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THE CENTURY STUDIES IN ECONOMICS

WILLIAM H. KIEKHOFFER, *Editor*



Economic Principles,
Problems, and Policies

Economic Principles, Problems, and Policies

by

WILLIAM H. KIEKHOFER, Ph.D., LL.D.
UNIVERSITY OF WISCONSIN

FOURTH



EDITION

New York

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TO MY STUDENTS

*in the general economics course
at the University of Wisconsin
during the years 1916-1951
whose alert interest has been a constant stimulus to me*

AND

TO MY ASSOCIATES

*in the teaching of the course
whose contributions have been indispensable to its development*

THIS BOOK

which owes so much to both

IS DEDICATED

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Preface



THE MOMENTOUS events, both economic and political, of the past score of years have left a deep impress upon our economy and have profoundly affected the thinking of men on economic matters. In this period we have experienced the most severe and protracted depression in our history, and have participated in the most devastating war of all time. The foundations of society have been rocked by these convulsions. The post-war years have brought a continuation rather than the conclusion of extraordinary demands upon our economic system. Its precise future is not certain. The price of both economic freedom and political liberty must be eternal vigilance. Times such as these have greatly stimulated the reading and study of economics. This is a social gain. I hope that this volume will help its readers to a clearer understanding of economic principles and of some of the complicated problems of economic life. At the same time, I hope that through the promotion of such better understanding it may indirectly contribute something to the solution of such problems in the common interest.

Upon the basis of what has been placed in evidence, I cannot share the conclusion of those who seem to think that traditional economic theory is outmoded and must be superseded by what they call the "new economic theory." What I have sought to do in this Fourth Edition of *Economic Principles, Problems, and Policies* (first published in 1936) is to find a place for the more significant ideas of modern economic theory within the framework of the traditional economic theory that has been developing during the past two centuries. Theory grows through the synthesis of the old, which has stood the test of time, and the new, which is based upon fresh facts and analysis. Recognition of conditions other than competition, such as monopoly, monopolistic competition, and public authority, has led to more complete and realistic economic analysis. The national income approach and analysis are proving very useful now that better statistical estimates are more quickly and widely available. Doctrines such as the general equilibrium theory of international trade, the liquidity preference theory of interest, the savings-investment and innovations theories of the business cycle, have proved highly provocative of thought and have made important contributions to the subjects concerned. But the study of em-

ployment, income, savings, and investment, important as it is, is not the whole of economics.

While every chapter of this Fourth Edition has been subjected to rigorous criticism for revision purposes and practically all contain some new materials, the predominantly new chapters or chapters containing substantial new sections include the following:

Chap. (I.) The Foundations of Economics—the section on “Scientific Methods and Analysis in Economics.”

Chap. VIII. The National Income Analysis of Production and Other Economic Functions.

Chap. XI. International Trade and Exchange—the section on “International Trade Based on Differences in Price Structures.”

Chap. XVII. Short-Run and Long-Run Equilibrium Price Under Competition.

Chap. XVIII. The Rôle of the Business Firm in the Determination of Price.

{ Chap. XIX. Price Under Monopoly.

{ Chap. XX. Price Under Monopolistic Competition.

Chap. XXVII. Business Cycles—the theoretical parts.

Chap. XXIX. Spending, Saving and Investment—the section on “Aggregate Consumption, Saving, and Investment.”

Chap. XLI. Coöperative Enterprise.

Throughout the book all factual data have been revised. Wherever pertinent new facts were available, or more significant facts could be set forth, this has been done. New legislation, such as the Taft-Hartley Act of 1947 and the Federal Income and Excess Profits Tax laws of 1950, has been discussed in the chapters concerned.

At points where experience showed that there was lack of clarity or the possibility of misunderstanding, an attempt has been made to correct the sequence of ideas or the language employed. Every chapter has been worked over very carefully with reference to the logical structure of thought, and the entire forty-two chapters have been arranged with particular reference to the logical development of the book as a whole—as well as its readability and teachability. I hope and believe that its main sequence of ideas will linger in the memories of careful readers.

