibit monopolies and to create conditions tending to lessen the imperfections in the competitive system.

In Chap. I it was stated that all economic transactions had a reaction upon the distribution of wealth or income and that all private business was a struggle between the participants to secure a larger income. It has just been indicated that the basic institutions shaping the conditions under which this struggle was carried on underwent only very moderate alterations. We can now profitably look back to note the activities of a few of the leading groups participating in this struggle, though it must be emphasized that the number of such groups was legion. A striking feature here is the growing tendency of various groups to organize to secure the power and resources of united action for promoting their economic interests, both in the arena of business and, by means of legislation, in the political arena.

Reviewing our history, we see how, as employers gained in power over wage earners with the increased size of the business unit, the workers organized their unions to offset this. Then, as the unions grew in power,

the employers in turn formed their associations, and in time unions and employer associations in varied industries each united in still larger organizations to oppose one another on a broader front which also included the political arena. The conflict between debtor and creditor groups was constantly reappearing in the struggle to obtain easy credit and cheap money. Landowners and landlords opposed the demands of the landless for free access to the public domain and of tenants for easier terms of rent. Even within each of these groups there were internecine conflicts: trade-unions had their jurisdictional disputes, capitalist lenders were in keen rivalry over investment opportunities, as were landlords in their efforts to secure tenants.

There was the all-pervading rivalry among different industries in their effort to attract the customer's dollar; innumerable trade, professional, agricultural, and other associations were organized to promote each industry's interest in its dealings with others. Wood, coal, gas, oil, and electricity competed with one another for various uses. The stagecoach drivers, ferrymen, and innkeepers opposed canals, bridges, and railroads; the railroads fought improved waterways and motor vehicles; trade-unions restricted the use of more efficient machinery; small retailers fought chain stores, mail-order houses, and cooperatives, just as improvements of all sorts were apt to be opposed by groups that might suffer from their introduction. Also, within each industry, except as monopolistic practices developed, there was the constant struggle for business among the individual concerns.

Similarly, one must be impressed with the endless conflicts between different geographical areas and the efforts of groups in each area to secure a larger share of the national income. There was the opposition between the rural farming region and the town and that between the town and the large city. Different cities vied with one another to attract industry and trade and formed chambers of commerce to promote local interests. More frequent was the rivalry among the different states, constantly reflected in state legislation concerning labor conditions, banking, corporations, taxation, and many other subjects.

This rivalry was far more obvious among Federal activities in the form of economic sectionalism, which became a dominant factor in shaping both political and economic history. It was the basis of the conflicts between the North and the South or between the East and the West. As far as Federal action was concerned, the most important and continuous economic group conflict in our history was that between the wealthy, industrial, and commercial sections of the East and the poorer agricultural sections of the South and the West. The rivalry between domestic and foreign interests was also reflected in Federal action designed to check imports, stimulate

exports, aid shipping, protect labor against immigrants, and assist or safeguard American investments abroad. Outside of private business in the field of governmental action in providing goods and services, there was also a constant conflict between the groups that paid most of the taxes and those receiving most of the benefits for which the tax proceeds were used.

What were the general effects of these developments in the struggle over the distribution of income taking place in an institutional framework that underwent but moderate change? Among the factors of production the return to labor per unit of service showed a decided upward trend; that which went to capital, though subject to considerable fluctuation, showed a moderate decline. In the case of both rent and profit, the factors affecting the return to each piece of land or to each entrepreneur were so varied that no generalization seems possible. Though urban sites as a whole showed a marked upward trend in rent, individual plots were subject to the greatest vicissitudes; much the same was true of farming land, but the rent on land valuable for such resources as virgin timber or minerals tended upward. The greater responsibilities and opportunities of entrepreneurs created possibilities for both greater profits and greater losses than ever.

The outcome of all this in recent years, as far as the general pattern of income distribution is concerned, was shown by the charts on page 880. Lack of data makes it impossible to say how this pattern differed from that of the period before 1860. Estimates based on later data indicated there was little change in the pattern between 1865 and about 1900 but that since then, chiefly in the more recent years, there has been some trend toward a more even distribution of income. In effecting this, the development of the progressive income, the estate and gift taxes, and the reform measures of the New Deal played an important part.

To the extent that a less uneven distribution of private income has been obtained, we may conclude that the average of the standard of living has been raised. To this gain should also be added that resulting from the action of the government and of philanthropic organizations in supplying free goods and services, which was very substantial. Nonetheless, this historical summary indicates that much less progress was made in furthering a more desirable distribution of the nation's income than was made in increasing the per capita national income and that, until very recently, the problem of distribution was seriously neglected.

Some Common Causes of Mistakes and Failures. Thus far this chapter has attempted to analyze the main factors and developments responsible for the rising standard of living achieved by the American people. Although it is essential for the purpose of social control and guidance in the future to understand just what made this achievement possible, it is also desirable to look back over our history to try and learn why this

achievement was not even greater. There has been frequent note in preceding chapters of action by the state that seemed unwise; some generalizations as to the most common causes for such errors will therefore provide additional guidance for future social control. It should be noted, however, that this will relate only to the type of social action that took the form of legislation; it does not cover the causes for failure to attain a higher standard of living due to such things as ignorance, bad judgment, and numerous forms of unsocial economic activities on the part of producers in the conduct of their business, except as such things affected legislation.

One of the most frequent causes for the mistakes and failures of legislation has been the ignorance of economics or the practice of ignoring it. Only too frequently in formulating laws there was little effort to study the problem and to analyze its causes or the economic forces and principles involved; yet without this it was mere chance if the legislation did not prove a dismal failure. Americans seem to have had a sublime faith in the efficacy of a mere law; this was equaled only by their readiness to break the law the moment it interfered with their particular interest. It may not be impossible to enforce a law, whether good or bad, that runs contrary to powerful economic forces; but it is certain to require an extremely strong administrative arm of the government to do so. And a law, formulated regardless of the economic forces that it seeks to control, is more likely to prove bad than good in its consequences.

Our history is strewn with illustrations of laws that proved more or less futile, if not unwise, because of this defect. In colonial times there was the constant violation of the Navigation Acts, the complete failure of the Molasses Act, the futility of the attempts to regulate wages, and the inability of much of the currency legislation to accomplish all that was sought. The fiasco of the effort to control prices during the Revolution provides a striking case. In the subsequent period, there is scarcely a field of economic legislation that cannot provide many illustrations of similar errors. The sooner it is recognized that there is no way of legislating ourselves into an economic millennium and that any law which hopes to make progress in that direction must consider the economic forces with which it has to deal, the faster will be the progress made.

Another result of the ignorance concerning, or the neglect of, economics has been the tendency to exaggerate the consequences attributed to either existing or proposed legislation and so mislead the people. This was most noticeable whenever an economic issue became prominent in politics and propaganda was widespread. The tariff controversy affords a striking illustration of this, or the endless panaceas advanced to save the country from one or another evil. The businessman has been especially prone to attribute results to laws out of all relation to their actual effects, particularly when

they were laws he disliked. At best it is often difficult to determine the effect of legislation in the complex interaction of economic forces; but unless ignorance and deliberately misleading propaganda can be overcome, mistakes in social control of economic affairs will continue to be frequent.

A second prominent cause for much legislation undesirable in its effects upon the standard of living has been the great influence exerted by various producer groups to secure laws favorable to their interests and the very common failure to protect the interests of consumers, despite the fact that the interest of the consumer in securing a higher standard of living is the ultimate economic objective of the productive process. Though less serious a matter, even the producer-group interests that lack effective organization and political power are apt to suffer similarly. Whereas the economic order may properly be controlled and economic sacrifices made to promote such objectives as national defense, public morals, or other social ideals, too frequently such ideals are advanced as a blind by selfish interests and provide no adequate justification for the action taken.

In the last analysis, the consumer has only himself to blame for this neglect of his interests. He himself is always dominated in his action by his particular interest as a producer, whether he is a farmer, a manufacturer, a capitalist, or a laborer. His ultimate interest as a consumer is spread over all the goods and services his family consumes, and any specific law is likely to affect only a few of these things. Even if he knows what that effect will be, which is seldom the case, it is commonly so small an item in the total of his living expenses that he will not bother to do anything about it. Consequently consumer organizations have never secured widespread and consistent support.