The title of the present work indicates the scope of its exposition. The book deals with the structural organization of modern economic society, with the ways in which it functions, with the principles or laws of its functioning, with the maladjustments in its operations resulting in problems calling for both private and public remedial action, and with the policies pursued in attempts to make it function better. It is an exposition of economic principles, problems, and policies. In the treatment, principles and problems are interwoven throughout the book. Theory and prac-

tice, principles and problems, are not kept in separate compartments. To attempt to keep them so would be, it seems to me, to run the risk of developing a lifeless theory and of losing the significance of practical activities. Economic theory is developed as an interpretation of economic practice and as a guide to better practice.

It has always seemed to me that the most direct gateway to economics is production and the income that it yields. Most persons who think about the nature and scope of economics at all are apt to think that it has something to do with the ways in which men acquire income to satisfy their wants. This seems a logical place to begin the study of economics; it is the subject of Part I. Goods must be produced before wants can be satisfied. From the successful sale of the commodities one has produced, or the services which one can render, comes the purchasing power that can be exchanged for a great variety of want-satisfying goods. The national income analysis can be effectively developed at this point.

Because, in these days of specialization, production is characteristically carried on for the market, Part II is concerned with the agencies which have been created to facilitate the exchange of goods, and the principles of their operation.

The fundamental economic problem with reference to goods produced for exchange in the market is the problem of determining their price, since prices are the chief guide to the investment of productive energy and the principal control mechanism in a system of free enterprise. Accordingly, value and price are the theme of Part III. The price pattern of any economic society, however, is largely determined by its institutions. Assumptions and conclusions that are valid within a given institutional framework do not hold within another. The price analysis of Part III concerns itself with such divergent institutional arrangements as those of competition, monopoly, monopolistic competition, and price fixing by public authority.

The treatment of theories of distribution—wages, interest, rent, profits—follows immediately (Part IV), thus preserving what seems to me a desirable unity in the presentation of price problems. In the treatment of markets—those for commodities, labor, loanable funds, and land—I have developed a parallelism of treatment which is intended to make the understanding of price theory and problems easier than it would be without such an approach. After considering the subjects of value and distribution, I turn to a treatment of price changes and the cyclical movement of business. In the discussion of value and distribution no question is raised concerning the effects of possible changes in the purchasing power of money. The value of money, however, does not remain constant, and rapid changes in its purchasing power are an invariable characteristic of business cycles. So it seems best to treat price changes and business cycles

immediately after concluding treatment of the theory of value and distribution.

The ultimate objective of the production, exchange, valuation, and distribution of goods is consumption, the gratification of human wants; this is the subject of Part V.

At various points in this round of processes involving the production and consumption of wealth, government steps in to collect taxes and other forms of public revenue, to be used in expenditures for the common good. Accordingly, Part VI deals with the economics of government—the expenditures and income of governmental units.

The concluding section of the book, Part VII, is concerned with the relation of government to a nation's economic life under various possible economic systems. It includes an appraisal of the achievements of the capitalistic system, and an examination of the possible substitutes for it, particularly socialism and communism.

One of the distinctive difficulties, with which every teacher is familiar, in the presentation of economics is the tendency of some students, particularly if they have had a little practical economic experience, to substitute a smattering of information for real knowledge. It is a case where "a little learning is a dangerous thing." Experience is most helpful in appraising the significance of theory, but it is no substitute for theoretical analysis and the hard work which the assimilation of theory requires. A further difficulty encountered in the presentation of economics, which is not generally experienced by the teachers of the natural sciences, is that both the student and the layman are apt to bring preconceptions, sometimes strong prejudices, to the consideration of economic principles and issues. Few discussions of tariff policy, for example, have been free from a considerable bias in favor of protectionism.