Theoretically, the lawmakers are supposed to look after the consumers' interests as an essential factor among the things that constitute the general welfare. Practically, as is only too clear in our history, they are subject to the strong pressure of the well-organized producer groups, especially those of their own constituency, while any appreciable pressure from consumers is very rare. Also, the lawmakers may be almost as ignorant of the consumer's interest as the consumer himself, and his conception of the producer's interest is likely to be determined by that of his own constituency rather than that of the nation. In addition, legislative action is constantly shaped by party politics and the objective of securing power for one or another political party; the effects of this in an election year are notorious. We need only recall the logrolling, the bargaining of special interests, and the pork-barrel type of legislation, to say nothing of the graft and corruption—practically always owing to producer interests—as illustrating the point.

Each producer group has its own dominant interest; the great interests of consumers are for the most part common interests. Everybody is a con-

sumer, and the old saying that everybody's business is nobody's business is nowhere more strikingly illustrated than in the history of our economic legislation. This does not imply that consumer interests are never dominant in shaping laws, but only that such is far too seldom the case. Nor does it imply that producer interests should be ignored. It does imply that all producer interests rather than a few should be considered and that even then the consumer long-run interest should be the ultimate determining factor as far as purely economic objectives are involved.

Another cause for failure to accomplish more, though one for which better excuses can be found, has been the general lack of attempts at farsighted planning on a comprehensive scale and the tendency to be content with temporizing or to let matters drift until a crisis compelled action, which too often turned out to be hasty and ill advised. To be sure, in some limited field people often tried to look ahead and plan accordingly, yet nearly 150 years passed before the country even attempted such a broad survey of current trends and the lines of action they involved as those initiated by Hoover and F. D. Roosevelt. Under the dominantly laissez-faire policy, but also in part owing to the division of governmental powers, the railroad system with its duplications and different gauge tracks was built without effective coordination, the banking system was at times chaotic and still lacks needed centralization, wartime planning was always inadequate, the public land laws were shortsighted, the tariff was made the football of temporary, shifting conditions, cities grew heedless of the problems they were creating. This list could easily be extended.

That more farsighted planning was needed and might have accomplished much is clear. Yet we must admit that, in an age of such rapid changes in the economic order, successful planning would have required the highest type of scientific imagination. A survey of our history indicates that, among the developments most likely to upset careful efforts at planning, two were outstanding: war and those due to the progress of science and technology. How temporary conditions arising out of war often led to changes that endured long after those conditions had passed can frequently be seen. Such changes are prominent in legislation originating in postwar depressions, or that affecting money and banking and fiscal policy. Had it not been for the various postwar boosts in tariff duties, the general level of duties would presumably have remained much lower. In the long run, however, it is the changes originating in the advance of science that produce the most revolutionary effects and present the most serious obstacle to success in efforts at farsighted planning.

Finally, there are several other causes for failure to accomplish more that have their origin in the general character and framework of our government. The nation has chosen a democratic type of government with a

representative system and a written constitution as the best means for attaining its ideals. Yet, like every other type of government, this is not free from imperfections, and it is essential these should be recognized in order, as far as possible, to guard against their undesirable results.

In addition to the points already noted, which in part go back to this same cause, certain others should at least be mentioned. One is the slowness with which needed legislation is secured. It is a commonplace that our laws are 25 years or more behind the times. Doubtless it is an excellent maxim to make haste slowly, but in the rapidly changing economic order of the past 150 years, our democracy seems to have overdone this. In part it is a product of ignorance, inertia, and a widespread unwillingness to make the effort necessary to assume the responsibilities of citizenship. People are slow to recognize the rise of a new problem and still slower to act in securing the needed legislation. Even when secured, the laws may run afoul of the courts—possibly desirably so and possibly not. The country was also slow to recognize the importance of developing a well-trained, adequately paid group of civil servants, especially in local and state government. The spoils system led to inefficiency; inadequate pay repelled the competent and promoted corruption.

The system of written constitutions made difficult of amendment, combined with a judiciary brought up under the prevailing type of legal training, was another source of failure in an age of rapid economic change, though it also helped to check unwise and hasty action. No government not well adapted to the existing economic order can perform its many essential economic functions efficiently. Adaptation has proved easiest in the case of local government; amendment of state constitutions was often difficult and complete revision far more so. That the Federal Constitution has survived to this day with so few amendments, despite the revolution in the economic order, is the greatest tribute to the wisdom of the founders. Yet nobody who has watched the efforts of forty-eight competing states or the devious indirect means to which the Federal authority has had resort when trying to deal with economic problems that had become national in character, would claim that the particular division of powers adopted in 1787 was well suited to the needs of today.

There seems every reason to believe that in the future wise and efficient guidance of our economic affairs will prove more important than ever. If we take one final glance back over our economic history and ask what contributed most to advancing the standard of living, we might single out two things. Clearly recognizing that everything reacted on nearly everything else and that the achievement was the cumulative effect over time of this infinitely complex interaction, we might still pick out as of outstanding influence: (1) a virgin continent of remarkably rich and varied resources

and (2) the progress of science and technology, which made available to an energetic people, desirous of improving their economic condition, facilities for developing these resources such as no people had ever possessed theretofore.

Of these two, the second was by far the more important; without it, the achievement would have been relatively meager. In other words, the achievement was far more a product of man's learning how to cooperate better with nature by gaining and applying a knowledge of her laws than it was a product of learning how to secure a better cooperation between man and man, though the final outcome was dependent upon both processes. And, although we cannot clearly separate or measure the effects, it is unlikely that any great portion of this achievement could be attributed to a marked superiority over other advanced nations in the wisdom and ability with which our economic life was governed. After all, other nations less favorably circumstanced also made rapid economic progress.

Of particular significance for the future is the fact that the peculiarly favorable chance combination of these two things, which in the past 150 years has raised the power and the standard of living of the nation to such a preeminent height, is something that cannot be counted upon to endure. The nation's natural resources relative to the population are still great and some, with proper care, may prove enduring. Others have been sadly depleted while more recently developed countries enjoy many of the advantages similar to those we possessed in our youth. Though scientific knowledge may be expected to advance, it is seldom possible to confine it to one nation and nowadays, more quickly than ever, it becomes the property of all.

In addition, other decided advantages enjoyed in the past seem destined to disappear. First, in the transit of civilization from the Old World to the New in the colonial period, it was easy to cast off much of the heritage of outworn social institutions and habits that tended to check social progress, and later independence made possible still more complete adjustment to the needs and ideals of the day. But with broadening social ideals and the swift changes in the economic order since that time, the country has been accumulating a heritage from its own past, sustained by inertia and the power of vested interests anxious to maintain the *status quo*, which tends to check progress. Second, the geographic isolation with the comparative freedom and political security that it provided, once the nation attained maturity, were advantages of no slight economic significance, which recent developments show will be far less marked in the future. Finally, the growing complexity and interdependence in both the economic and the rest of the social order will necessitate a greater amount of social control than ever before.

Thus, facing a future in which the combination of circumstances so favorable to the rapid economic advance of the United States and its people cannot be expected to continue unchanged, it becomes increasingly important to secure wise and efficient control of the social processes. To further this objective by indicating what we can learn from past experience about the causes for success or failure of efforts to promote economic progress, is the main, though by no means the only, purpose of the study of economic history.

BIBLIOGRAPHY

Introductory Note. This condensed bibliography is designed to do two things: (1) It lists the chief available sources where one can find far more detailed bibliographies dealing with the main general topics covered in this volume than can be provided here. Books, other than pure bibliographies, particularly important for the broad scope of subject matter covered in their bibliography are indicated by an asterisk (*) before the title. (2) It seeks to list the most important books of a fairly comprehensive character that deal with the main topics indicated by the general subject headings of the chapters. Although relatively few books confined to the more specialized phases of these topics have been mentioned, an effort has been made to include the most important and a somewhat larger proportion of the more recent publications the titles of which might not be found in older bibliographical lists. For most monographs, journal articles, source material, and all works in foreign languages, the other bibliographies referred to should be consulted.

To save frequent duplication in listing books, the bibliography has been divided into two main parts. The first part, following the chronological division in this volume, lists the books of a more general character significant for each period or for the history as a whole. The second part is divided topically under the general headings suggested by the subjects of most chapters and lists the books dealing primarily with these topics or with some phase of them regardless of period. An exception is made in the case of topical studies important for only a brief period to which a special chapter is devoted, in which case they are generally listed under that period. Since many books do not fit into simple classifications, decision often has had to be arbitrary. The classification, although not exactly corresponding with the various chapter headings, approaches it closely enough so that for the purpose of easier reference the portions have been indicated where the material relating to each chapter will, for the most part, be found.

In this revised edition, to include the more important publications since the first edition appeared and at the same time to reduce size, many of the items of narrower interest listed in the first edition have been omitted.

Economic History: Its Character and Significance (Chap. I)

For a very useful bibliography see E. E. Edwards, "References on Economic History as a Field of Research and Study," Department of Agriculture, Bibliographical Contribution 31, Washington, 1936. An excellent article on economic history is in "Encyclopaedia of the Social Sciences," vol. 5. C. W. Wright, "The Nature and Objectives of Economic History," *The Journal of Political Economy*, vol. 46, somewhat expands the views presented in Chap. I of this volume. Among the many books dealing with the economic interpretation of history the best presentation of a moderate viewpoint will be found in H. Sée, "The Economic Interpretation of History," New York, 1929, and a book of the same title by E. R. A. Seligman, New York, 1922, the latter including more of a historical account. M. M. Bober, *"Karl Marx's Interpretation of History," Cambridge, 1927, is one of the most scholarly attempts to present and criticize Marx's

views. Among other possible interpretations, the best antidote is provided by S. Mathews, "The Spiritual Interpretation of History," Cambridge, 1916.

The Physiographic Background and the Indians (Chap. II)

Good descriptions of the country's physical geography can be found in J. R. Smith, "Men and Resources: A Study of North America and its Place in World Geography," New York, 1937, or H. H. McCarty, "The Geographic Basis of American Economic Life," New York, 1940. A historical survey is provided by E. C. Semple, "American History and Its Geographic Conditions," Boston, 1933. Special aspects are stressed in A. B. Hulbert, "Soil: Its Influence on the History of the United States," New Haven, 1930, and I. Bowman, "Forest Physiography," New York, 1911.

The aboriginal Indian life is described in C. Wissler, "The American Indian," 3d ed., New York, 1938. A short popular general history is given in E. Huntington, "The Red Man's Continent," New Haven, 1919, and a sympathetic narrative stressing problems in F. E. Leupp, "The Indian and His Problems," New York, 1910.

General Works

For a wide range of topics and bibliographical references, consult E. R. A. Seligman, ed., "Encyclopaedia of the Social Sciences," 15 vols., New York, 1930–1935; A. Johnson, ed., "Dictionary of American Biography," 21 vols., New York, 1928–1944, and J. T. Adams, ed., "Dictionary of American History," 6 vols., New York, 1940. The best compilation of bibliographies is H. P. Beers, "Bibliographies in American History," 2d ed., New York, 1942. The *Statistical Abstract of the United States*, published annually by the Bureau of the Census, provides an indispensable collection of statistical data, the most important series being carried back as far as practicable and the sources indicated. L. F. Schmeckebier, "Government Publications and Their Use," 2d ed., Washington, 1939, is an excellent guide to this material. Maps and graphs covering economic as well as other material can be found in C. O. Paullin, "Atlas of the Historical Geography of the United States," Washington, 1932; C. L. and E. H. Lord, "Historical Atlas of the United States," New York, 1940, and J. T. Adams, "Atlas of American History," New York, 1943.

For general textbooks and similar works on American economic history, consult E. E. Edwards, "List of American Economic Histories," Department of Agriculture, Bibliographical Contributions 27, 2d ed., Washington, 1939. Among collections of readings G. S. Callender, ed., "Selections from the Economic History of the United States, 1765–1860," Boston, 1909, is notable for the interpretive grasp and insight of the editor's brief introductions to each chapter which are very valuable. A much wider range of selections is offered in both F. Flügel and H. U. Faulkner, eds., "Readings in the Economic and Social History of the United States, 1773–1929," New York, 1929, and E. L. Bogart and C. M. Thompson, eds., "Readings in the Economic History of the United States," New York, 1916, the latter covering the colonial period as well. Though not confined to the United States, an excellent account of the reaction of changing stages of capitalism on business enterprise is in N. S. B. Gras, "Business and Capitalism," New York, 1939; a brief outline of the American development is given in his Introduction to "Case Book in American Business History," New York, 1939. Frankly supporting the American free enterprise system are C. Snyder "Capitalism the Creator," New York, 1940, and Economic Principles Committee, National Association of Manufacturers,

"The American Individual Enterprise System," 2 vols., New York, 1946. A useful summarization of the writings of American theorists and others, eventually to be brought down to date, is offered in J. Dorfman, "The Economic Mind in American Civilization, 1606–1865," 2 vols., New York, 1946. The South is the only large section for which there is a general economic text, as in E. Q. Hawk, "The Economic History of the South," New York, 1934. Volumes 5 and 6 of "The South in the Building of the Nation," Richmond, 1909, have articles of varying value on the same field.

For the general background of political and social history, S. E. Morison and H. S. Commager, "The Growth of the American Republic," 3d ed., 2 vols., New York, 1942, is a broad, balanced, and well-written text. A broader survey of cultural aspects of American life with considerable stress on economic influences is C. A. and M. R. Beard, "The Rise of American Civilization," 2 vols., New York, 1927, which is continued in "America in Midpassage," 2 vols., New York, 1939. Various reactions of business enterprise on society are covered in T. C. Cochrane and W. Miller, "The Age of Enterprise: A Social History of Industrial America," New York, 1942. The most extensive and useful general histories are two series the individual volumes of which are written by different authors and so vary in value. A. B. Hart, ed., *"The American Nation Series," 28 vols., New York, 1904–1908, is almost exclusively political in character. The critical bibliographies are good for material available up to the date of publication. A. M. Schlesinger and D. R. Fox, eds., *"A History of American Life," 12 vols., New York, 1927–1944, best reflects the current trend to broaden the scope of history to include the whole of a nation's culture, and has excellent bibliographies. M. Curti, "The Growth of American Thought," New York, 1943, best surveys intellectual history. R. H. Gabriel, ed., "The Pageant of America: A Pictorial History of the United States," 15 vols., New Haven, 1925–1929, is unexcelled for its collection of pictorial material; several volumes cover various phases of economic life and all have running comments. A collection arranged by periods is J. T. Adams, ed., "Album of American History," 4 vols., New York, 1944–1948. L. M. Hacker, "The Triumph of American Capitalism," New York, 1940, stresses the reactions of the rise of capitalism, partly in protest against overemphasis of the frontier influence, but gives little space to the period after 1865. It can well be supplemented by A. N. Holcombe, "The Middle Class in American Politics," Cambridge, 1940, and F. J. Turner, "The Significance of Sections in American History," New York, 1932.

The World Background: General
(Chaps. III, XVI, and XXVII)

W. H. Allison and others, eds., "A Guide to Historical Literature," New York, 1931, includes sections on economic history. General survey texts are H. Heaton, "Economic History of Europe," New York, 1936, and S. B. Clough and C. W. Cole, "Economic History of Europe," 2d ed., Boston, 1947. A more detailed account of the later period is W. Bowden, M. Karpovitch, and A. P. Usher, *"An Economic History of Europe Since 1750," New York, 1937. For England, the best works are E. Lipson, "The Economic History of England," rev. ed., 3 vols., London, 1943, which carries the account through the age of mercantilism; P. Mantoux, "The Industrial Revolution in the Eighteenth Century," 2d ed., New York, 1927; J. H. Clapham, "An Economic History of Modern Britain," 3 vols., Cambridge, 1926–1938, which covers the period 1820–1914 with great thoroughness. J. B. Williams, "A Guide to the Printed Materials for English Social and Economic History, 1750–1850," 2 vols., New York, 1926, is an indispensable annotated bibliography. The *"Cambridge History of the British Empire," 8 vols., Cambridge, 1929—, includes economic developments. The best book on Canada is

M. Q. Innis, "An Economic History of Canada," Toronto, 1935. A mass of material for the period since 1867 is in the *Report* of the Royal Commission on Dominion-Provincial Relations, 3 vols., Ottawa, 1940, and its accompanying documents, App. 3 being particularly illuminating. In the series directed by J. T. Shotwell on "The Relations of Canada and the United States," 25 vols., New Haven, 1937–1945, many volumes deal with economic matters.