In writing this general treatise on economics I have tried to be clear in the statement of economic principles and rigorously fair in stating opposing views on controversial economic issues. Partisanship on unsettled questions of the day has no place in a book of this sort; objectivity should stamp it at every turn. What the reader of this volume has a right to expect is a meticulously objective presentation of the principles of economics, the problems of economic society, and the policies pursued in their solution.

I have purposely kept the presentation of the subject within the compass of a single manageable volume. It is intended, however, as the basic reading for a year's survey course in general economics, together with such supplementary reading as every teacher will want to include. Students in the general survey course should acquire some familiarity with the literature of economics. Most teachers have their favorite selections from standard works of reference or from contemporary sources which they want to assign, and which they know how to provide through the

regular facilities of libraries or in other ways. I have for many years made extensive use of current periodicals dealing with economic news and issues.

I am frequently asked how this book can be most effectively used if the course is restricted to a single semester. It seems to me that will depend upon local conditions at the institution concerned, including the sequence of other courses and the objectives of the instructor. A workable arrangement would be Parts I, III, and IV in the order named.

The problems at the close of most of the chapters have been thoroughly revised and many new ones have been added. These thought-provoking and thought-testing problems may help to stimulate class discussion and may provide some assigned written work.

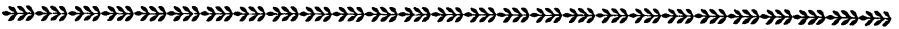
Suggestions for further reading, appended to each chapter or group of chapters, have been reviewed and new references either substituted or added to point the way for further explorations of the subject.

In the preparation of this edition I have had much competent and devoted help for which I am deeply grateful. For many penetrating criticisms and constructive suggestions, offered through the years, I am indebted to my long-time friend and collaborator in the teaching of general economics, Professor Ira B. Cross of the University of California. From Dr. W. H. Anderson of the University of Southern California and Dr. Joseph E. Shafer of the University of New Hampshire, both formerly associated with me here in the teaching of general economics, I received helpful suggestions which I was able to act on in this edition. Professor Marvin A. Schaars of the University of Wisconsin gave me sound advice on my proposed treatment of coöperative enterprise. The counsel of my colleague, William V. Wilmot, Jr., was invaluable on the many points I discussed with him. Jack and Gladys Ellenbogen rendered me superb service as research assistants, and enabled me to explore many ideas which it would have been impossible to investigate without their highly competent help. Roy L. Marx revised the problems and formulated new ones, and similarly revised the chapter bibliographies, and did it all with rare ability and care. The revision of the index was in the experienced hands of Alma L. Bridgman, whose teaching of general economics at the University of Wisconsin made her familiar with the entire field. Geraldine Hinkel again rendered outstanding service in preparing the manuscript for the printer, and with Olivia Marx carried the taxing responsibility of reading much of the proof. Josephine Trumbower Bradley typed the lists of tables and charts. Only the efficient team-work of my associates enabled me to meet the publisher's deadline for this Fourth Edition.

W. H. K.

University of Wisconsin

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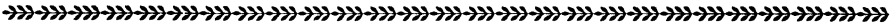
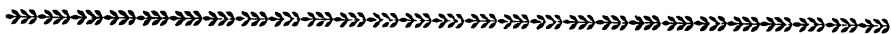


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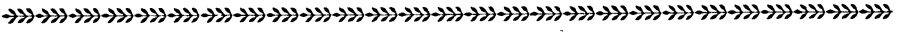
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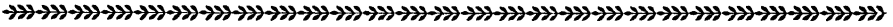
PART I