For Australia, see B. Fitzpatrick, "British Imperialism and Australia, 1783–1833," London, 1939, and "The British Empire in Australia, 1834–1939," Melbourne, 1941. For India on the modern period, V. Anstey, "The Economic Development of India," London, 1936. For South Africa, see M. H. de Kock, "Selected Subjects in the Economic History of South Africa," Cape Town, 1924, and "The Economic Development of South Africa," London, 1936. For modern Japan, see E. B. Schumpeter, ed., "The Industrialization of Japan and Manchukuo," New York, 1940, and G. C. Allen, "A Short Economic History of Modern Japan, 1867–1937," London, 1946. For nineteenth-century France and Germany, see J. H. Clapham, "The Economic Development of France and Germany, 1815–1914," 4th ed., Cambridge, 1936. A. C. de Breycha-Vauthier, "Sources of Information; A Handbook for the Publications of the League of Nations," London, 1939, is a guide to a mass of recent material.

General Works on Particular Periods

For each period, the related volumes in "The American Nation" series and the "History of American Life" series, previously cited, should be consulted.

For the colonial period, two good general texts are O. P. Chitwood, *"A History of Colonial America," New York, 1931, and C. P. Nettels, "The Roots of American Civilization," New York, 1938, the latter covering the field topically. The works of H. L. Osgood, "The American Colonies in the Seventeenth Century," 3 vols., New York, 1904–1907, and "The American Colonies in the Eighteenth Century," 4 vols., New York, 1924–1925, are unsurpassed in their field and, though devoted chiefly to political institutions, have much of economic interest. C. M. Andrews, "The Colonial Period of American History," 4 vols., New Haven, 1934–1938, stresses certain phases of the English background, the last volume dealing with mercantilism. E. F. Heckscher, "Mercantilism," 2 vols., London, 1935, is the best study of this subject. For a general survey of English colonial policy down to 1783, see vol. I of the *"Cambridge History of the British Empire," Cambridge, 1929. K. E. Knorr, "British Colonial Theories, 1570–1850," Toronto, 1944, is an excellent analysis. A still useful collection of factual material but poorly organized is W. B. Weeden, "Economic and Social History of New England, 1620–1789," 2 vols., Boston, 1890. P. A. Bruce, "Economic History of Virginia in the Seventeenth Century," 2 vols., New York, 1895, is a painstaking work. E. A. J. Johnson, "American Economic Thought in the Seventeenth Century," London, 1932, best covers this topic. C. Bridenbaugh, "Cities in the Wilderness, 1625–1742," New York, 1938, has much of economic interest. Particularly enlightening on business conditions as well as on prices is A. Bezanson, R. D. Gray, and M. Hussey, "Prices in Colonial Pennsylvania," Philadelphia, 1935.

General works of importance for the periods 1763–1815, the Civil War, and after 1914, to which special chapters are devoted, are listed under separate headings which follow this section.

For the period 1815–1860, W. B. Smith and A. H. Cole, "Fluctuations in American Business, 1790–1860," Cambridge, 1935, is essential and has much statistical data.

"Eighty Years' Progress," Hartford, 1869, has useful essays on many topics. J. D. B. De Bow, "Industrial Resources and Statistics of Southern and Western States," 3 vols., New Orleans, 1852–1853, is a useful collection of material. J. B. McMaster, "History of the People of the United States," 8 vols., New York, 1888–1913, though poorly organized, has much of economic interest.

For the period since 1860, useful annual surveys of events are "Appleton's Annual Cyclopaedia," New York, 1868–1903, and "The American Year Book," New York, 1911— (except 1920–1924). The Public Affairs Information Service, *Bulletin*, New York, 1915—, is invaluable as an index of current publications in this field. Short accounts of many activities not readily found elsewhere are in C. M. Depew, ed., "One Hundred Years of American Commerce," 2 vols., New York, 1895. "The Tenth Census of the United States," 22 vols., Washington, 1883–1888, is unique in offering a historical survey of many of the topics covered. D. A. Wells, "Recent Economic Changes," New York, 1889, competently discusses current trends. The Reports of the U.S. Industrial Commission, 19 vols., Washington, 1900–1902, present a mass of economic material which is summarized in the final volume. The Report of the Presidents' Research Committee, "Recent Social Trends in the United States," 2 vols., New York, 1933, together with the thirteen special monographs, is unique as the first comprehensive study of social trends designed to guide in shaping national policies. Similar work of narrower scope is found in the various reports of the National Resources Committee, Washington, 1935–1941. A useful collection of statistical data and charts is National Industrial Conference Board, "Studies in Enterprise and Social Progress," New York, 1939. The numerous statistical studies of the National Bureau of Economic Research are indispensable for this period.

The Revolutionary Period, 1763–1783
(Chaps. XI and XII)

As yet no adequate study of economic conditions during this period has been made. An excellent monograph on one phase is A. M. Schlesinger, "Colonial Merchants and the American Revolution, 1763–1776," New York, 1918. Another phase is well covered in C. M. Alvord, "The Mississippi Valley in British Politics, 1763–1775," Cleveland, 1917, and T. P. Abernethy, "Western Lands and the American Revolution," New York, 1937. General in scope are C. L. Becker, "The Eve of the Revolution," New Haven, 1911, ably written; C. M. Andrews, "The Colonial Background of the American Revolution," New Haven, 1924, also excellent; and C. H. Van Tyne, "The Causes of the War of Independence," New York, 1922. J. C. Miller, "Origins of the American Revolution," Boston, 1943, surveys the contemporary discussions, and R. B. Morris, ed., "The Eve of the American Revolution," New York, 1939, includes a number of excellent articles.

For the war effort, see V. L. Johnson, "The Administration of the American Commissariat during the Revolutionary War," Philadelphia, 1941, and C. O. Hatch, "The Administration of the American Revolutionary Army," New York, 1904. R. A. East, "Business Enterprise in the Revolutionary Era," New York, 1938, throws light on war contracts and business methods. W. G. Sumner, "The Financier and Finances of the Revolution," 2 vols., New York, 1891, which centers about Morris, is still useful. V. G. Setser, "The Commercial Reciprocity Policy of the United States, 1774–1829," Philadelphia, 1937, is best on that subject. A. Nevins, "The American States during and after the Revolution, 1775–1789," New York, 1927, is important in a neglected field. J. F. Jameson, "The American Revolution Considered as a Social Movement," Princeton, 1926, is an admirable summary.

The Confederation and the Constitution
(Chap. XIII)

For these years, the works by Nevins and Setser, cited above, are valuable. Lord John Sheffield, "Observations on the Commerce of the American States," 6th ed., London, 1784, is important for its statistics and as reflecting the view that dominated British policy as is also Society of Ship Owners of Great Britain, "Collection of Interesting and Important Reports and Papers on the Navigation and Trade of Great Britain," London, 1807.

M. Farrand, "The Framing of the Constitution of the United States," New Haven, 1913, is a well-balanced account by the editor of the Convention's records. C. A. Beard, "An Economic Interpretation of the Constitution of the United States," New York, 1913, stresses the economic influences; they are minimized in C. Warren, "The Making of the Constitution," 2d ed., Boston, 1937. The document is viewed from a wide range of angles in C. Read, ed., "The Constitution Reconsidered," New York, 1938.

The Period 1789–1815
(Chaps. XIV and XV)

For price movements, always important but particularly so for these years, see references under money; for trade and shipping the previously cited works by Setser and the Society of Ship Owners, and for general business conditions that of Smith and Cole. Collections of statistical data are found in A. Seybert, "Statistical Annals of the United States," Philadelphia, 1818, and T. Pitkin, "Statistical View of the United States," 2d ed., New Haven, 1835. Tench Coxe, "A View of the United States of America," Philadelphia, 1794, is a good contemporary survey. For the European background, see E. F. Heckscher, "The Continental System," Oxford, 1922; for the domestic scene, there is the outstanding work of H. Adams, "History of the United States of America during the Administration of Thomas Jefferson," which is carried on through Madison's administration, 9 vols., New York, 1889–1891, though economic conditions are rather slighted.

The Civil War
(Chap. XXVIII)

E. D. Fite, "Social and Industrial Conditions in the North during the Civil War," New York, 1910, is the only general survey, but is more descriptive than analytical. For the South, J. C. Schwab, "The Confederate States of America, 1861–1865," New York, 1901, is the best survey, though concentrating on finance, and can be supplemented by C. W. Ramsdell, "Behind the Lines in the Southern Confederacy," Baton Rouge, 1944. F. A. Shannon, "The Organization and Administration of the Union Army, 1861–1865," 2 vols., Cleveland, 1928, is excellent. W. C. Mitchell, "A History of the Greenbacks," Chicago, 1903, is indispensable for price movements. E. P. Oberholtzer, "Jay Cooke, Financier of the Civil War," is a painstaking study. Among general histories J. F. Rhodes, "History of the United States, 1850–1877," 7 vols., is the most detailed, but slights economic affairs; J. B. McMaster, "A History of the People of the United States during Lincoln's Administration," New York, 1927, is in his characteristic manner; and J. G. Randall, *"The Civil War and Reconstruction," Boston, 1937, is the best recent study.

The First World War
(Chap. XLII)

The most detailed survey of the economic phases of the American effort, though still limited in scope, is B. Crowell and R. F. Wilson, "How America Went to War," 6 vols., New Haven, 1921. I. Lippincott, "Problems of Reconstruction," New York, 1919, is a useful survey chiefly devoted to war problems other than financial, and L. P. Ayres, "The War with Germany," Washington, 1919, collects statistical data. The extensive Carnegie series, J. T. Shotwell, ed., "Economic and Social History of the World War," is devoted chiefly to foreign countries, but includes W. G. Leland and N. D. Mereness, "Introduction to the American Official Sources for the Economic and Social History of the World War," New Haven, 1926; J. M. Clark, "The Cost of the World War to the American People," New Haven, 1931; and W. D. Hines, "War History of American Railroads," New Haven, 1928. For the War Industries Board's work, G. B. Clarkson, "Industrial America in the World War," Boston, 1923, is important and, in their respective fields, C. O. Hardy, "War Time Control of Prices," Washington, 1923; W. C. Mullendore, "History of the U.S. Food Administration, 1917–1919," Stanford, 1941; and W. W. Willoughby, "Government Organization in War Time and After," New York, 1919.

The Postwar Decade, the Depression, and the New Deal
(Chap. XLIII)

The best economic survey of the 1920's is The President's Conference on Unemployment, "Recent Economic Changes in the United States," 2 vols., New York, 1929. The world situation is covered in The League of Nations, "Course and Phases of the Economic Depression," Geneva, 1931. For subsequent years, consult the League's annual "World Economic Survey," Geneva, 1932—. For its period, H. V. Hodson, "Slump and Recovery, 1929–1937," London, 1938, is excellent.

Relatively few scholarly studies of the New Deal effort are as yet available. L. S. Lyon and others, "The National Recovery Administration," Washington, 1935, is the best analysis of this subject. J. S. Davis, "On Agricultural Policy, 1926–1938," Stanford, 1939, is excellent. Two studies of the Twentieth Century Fund, "The Internal Debts of the United States," New York, 1933, and "Debts and Recovery," New York, 1938, carefully survey one factor in the difficulties. A. H. Hanson, "Full Recovery or Stagnation," New York, 1938, presents an influential point of view. J. D. Paris, "Monetary Policies of the United States, 1932–1938," New York, 1938, and F. D. Graham, "Golden Avalanche," Princeton, 1939, criticize the government's policy. A. W. Crawford, "Monetary Management under the New Deal," Washington, 1940, is better for the political background than for economic analysis. J. C. Brown, "Public Relief, 1929–1939," New York, 1940, best surveys this topic. B. Rauch, "The History of the New Deal," New York, 1944, is a political rather than economic analysis. S. Bell, "Productivity, Wages and National Income," Washington, 1940, is a careful statistical study.

The Second World War
(Chap. XLIV)

Until the large number of official histories of the various wartime agencies now under preparation have been published and critically studied, the chief reliance must be upon the reports and publications of these agencies during the war years. For these, see J. K.

Wilcox, "Official War Publications: A Guide to State, Federal, and Canadian Publications," 9 vols., Berkeley, 1941–1945. For a day-to-day record of governmental actions, see "The Federal Register," and for comprehensive statistics on economic conditions see the monthly "Survey of Current Business" of the Department of Commerce. W. Millis, ed., "The War Reports," Philadelphia, 1947, conveniently gathers together, with slight cuts, the official reports of the heads of the army, the army air force, and the navy. D. M. Nelson, "Arsenal of Democracy," New York, 1946, describes the work and problems of the War Production Board as seen by its head. E. R. Stettinius, Jr., "Lend Lease," New York, 1944, gives a broad popular account of operations while the author was in charge, and L. H. Campbell, "The Industry-Ordnance Team," New York, 1946, is a similar account by the Chief of the Ordnance Department. Various aspects of war labor policies are discussed by different writers in Institute of Labor Studies, "Yearbook of American Labor," vol. I, New York, 1945. The contribution of science is excellently summarized in J. P. Baxter, Jr., "Scientists against Time," New York, 1946. Among the various congressional hearings and investigations that of the (Truman) Special Senate Committee on the National Defense Program is the most useful.

Population, Immigration, the Westward Movement, and Public Lands (Chaps. IV, XVII, XVIII, and XXIX)

A convenient survey, which also covers the colonial period, is the census monograph, "A Century of Population Growth, 1790–1900," Washington, 1909. By far the best analytical study is W. S. Thompson and P. K. Whelpton, "Population Trends in the United States," New York, 1933; see also the National Resources Committee, "The Problems of a Changing Population," Washington, 1938. A useful historical survey of world trends, including migration, is A. M. Carr-Saunders, "World Population: Past Growth and Present Trends," Oxford, 1936. For the colonial period, E. B. Greene and V. D. Harrington, "American Population before the Federal Census of 1790," New York, 1932, presents all the available estimates and data. S. H. Sutherland, "Population Distribution in Colonial America," New York, 1936, surveys the spread of settlement and has dot maps for population distribution about 1775.

On immigration, the chief collection of materials is the "Report of the Immigration Commission," 42 vols., Washington, 1911, the results being summarized in the two volumes of Abstracts. J. W. Jenks and W. J. Lauck, "The Immigration Problem," 6th ed., New York, 1926, is a textbook survey. E. Abbott, "Historical Aspects of the Immigration Problem," Chicago, 1926, is a good selection of contemporary material. M. L. Hansen, "The Atlantic Migration, 1607–1860," Cambridge, 1940, describes the foreign conditions back of migration and C. F. Wittke, "We Who Built America," New York, 1939, surveys the settlements and work of each of the non-English racial groups except the Negro. For the latter, M. N. Work, "Bibliography of the Negro in Africa and America," New York, 1927, provides references. A good historical survey is G. M. Stephenson, "A History of American Immigration, 1820–1924," Boston, 1926.

For references on the frontier and the West in general, consult F. J. Turner and F. Merk, "List of References on the History of the West," rev. ed., Cambridge, 1922, and E. E. Edwards, "References on the Significance of the Frontier in American History," Dept. of Agriculture, Bibliographical Contributions 25, Washington, 1935. Everyone should read the famous essay included as Chap. I in F. J. Turner, "The Frontier in American History," New York, 1921. F. L. Paxson, "History of the American Frontier, 1763–1893," Boston, 1924, is the only general survey and the same author's "The Last

American Frontier," New York, 1910, presents a picture of the Far Western phase. Other accounts of this section, generally broad in scope, are L. R. Hafen and C. C. Rister, *"Western America," New York, 1941; R. N. Richardson and C. C. Rister, "The Greater Southwest," Glendale, 1934; E. Dick, "Vanguards of the Frontier," New York, 1941, and his "Sod-House Frontier, 1854–1890," New York, 1937; W. P. Webb, "The Great Plains," Boston, 1931; and K. Coman, "Economic Beginnings of the Far West," 2 vols., New York, 1912. R. E. Riegel, "America Moves West," New York, 1930, surveys the whole movement. The copious index in R. G. Thwaites, ed., "Early Western Travels," 32 vols., Cleveland, 1904–1907, is a key to the economic material in this important series.

The two most useful general accounts of the public land policy are B. H. Hibbard, "A History of the Public Land Policies," New York, 1924, and R. M. Robbins, "Our Landed Heritage, 1776–1936," Princeton, 1942, the latter dealing chiefly with political aspects. A mass of undigested material is in T. Donaldson, "The Public Domain," Washington, 1884. For the colonial period, B. W. Bond, Jr., "The Quit Rent System in the American Colonies," New Haven, 1919, and R. H. Akagi, "The Town Proprietors of the New England Colonies," Philadelphia, 1924, are excellent within their scope as is P. J. Treat, "The National Land System, 1785–1820," for its period. L. Havemeyer, ed., "Conservation of Our Natural Resources," New York, 1930, and A. F. Gustafson and others, "Conservation in the United States," 2d ed., Ithaca, 1944, are general surveys. Two books by J. Ise, "The United States' Forest Policy," New Haven, 1920, and "The United States' Oil Policy," New Haven, 1927, are careful studies of these phases.