PRODUCTION

CHAPTER I

The Foundations of Economics: Human Wants and the Scarcity of Goods



FOUNDATIONS OF ECONOMICS

MOST MEN neither have, nor can they easily get, all the income they desire for the gratification of their wants. Upon this basic fact of scarcity in relation to human wants the whole subject of economics has been built. Human wants are the great driving forces of an economic world in which there is not enough of everything for all. If our wants were fewer and less urgent, or if the things that satisfy them (what economists call goods) were more abundant, many of our present economic activities would disappear. But one of the most striking facts about civilized man is the number and variety of his wants; and at the same time one of the most stubborn facts about the world in which we live is the scarcity of want-satisfying goods. As a consequence men must work to get a living. To carry on this struggle for a living more effectively, men have developed a great variety of means and human relations, which now constitute the structural organization of our economic society. To furnish an understanding of the functioning of this economic society is the chief purpose of economics as a social study. To show that economic processes are not chaotic, but rather in accordance with laws which can serve as guides for action, is the hope of economics as a science. To improve the mechanism by which men make a living is the task of the technical arts. To bring into constantly more efficient coördination the many interdependent parts of an ever changing economic system is the duty of economic statesmanship both in and out of political office.

Since the beginning and end of economic study is man, there is a large humanistic element in economics. In its method, however, of systematically searching for the causes of economic phenomena and of reducing its conclusions to laws, economics is scientific. Not inaptly, therefore, economics has been called a social science, the term suggesting its kinship with both the humanities and the sciences. Whether one emphasizes the humanistic or the scientific element in it, *economics is that branch of human learning which treats of the means and activities by which men get a living.* Prob-

lems of income and of expenditure, whether of individuals or of groups, are the special subject of economics. Human wants and scarcity of goods are its foundations.

SOME HUMAN WANTS PROMPTING ECONOMIC ACTIVITY

It is with man's efforts to obtain income and the use of income in the gratification of his wants that economics is largely concerned. Accordingly, an understanding of human wants, no less than of how man comes into possession of want-satisfying goods, is essential to a complete understanding of economic life. In common with the other social studies, economics has some of its roots in biology and psychology. It is to these sciences that we must turn for knowledge of the nature of the human factor in social life. Economics assumes human beings in action. Biology and psychology aim to explain their actions, physical and mental. The economist, in explaining that part of social life with which he is most concerned, is helped or limited at almost every turn by the adequacy or inadequacy of the biologist's and psychologist's interpretation of human behavior.

Unfortunately, not all explanations of economic life have been based upon adequate psychological foundations. It was once rather common, for instance, to think of man, whose economic activities economists sought to explain, as a being largely motivated by self-interest and by the desire to gratify his wants with the least possible effort. Of course this so-called "economic man" was never anything more than an abstraction. Powerful as is self-interest in economic behavior, and eager as men are to get the largest reward in return for the least necessary effort, human nature as revealed in economic life cannot be reduced to quite such simple terms. The fact is, man is a member of various social groups, and consequently his economic activities are influenced by many motives other than self-interest and parsimony. There is no economic motive *par excellence*. The economic behavior of men is as complex as any other form of human behavior. In any given economic situation, men may be driven by instinctive impulses, may act in accordance with thoroughly established habits, or may be guided by rational calculation of consequences. Any attempt, however, to explain economic behavior solely in terms of a single mental element is bound to prove disappointing.¹

¹ It seems unwise and unnecessary in this connection to attempt any excursion into the psychological controversy associated with the terms "behaviorism" and "mentalism." Behaviorists, like Dr. J. B. Watson, seek to explain all of man's behavior in terms of "response to stimulus"; "mentalists," like Professor William McDougall, insist that there is a mind or self which expresses itself in his experience and behavior. The economist accepts human wants or desires as driving forces in our economic life, whatever their nature and origin. Whether they be mechanical responses to stimulus and nothing more or states of an experiencing mind is for the psychologist to determine.