Transportation and Communication
(Chaps. XIX and XXX)

The chief work in this field for the period covered, though poorly organized, is B. H. Meyer and C. E. MacGill, *"History of Transportation in the United States before 1860," Washington, 1917. I. L. Ringwalt, "Development of Transportation Systems in the United States," Philadelphia, 1888, is still useful because of its scope, especially on technology. W. Z. Ripley, "Railroads," 2 vols., Boston, 1912–1915, has much historical material on finance and regulation for the period after 1865. E. R. Johnson, "Government Regulation of Transportation," New York, 1938, is a convenient survey and I. L. Sharfman, "The Interstate Commerce Commission," 5 vols., New York, 1931–1937, is an exhaustive study. The best regional histories are G. E. Baker, "Formation of the New England Railroad Systems," Cambridge, 1937; U. B. Phillips, "A History of Railroad Transportation in the Eastern Cotton Belt to 1860," New York, 1908; and R. E. Riegel, "The Story of the Western Railroads," New York, 1926.

A. B. Hulbert, "Historic Highways of America," 16 vols., Cleveland, 1902–1905, covers canals and trails along with highways but is weak on economic aspects. Popular yet excellent general surveys are A. F. Harlow, "Old Towpaths," New York, 1926, which well covers canals; "Old Waybills," New York, 1934, on the express companies; "Old Postbags," New York, 1928, on the post office, foreign as well as domestic; and "Old Wires and New Waves," New York, 1936, on the telegraph, telephone, and radio. H. L. Smith, "Airways: The History of Commercial Aviation in the United States," New York, 1942, is the best recent account. W. E. Rich, "The History of the United States Post Office to the Year 1829," Cambridge, 1929, starts with the colonial period. F. L. Mott, "American Journalism," New York, 1941, is the best history of newspapers. F. Presbrey, "The History and Development of Advertising," Garden City, 1929, covers Europe as well as America and is well illustrated.

Agriculture and Other Extractive Industries
(Chaps. V, XX, XXXI, and XXXII)

Consult E. E. Edwards, "Guide for Courses in the History of American Agriculture," "Bibliography of the History of American Agriculture," and "References on Colonial Agriculture," Department of Agriculture, Bibliographical Contributions, Nos. 35, 32, and 33, Washington, 1938–1939. There are also cumulative indexes to the Department's voluminous publications. For recent years, "The Agricultural Index," New York, 1917—, best covers publications in this field. L. Bailey, "Cyclopaedia of American Agriculture," 4 vols., New York, 1907–1909, is mainly technical but has some articles on economic aspects. L. B. Schmidt and E. D. Ross, "Readings in the Economic History of American Agriculture," New York, 1925, is an excellent selection. Outstanding works of scholarship are P. W. Bidwell and J. I. Falconer, *"History of Agriculture in the Northern United States, 1620–1860," Washington, 1925, and L. C. Gray, *"History of Agriculture in the Southern United States to 1860," 2 vols., Washington, 1933. For the colonial period, L. Carrier, "The Beginnings of Agriculture in America," New York, 1923, is good on the more technical side and "American Husbandry," 2 vols., London, 1775, reprinted, New York, 1939, is the best contemporary account. For the period since 1860, see F. A. Shannon, "The Farmer's Last Frontier: Agriculture, 1860–1897," New York, 1945; H. Barger and H. H. Landsberg, "American Agriculture, 1899–1939," New York, 1942; and Department of Agriculture, *Year Books* for 1921–1925 and 1940, Washington, 1922–1941. E. Wiest, "Agricultural Organization in the United States," Lexington, 1923, is the best historical survey. S. J. Buck, "The Granger Movement," Cambridge, 1913, and J. D. Hicks, "The Populist Revolt," Minneapolis, 1931, well cover these two episodes.

For the other extractive industries, except the fisheries, few scholarly works stressing economic aspects of their development are available. H. Barger and S. H. Shurr, "The Mining Industries, 1899–1939: A Study of Output, Employment, and Productivity," New York, 1944, is excellent within its scope. H. N. Eavenson, "The First Century and a Quarter of the American Coal Industry," Pittsburgh, 1942, is best for this field. J. E. Defebaugh, "History of the Lumber Industry of America," 4 vols., Chicago, 1906–1909, the only fairly general survey, leaves much to be desired. Much material on the fur trade is collected in H. M. Chittenden, "The American Fur Trade of the Far West," 3 vols., Cleveland, 1902, and can be supplemented by H. A. Innis, "The Fur Trade in Canada," New Haven, 1930. Among works on the fisheries, H. A. Innis, "The Cod Fisheries," New Haven, 1940, is outstanding for scholarship and breadth of treatment. R. McFarland, "A History of the New England Fisheries," Philadelphia, 1911; W. S. Tower, "A History of American Whale Fishing," New York, 1920; and E. P. Hohman, "The American Whaleman," New York, 1928, are all useful.

Manufacturing
(Chaps. VI, XXI, XXXIII, and XXXIV)

The outstanding general work, marked by both scholarship and a broad grasp of essentials, is V. S. Clark, *"History of Manufactures in the United States, 1607–1928," 3 vols., New York, 1929. J. G. Glover and W. B. Cornell, eds., "Development of American Industries," rev. ed., New York, 1941, has brief accounts of many industries as does C. M. Depew, ed., "One Hundred Years of American Commerce, 1795–1895," 2 vols., New York, 1926. As a large collection of factual material down to 1865, J. L. Bishop, "A History of American Manufactures from 1608 to 1860," 3 vols., Philadelphia, 1866,

is still useful. R. M. Tryon, "Household Manufactures in the United States, 1640–1860," is good on that field. Three studies by S. Fabricant and C. A. Bliss for the National Bureau of Economic Research covering employment, output, productivity, and structure since 1899, New York, 1939–1942, are excellent. W. Kaempffert, "A Popular History of American Inventions," 2 vols., New York, 1924, is a convenient survey.

No adequate history of American corporations is available. Certain modern developments are covered in A. A. Berle, Jr., and G. C. Means, "The Modern Corporation and Private Property," New York, 1933, and J. C. Bonbright and G. C. Means, "The Holding Company," New York, 1932. Twentieth Century Fund, "Big Business: Its Growth and Place," New York, 1937, is a balanced summary survey; see also National Resources Committee, "The Structure of the National Economy," Part I, Washington, 1939. The hearings and monographs of The Temporary National Economic Committee's "Investigation of Concentration of Economic Power," Washington, 1939–1941, include a mass of widely ranging material. The hearings are summarized in D. Lynch, "The Concentration of Economic Power," New York, 1946. H. R. Seager and C. A. Gulick, Jr., *"Trust and Corporation Problems," New York, 1929, is the most recent general text but is weak in economic analysis. T. E. Blaisdell, Jr., "The Federal Trade Commission," New York, 1932, is a good critical account.

For the tariff, F. W. Taussig, "Tariff History of the United States," 8th ed., New York, 1931, is the authoritative work and can be supplemented by the same author's "Some Aspects of the Tariff Question," 3d ed., Cambridge, 1931, and "Free Trade, The Tariff, and Reciprocity," New York, 1920. E. E. Stanwood, "American Tariff Controversies in the Nineteenth Century," 2 vols., Boston, 1903, is a political history by a moderate protectionist. The Tariff Commission, "Dictionary of Tariff Information," Washington, 1924, is useful for reference. P. W. Bidwell, "The Invisible Tariff," New York, 1939, is good on certain recent trends.

Labor
(Chaps. VII, XXII, XXXV, and XXXVI)

The chief historical work in this field is J. R. Commons and others, *"History of Labour in the United States," 2 vols., New York, 1918, though it is largely confined to organized labor. It is continued and broadened in scope in *"History of Labor in the United States, 1896–1932," 2 vols., New York, 1933–1935, of which the first volume, by D. D. Lescohier and E. Brandeis, covers working conditions and labor legislation and the second, by S. Perlman and P. Taft, the labor movement. Differing interpretations are offered in N. J. Ware, "The Industrial Worker, 1840–1860," Boston, 1924, and P. S. Foner, "History of the Labor Movement in the United States," New York, 1947, which comes down to 1881. H. W. Farnham, *"Chapters in the History of Social Legislation in the United States to 1860," Washington, 1938, is useful on the scattered topics covered. For the colonial period, see also M. W. Jernegan, "Laboring and Dependent Classes in Colonial America, 1607–1783," Chicago, 1931; S. D. McKee, "Labor in Colonial New York, 1664–1776," New York, 1935, and R. B. Morris, "Government and Labor in Early America," New York, 1946. N. J. Ware, "The Labor Movement in the United States, 1860–1895," New York, 1929, centers about the Knights of Labor; L. L. Lorwin, "The American Federation of Labor," Washington, 1933, is the best study of this subject, and the same is true of P. F. Brissenden, "The I.W.W.: A Study of American Syndicalism," New York, 1919, and of C. E. Bonnett, "Employers' Associations in the United States," New York, 1922. J. R. Commons, ed., "Documentary History of American Industrial Society," 11 vols., Cleveland, 1910–1911, is confined to labor, including

slavery, prior to 1860, but reprints much scarce material. M. Hillquit, "History of Socialism in the United States," 5th ed., New York, 1910, is best on this topic. U. B. Phillips, "American Negro Slavery," New York, 1921, is an excellent survey.