Some of man's wants, such as those associated with food and sex, are largely instinctive. The expression of all human desires, however, is constantly modified by habit and reasoned calculation of consequences. Our wants tend to find habitual modes of expression. How powerful habit is in expressing human wants, especially as men get older, is evidenced by countless facts, such as individual preferences for certain foods, amusements, and modes of living. Habit in the individual, moreover, is the chief means of perpetuating the customs of a people, which greatly affect all economic endeavor and want gratification. With experience men tend to rationalize their wants—to calculate the consequences of satisfying their wants in this way or that. In almost every mature person the many native behavioristic impulses have been organized in such a way, and control over movements in accordance with ideas and ideals has been so definitely acquired, that we are justified in asserting of such a person that he has a will and character of his own. It is this complex will or character that expresses itself in economic behavior. As men grow in experience, rational wants play an increasingly important rôle in motivating economic activities. Sterilized milk for babies and pure food for all are demanded because people have come to understand the germ theory of disease. Safety devices and labor-saving appliances are installed in home and factory because people are unwilling to take unnecessary risks or to perform useless labor. Much money and energy are spent in educational work of all sorts because people demand that they and their children shall have opportunities for the fullest development and enjoyment of their powers. These are types of rational wants. It is such wants that prompt much of the economic effort of the world. In the rationalization and habit-expression of man's wants social influences of many kinds play a most important part.

Human wants or desires prompt all economic activity. As far as the effect upon our economic life is concerned, it matters not whether these desires be behavioristic impulses arising as responses to stimuli, or states of an experiencing mind. The important fact is that they stimulate economic activity. Instinctive, habitual, and rational elements may all be present in any given desire. Whatever the nature and origin of our desires, it is to gratify them that men the world over and time out of mind have sought to produce wealth and to acquire income. Desires are impulses directed toward the attainment of that which will gratify us. Desires in the economic world are comparable to forces in the physical world: both bring things to pass. That which gratifies human wants or desires is said to have utility for us.

Desire for physical necessities and comforts. Chief among the desires prompting economic activity is the desire for physical necessities and comforts—the “food, clothing, and shelter” described in our elementary school books as the basic necessities of life. Self-preservation is still the

first law of life. Getting a living, or making a living, comes first on the survival "must list" of human beings. This is true whether we think of the historical experience of the race or of the present experience of most people. Everybody knows that in most places men have been moved to economic activity by the pangs of hunger and the need of keeping warm. Hunger and cold directly account for enormous expenditures of human energy, for without food and protection against the elements men must perish. India and China, with their teeming millions, illustrate how much of the energy of people must be concentrated upon the single task of keeping alive when there is real pressure of population upon the means of subsistence. Periodically in less populous countries, when food supplies run low and there is a sharp rise in the cost of living, we are reminded of how potent after all is hunger in affecting the economic behavior of men. People must first of all be well fed if their conduct is to be rational and normal. Numerous and lengthy "bread lines" are symptomatic of deep-seated trouble in our economic system. Clothing and shelter in most climates are equally basic necessities. In wealthy countries such as the United States, it is true, relatively few persons are ever in imminent danger of either starving or freezing to death. But, here and elsewhere, as far as economic activity is concerned, man, unlike the lower animals, is rarely content with the mere necessities of life. On the contrary, he strives to acquire the comforts and luxuries which will enable him to lift his level of well-being above that of mere brute existence and to make life abundantly worth while. He wants food not only to keep alive, but for the pleasure of eating. He desires clothing not merely for protection, but to make an attractive appearance. He wants a house not solely for shelter, but because its modern conveniences and sometimes artistic furnishings help to bring him a measure of prestige among his fellows and to gratify his love of the beautiful.

But in recent years the world over both war efforts and post-war relief and rehabilitation etched the fact into the minds of men that the basic necessities of life, for the maintenance of the armed forces and the civilian populations, can and at times must dominate all other expressions of human behavior.

Desire for self-expression and development. One of the strongest desires motivating economic behavior is the desire for self-development. Wealth and income are desired not merely to procure physical necessities, but to provide opportunities for such self-development as will increase man's real freedom. Self-expression is fundamental to human happiness. It is a mistake to suppose that happiness can come through the mere accumulation of things. Happiness can come only through the active exercise of one's normal powers. Every person desires a chance to develop his capacities. Because men are curious, they demand opportunities to

learn; our vast system of education has largely been created in order to make possible the highest development of the largest number of people. Because men are constructive, they demand opportunities to exercise their creative powers, which they may do in countless different ways, such as expert craftsmanship, inventions, and art. Most men realize their ideas and ideals in constructive activities of some sort; what particular form these will take is for most people largely a matter of chance. To ensure the greatest development of the individual requires income and the opportunities which income commands. Accordingly, the desire for self-development prompts economic activity. Some men, indeed, find economic activities, particularly in their acquisitive aspects, so engrossing that they devote themselves almost exclusively to making money.

Desire for power. Still another desire prompting endless economic effort is the desire for power. Wealth is a form of power. Many men continue their money-making efforts long after they have all the money they need for the ordinary purposes of life; some do so because they become fascinated by the game and do not know how to stop; others because they desire the power which great wealth affords. There is something about the possession of great wealth which appeals to the self-assertiveness of men. It affords them a means of domination.

The same motive, the desire for power, prompts much business expansion. As Dewing puts it:

The most powerful motive that leads a man to expand a business is the illusion of valuing himself in terms of his setting. The bigger the business, the bigger the man. . . . The race-old instinct of conquest becomes translated in our twentieth century economic world into the prosaic terms of corporate growth. Business expansion is the spirit of a modern Tamerlane seeking new markets to conquer. Small enterprises become merely the pawns for human ambition in the game of business achievement.²

To become a captain of industry or railway king or financial magnate, to appear as the recognized leader and spokesman of thousands of men, to get the thrill of directing the policies of huge organizations whether of capital or of labor—these are the heights of ambition of many men and call forth prodigious economic effort.

Desire for recognition and approval by others. Deeply implanted in human nature is the desire to gain the recognition of others and to win their approval. A limited few may be content with the satisfaction that comes through meeting their own standards; exceptional individuals may appeal to the verdict of history rather than to the judgment of their contemporaries; but most men covet the approval of their fellows. Some desire most of all the discriminating approval of a few select friends and

² A. S. Dewing, *Financial Policy of Corporations*, 4th ed. (New York, Ronald Press Company, 1941), II, pp. 854-855.

associates; others yearn for the applause of the multitude. This desire for recognition and distinction, like the other desires already mentioned, prompts a vast amount of economic activity and drives some men at top speed. Some seek recognition in the piling-up of great fortunes; others, in lavish spending. Some strive for distinction in building up great economic enterprises; others, in the establishment of foundations dedicated to the common welfare. Income and wealth are desired not merely to provide necessities and luxuries; not wholly for the opportunities for self-development which they afford; not only for the power which they may confer; but also for the recognition and distinction which they may bring.

Desire for the welfare of others. Beyond all these desires, which are essentially self-centered, is the desire to help provide for the welfare and happiness of others. Not infrequently this desire is stronger and more compelling than any one or all of the rest. This is particularly apt to be true in the intimacy of the family group. The desires for a mate and for children, the impulses to protect them and to provide for their welfare, have resulted in the institutions of marriage and the family. It is altogether probable that the sex and the parental impulses, together with the institutions based upon them, account for more economic activity on the part of human beings than any others. Think, for instance, of the efforts parents put forth and the lifelong sacrifices they often make in order that their children may have opportunities which were denied them. Back of many a demand for shorter hours or steady work or higher wages is the solicitude of devoted parents.

But the altruistic motive, so often perfectly expressed within the family, is not confined in its objectives to the family group. Fortunately for human society, many persons become public-spirited and find their highest satisfaction in genuine expressions of good-will to all men. Many philanthropic foundations and educational endowments, much welfare work and social service, a great many humanitarian reforms protecting workers, and measures taken for the protection of our children and children's children are directly inspired by the desire to provide for the greatest welfare and happiness of others.