Stressing the more recent trends and general problems, H. A. Millis and R. E. Montgomery, "The Economics of Labor," 3 vols., New York, 1938–1945, provides a comprehensive survey. The long series of *Bulletins* and the *Monthly Labor Review* of the Bureau of Labor provide a mine of important material. Its *Bulletin* No. 604, Washington, 1934, is the most useful collection on the history of wages and indicates the main sources. P. H. Douglas, "Real Wages in the United States, 1890–1926," Boston, 1930, is the most thorough study. An excellent historical survey is supplied by E. P. Cubberley, "Public Education in the United States," Boston, 1919.

Domestic and Foreign Trade
(Chaps. VIII, XXIII, XXXVII, and XXXVIII)

The best general work in this field is E. R. Johnson and others, *"History of Domestic and Foreign Commerce of the United States," 2 vols., Washington, 1915. Adequate information on domestic trade as a whole and its organization was first provided by the Census of 1930. The excellent study of the Twentieth Century Fund, "Does Distribution Cost Too Much?" New York, 1939, based on this provides the first comprehensive analytical survey of the distributive system. F. E. Melder, "State and Local Barriers to Interstate Commerce in the United States," Orono, 1937, and G. R. Taylor, E. L. Burtis, and F. V. Waugh, "Barriers to Internal Trade in Farm Products," Department of Agriculture, Washington, 1939, best survey a growing problem.

On foreign trade for the colonial period, the study of G. L. Beer, "The Commercial Policy of England toward the American Colonies," New York, 1893, was later developed in three works of importance, but they should be supplemented by the meticulous work of L. A. Harper, "The English Navigation Laws," New York, 1939, which carries the history to the repeal. Considerable light on business methods of the time as well as on trade is found in L. Sellers, "Charleston Business on the Eve of the American Revolution," Chapel Hill, 1939; V. D. Harrington, "The New York Merchant on the Eve of the Revolution," New York, 1935; and W. T. Baxter, "The House of Hancock," Cambridge, 1945. N. M. M. Surrey, "The Commerce of Louisiana during the French Regime, 1699–1763," is a detailed study. J. R. Spears, "The American Slave Trade," New York, 1900, is rather scanty but can be supplemented by the large collection of material and comment in E. Donnan, "Documents Illustrative of the Slave Trade to America," 4 vols., Washington, 1930–1935, and by W. E. B. Du Bois, "The Suppression of the African Slave Trade to the United States, 1638–1870," New York, 1904. For the background of the important West Indian trade, see F. W. Pitman, "The Development of the British West Indies, 1700–1763," New Haven, 1910; R. Pares, "War and Trade in the West Indies, 1739–1763," Oxford, 1936; S. L. Mims, "Colbert's West India Policy," New Haven, 1912; C. W. Cole, "Colbert and a Century of French Mercantilism," 2 vols., New York, 1939; L. J. Ragatz, "The Fall of the Planter Class in the British Caribbean, 1763–1833," New York, 1928; and the same author's invaluable annotated bibliography, "A Guide for the Study of British Caribbean History, 1763–1834," Washington, 1932. For the Spanish possessions, see C. H. Haring, "The Spanish Empire in America," New York, 1947. E. J. Hamilton, "American Treasure and the Price Revolution in Spain, 1501–1650," Cambridge, 1934, is authoritative on the treasure movement. C. J. Bullock, J. H. Williams, and R. S. Tucker, "The Balance of Trade of the United States," in the *Review of Economic Statistics*, Vol. I, Cambridge, 1919, is

essential for the period 1820–1914, and the Department of Commerce has issued annual surveys since 1922. References on the tariff are listed in the section on manufacturing.

The best history of the merchant marine, especially good on the construction side, is J. G. B. Hutchins, *"The American Maritime Industries and Public Policy, 1789–1914," Cambridge, 1941. Excellent books on particular phases are S. E. Morison, "The Maritime History of Massachusetts, 1783–1860," Boston, 1921; R. G. Albion, "The Rise of New York Port, 1815–1860," New York, 1937; the same author's "Square Riggers on Schedule," Princeton, 1938, which deals with the packet lines; A. H. Clark, "The Clipper Ship Era, 1843–1868," New York, 1910; and F. L. Benns, "The American Struggle for the British West India Carrying Trade, 1813–1830," Bloomington, 1923. On subsidies and other aids, see references in Hutchins. A. W. Kirkaldy, "British Shipping: Its History, Organization, and Importance," London, 1914, together with the work of L. A. Harper cited above provide the important British background.

Money, Banking, and Financial Institutions (Chaps. IX, XXIV, XXV, XXXIX, and XL)

Two good textbooks, both covering public finance as well, are D. R. Dewey, *"Financial History of the United States," 12th ed., New York, 1934, and W. J. Shultz and M. R. Caine, "Financial Development of the United States," New York, 1937, the latter being a little broader in scope and more critical and the former better on bibliography. For the portion of the colonial period covered C. P. Nettels, "Money Supply of the American Colonies before 1720," Madison, 1934, is excellent. The most detailed study for any colony is A. M. Davis, "Currency and Banking in the Province of Massachusetts Bay," 2 vols., New York, 1900–1901; the same author edited the "Colonial Currency Reprints, 1682–1751," 4 vols., Boston, 1911. A. B. Hepburn, "History of Coinage and Currency in the United States," rev. ed., New York, 1915, is useful. J. L. Laughlin, "The History of Bimetallism in the United States," 4th ed., New York, 1897, is the authority on that topic. W. C. Mitchell, "History of the Greenbacks," Chicago, 1903, is exhaustive for the war period; D. C. Barrett, "The Greenbacks and Resumption of Specie Payment, 1862–1879," Cambridge, 1931, completes the story. W. G. Sumner, "History of Banking in the United States," New York, 1896, supplies a mass of poorly organized material up to 1860. J. J. Knox, "History of Banking in the United States," New York, 1900, is useful for state developments. R. C. H. Catterall, "The Second Bank of the United States," Chicago, 1903, is a very detailed study. D. R. Dewey and J. T. Holdsworth, "The First and Second Bank of the United States," Washington, 1910, is useful; D. R. Dewey, "State Banking before the Civil War," Washington, 1910, is the best general analysis; and G. C. Barnett, "State Banks and Trust Companies Since the Passage of the National Banking Act," Washington, 1911, supplies the best survey of this topic. H. P. Willis, "The Federal Reserve System," New York, 1923, is a detailed account of its origin and early years and S. E. Harris, "Twenty Years of the Federal Reserve System," 2 vols., Cambridge, 1933, is a thorough analysis of its operation. M. G. Myers, "The New York Money Market: Origin and Development," New York, 1931, has much historical material. Theory is carefully covered in H. E. Miller, "Banking Theories in the United States before 1860," Cambridge, 1927, and L. Mints, "A History of Banking Theory in the United States and Great Britain," Chicago, 1945.

A succinct outline of general business conditions in the United States and Great Britain, yearly from 1790 to 1925, and for other important nations starting at a later date, is supplied in W. L. Thorp, "Business Annals," New York, 1926. A fair history of crises is given in T. Burton, "Financial Crises and Periods of Industrial Depression,"

New York, 1903. Most valuable for the period covered is W. B. Smith and A. H. Cole, "Fluctuations in American Business, 1790–1860," Cambridge, 1935. O. M. W. Sprague, "History of Crises under the National Banking System," Washington, 1910, is an admirable analytical study. J. A. Schumpeter, "Business Cycles," 2 vols., New York, 1939, presents a mass of American and foreign historical material in support of his theories. E. Frickey, "Economic Fluctuations in the United States," Cambridge, 1942, covers the period 1866–1914 and refers to related specialized studies.