The foregoing illustrations of desires prompting economic activity will convey a wrong meaning if they leave the impression that any given form of economic behavior can easily be explained by reference to a single human trait working in isolation from all others. Human nature is not a mere mosaic of separate traits; it is a highly integrated organism. It is impossible in any given economic behavior situation to assert that any one behavior tendency is working to the exclusion of the rest. All that can be done is to distinguish the dominating tendency. Nor is it possible to say just how much of man's economic behavior is due to the inborn, and how much to the acquired. John Dewey says: "After ignoring

impulses for a long time in behalf of sensations, modern psychology now tends to start out with an inventory and description of instinctive activities. This is an undoubted improvement. But when it tries to explain complicated events in personal and social life by direct reference to these native powers, the explanation becomes hazy and forced.”³ It is the whole man—instinctive, habitual, rational, emotional—in constant interaction with his changing environment that constitutes the human factor in economic life, and that must be understood if we would explain, predict, and influence man’s economic behavior.

Nor is it to be understood that the expression in economic and social life of the driving forces of the human desires just described is necessarily and always in the social interest. As a matter of fact, the desires for physical necessities and comforts, for self-expression and development, for power, and even for the recognition and approval of others may take exceedingly anti-social forms and result in the oppression and exploitation of others. The economic activity of individuals, however it is prompted, may be in the interest or at the expense of others. Economic behavior, like all other human conduct, needs to be socially controlled, so that the possible selfish pursuits of the one shall not be at the expense of the many. The strengthening and extension of the desire for the welfare of others and the disciplining of essentially egoistic impulses, so that the expression of individual liberties will not encroach upon the freedom of others, are constant processes of education and control.

SCARCITY, A LIMITING FACTOR IN WANT GRATIFICATION

Scarcity contrasted with abundance. Whatever the desires that prompt economic activity may be, the constant limitation upon the fullest gratification of human wants is the fact of scarcity. Scarcity may mean that at any given time and place there is a limited supply of a good to satisfy the desires for it which then and there exist. It is such scarcity that has taught men to economize, to use goods to the best possible advantage in the gratification of their wants. This scarcity of want-satisfying goods has sometimes been due to the niggardliness of nature and again to the fact that too large a population was trying to live in a given area. In the economy of most individuals, however, the scarcity that proves a limiting factor in the gratification of wants is not so much due to any sharp limitation of available goods, as it is due to inadequate incomes with which to acquire want-satisfying goods. Scarcity for both society and the individual is relative to the human wants to be supplied. Man’s first economic problem has been to achieve such power over the materials

³ *Human Nature and Conduct* (New York, Henry Holt and Company, Inc., 1922), pp. 90-91.

and forces of nature as to ensure himself abundant and regular means of subsistence. Scarcity has created our economic organization and constantly stimulates economic activities.

Men sometimes contrast an economy of abundance with an economy of scarcity. By the former they commonly mean a system of unrestricted production in which goods are reasonably priced in relation to the purchasing power of people. By the latter they are apt to mean a system of restricted production, often artificially induced for the purpose of enhancing prices. Rich harvests, for example, may help to create an economy of abundance, as far as foodstuffs are concerned. The plowing under of every third row of cotton, the destruction of little pigs, and the dumping of coffee into the sea may help to achieve a temporary economy of scarcity, as far as these products are concerned. The difference between an economy of abundance and an economy of scarcity, however, is a difference of degree and not of kind. Goods the supply of which is limited in relation to the demand are scarce goods in the economic sense, no matter how abundant they may be. Only superabundant goods, that is goods the supply of which is unlimited in relation to human wants, lie outside the economic sphere. If by some miracle all want-satisfying goods were to become permanently superabundant, the need for both economic effort and economic use would disappear.