The most important work on price history, as gathering together the main results of other studies on the period covered, is A. H. Cole, "Wholesale Commodity Prices in the United States, 1700–1860," 2 vols., Cambridge, 1938. Among the special studies there noted, the two volumes on Philadelphia prices are especially useful, and the subsequently published T. S. Berry, "Western Prices before 1861," Cambridge, 1943, throws much light on the development of the Cincinnati region. T. M. Adams in Vermont Agricultural Experiment Station, *Bulletin* 507 and supplement, Burlington, 1944, has gathered Vermont price data, 1780–1940, that are unique for the variety of the goods and services covered. As covering the whole period down to 1932 and giving the sources for data after 1860, G. F. Warren and F. A. Pearson, "Prices," New York, 1933, is useful.

C. Lewis, "America's Stake in International Investments," Washington, 1938, is the best history of the international flow of capital. The field of insurance history is as yet inadequately covered; most useful are C. K. Knight, "The History of Life Insurance in the United States to 1870," Philadelphia, 1920; J. O. Stalson, "Marketing Life Insurance: Its History in America," Cambridge, 1942, an excellent study; and S. B. Clough, "A Century of American Life Insurance: A History of the Mutual Life Insurance Company of New York, 1843–1943," New York, 1946, which covers some of the general background. No scholarly history of the stock exchanges is available.

The Government and Economic Life
(Chaps. X, XXVI, and XLI)

For public finance, the two textbooks cited at the beginning of the preceding section supply the best historical outline as well as references to the most useful data and more specialized studies. Twentieth Century Fund, "Facing the Tax Problem: A Survey of Taxation in the United States," New York, 1937, is an excellent critical analysis, and S. Ratner, "American Taxation: Its History as a Social Force in Democracy," New York, 1942, is suggestive. B. U. Ratchford, "American State Debts," Durham, 1941, is the best general history, and there are many fiscal histories of individual states or cities. The most comprehensive data on state and local finance are found in various census reports, and the Tenth Census includes a historical survey.

A broad survey of the relation of government to the economic order is L. S. Lyon and others, "Government and Economic Life," 2 vols., Washington, 1939–1940, and useful textbooks are J. M. Clark, "Social Control of Business," 2d ed., New York, 1939, and H. D. Koontz, "Government Control of Business," Boston, 1941. L. M. Short, "The Development of National Administrative Organization in the United States," Baltimore, 1923, provides a general outline. The long series of Service Monographs issued by the Institute of Government Research gives useful accounts of the development of the government services. K. H. Porter, "A History of Suffrage in the United States," Chicago, 1918, best surveys this subject. Constitutional developments are covered in A. C. McLaughlin, "A Constitutional History of the United States," New York, 1935, and J. Q. Dealey, "Growth of American State Constitutions, 1776–1914," Boston, 1914.

E. S. Griffith, "History of American City Government: The Colonial Period," New York, 1938, well covers economic matters.

The Standard of Living
(Chap. XLV)

A most useful bibliography with many summaries of the books listed is F. M. Williams and C. C. Zimmerman, "Studies of Family Living in the United States and Other Countries," Department of Agriculture, Miscellaneous Publications No. 223, Washington, 1935. Though there is much material on recent conditions, little has been done to gather and analyze the scattered fragments out of which we have to piece together a picture of the living conditions in the past. An outstanding exception is the broad study of E. W. Martin, "The Standard of Living in 1860," Chicago, 1942. T. H. Streighthoff, "The Standard of Living among the Industrial People of America," Boston, 1911, though much narrower, provides the best account for that date. R. S. Lynd and H. M. Lynd, "Middletown," New York, 1929, though confined to one fair-sized Middle Western city, gives a broad picture of trends during the preceding quarter century, which is continued into the depression in "Middletown in Transition," New York, 1937. E. L. Kirkpatrick, "The Farmers' Standard of Living," New York, 1929, collects scattered sample data on various points. For general surveys of recent conditions, see M. Leven, H. G. Moulton, and C. Warburton, "America's Capacity to Consume," New York, 1934; the two reports of the National Resources Committee on "Consumer Incomes in the United States" and "Consumer Expenditures in the United States," Washington, 1938–1939; Bureau of Labor Statistics, *Bulletin*, Nos. 634–649; Bureau of Home Economics, Department of Agriculture, Miscellaneous Publication No. 345, and Farm Security Administration, Social Research Report No. 8. For the most recent and comprehensive study of consumer outlays see the Twentieth Century Fund study cited in the next section. For the colonial period see the various books of A. M. Earle, especially "Home Life in Colonial Days," New York, 1898, and W. C. Langdon, "Everyday Things in American Life, 1607–1776," which is continued in a second volume covering 1776–1876, New York, 1937–1941. G. Myers, "History of the Great American Fortunes," 3 vols., Chicago, 1910, is the only historical survey and is supplemented by the same author's "The Ending of Hereditary American Fortunes," New York, 1939. C. Clark, "The Conditions of Economic Progress," London, 1940, is the most careful statistical study of the standard of living in the leading nations since about 1850.

On the character and quantity of the different classes of goods and services consumed at different periods, especially before the present century, satisfactory information is generally lacking. Comprehensive and detailed data on housing were first provided by the census of 1940. J. Williamson, "The American Hotel: An Anecdotal History," New York, 1930, though popular, is useful. R. O. Cummings, "The American and His Food: A Study of Food Habits and Policies in the United States," Chicago, 1940, is the only historical survey and stresses diets. Reports for the Combined Food Board give detailed figures on the consumption of different foods just before and during the Second World War. There is much on the changing styles in dress, though the garb of the masses gets little attention. Most useful are E. McClellan, "History of American Costume, 1607–1870," 2 vols., Philadelphia, 1904, and A. M. Earle, "Two Centuries of Costume in America, 1620–1820," 2 vols., New York, 1903. For the history of medicine and public health work, see F. H. Garrison, "An Introduction to the History of Medicine," 4th ed., Philadelphia, 1929, detailed but difficult reading; F. R. Packard, "History of Medicine

in the United States," 2d ed., 2 vols., New York, 1931, unsystematic and most useful on the earlier period; M. P. Ravenel, ed., "A Half Century of Public Health," New York, 1921; Committee on the Cost of Medical Care, "Medical Care for the American People," Chicago, 1932, and the excellent study of W. F. Howard, "Public Health Administration and the Natural History of Disease in Baltimore, Maryland, 1797–1920," Washington, 1924. For educational history, besides the previously cited work of Cubberley, see E. G. Dexter, "A History of Education in the United States," New York, 1904, which is broader though less detailed; I. L. Randall, ed., "Twenty-five Years of American Education," New York, 1924, and the Bureau of Education's *Bulletin*. L. R. Wilson, "The Geography of Reading," Chicago, 1938, surveys the library facilities. In addition to his history of journalism previously cited, F. L. Mott, "A History of American Magazines, 1741–1885," 3 vols., New York and Cambridge, 1930–1938, is authoritative. A popular but excellent history of sports and other leisure pursuits is F. R. Dulles, "America Learns to Play," New York, 1940. J. F. Steiner, "Americans at Play," New York, 1933, is the best current survey.

Summary
(Chap. XLVI)

A few books may be noted here that are useful either as summarizing developments emphasized in the review or as providing a broad survey of the recent outcome of those developments. The National Resources Committee, "The Structure of the American Economy," Part I, Washington, 1939, provides a useful survey, well brought out in graphs, but far from complete, of many features of the present economic order. E. G. Nourse and associates, "America's Capacity to Produce," New York, 1934, is useful in the same way. F. R. Martin, "National Income in the United States, 1799–1938," New York, 1938, is the most careful attempt to carry this series back so far. The numerous statistical studies on income, production, etc., put out by the National Bureau of Economic Research are invaluable for the period since 1870. Among them may be noted H. Barger, "Outlay and Income in the United States, 1921–1938," New York, 1942, and three works by S. Kuznets, "National Income and Its Composition, 1919–1938," 2 vols., New York, 1941; "National Income: A Summary of Findings," New York, 1946; and "National Products since 1869," New York, 1946. Most comprehensive and useful of all, though published too late to be made much use of here, is Twentieth Century Fund, "America's Needs and Resources," New York, 1947. The attempt to estimate consumer demands and the resources available for supplying them down to 1960 has resulted in providing the most recent and comprehensive survey of consumer outlays and national productive capacity now available.

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