Universality of struggle due to scarcity. But after thousands of years of evolution, man's chief economic problem today is what it has always been: to acquire an income large enough to satisfy his wants. Indeed, the vast majority of people must still devote the major part of all their activities, from the time they arise in the morning to the time they fall asleep at night, to the process of getting a living. If the goods, including commodities and services of all kinds, essential to the satisfaction of our wants, were all as free as the air we breathe when out-of-doors, there would of course be no problem of getting a living. From time immemorial people have dreamed about such a world. Weary from their wanderings in the wilderness, they have looked forward to entering the "Promised Land" where milk and honey freely flowed. Many have conjured up Utopias where there would be more opportunity to live and less need for struggle. Disappointed with the results of their efforts here, many have turned attention to another world, thinking of it as a state in which there would be an abundance of want-satisfying goods and the opportunity to rest from weary toil. But, for the present, one of the most distinctive and significant things about the world in which we live is the fact that nature does not supply us gratuitously with all, or even many, of the commodities and services we desire. We live in a world of scarcity. It is scarcity that makes it necessary for men to struggle to get a living.

It is scarcity that has driven men into the uttermost parts of the world in quest of new and larger economic opportunities.

Distinction between the economic struggle and the struggle for existence. In some places and at some times goods have been so scarce that the struggle to get a living has become a struggle for bare subsistence. Starvation was a fearsome specter in the lives of many primitive peoples. But famine has been no less a grim reality in some countries during the distressful years following the First and Second World Wars. In modern as well as in primitive times, the struggle to obtain want-satisfying goods has often been a matter of life or death. But with progress in man's control over nature, the economic struggle has become less and less a struggle for mere existence and more and more a struggle for surplus and the power to control it. While the economic struggle is most assuredly a form of the struggle for existence, it is usually much more. The struggle for existence is a struggle for survival: the struggle of every living organism to preserve its life and not to permit its kind to perish from the earth. The economic struggle today in most of the industrialized nations of the world is a struggle for "survival plus"—a struggle for wealth and power often far in excess of what is needed for survival. In commenting on the relationship between the economic struggle and the struggle for existence, E. A. Ross expresses himself in the following picturesque language:

The master error of the social Darwinists is to see in the economic struggle a twin to the struggle for existence that plays so fateful a part in the modification of species. The fact is, the scramble for money or place, though it be as desperate as the fight of clawed beasts, has ceased to be a clear case of life or death. Only on the bottom steps of the social staircase do men compete from hunger. Above them men work themselves into the madhouse or the grave, not for bread, but for jam on the bread.⁴

Must economic conflict continue? The struggle to obtain scarce goods inevitably brings men into conflict. In the economic world this struggle to gain coveted goods in the attainment of which interests clash, when carried on in a lawful manner, is usually known as competition. Men compete with one another in buying and in selling material commodities and services of all kinds, in procuring productive opportunities and resources. As buyers men seek to pay as little as possible for the goods they want, but they find that others are in the market for the same goods, and accordingly they often have to pay more than they had originally planned. As sellers men seek to dispose of their goods for the highest possible price, but they find that others are eager to do the same, and accordingly they often have to sell for less than they had originally hoped. Usually such competitive struggle proves stimulating

⁴ *Foundations of Sociology* (New York, The Macmillan Company, 1905), p. 340.

and beneficial, as in ordinary retail trade, ensuring reasonable prices and fair quality and at the same time allowing the competitors to survive. But sometimes the competitive struggle proves ruthless, the more powerful seeking the destruction of their rivals in order that they may dominate the field unhampered. Some there are who regard the competitive struggle with its clash of interests as the mainspring of economic progress. Others denounce the competitive struggle as reminiscent of the jungle and as provocative of the brute in human nature. But however abhorrent the competitive struggle may appear to certain sensitive spirits, the fact is, as long as we live in a world in which the quantity of goods is limited in relation to the wants to be supplied, as long as men are disposed to obtain more for themselves and their own than everyone else is able to get, just so long will the economic struggle continue.

SCIENTIFIC METHODS AND ANALYSIS IN ECONOMICS

To reduce the mass of available information concerning the means and activities by which men make a living to organized knowledge is one of the first tasks of economics. To discover and establish cause-and-effect relationships among economic phenomena, generalizations that may properly be called laws, and which may serve as guides for future action both private and public, is the hope of economists as social scientists. But since economics is not only concerned with material means but also with human activities in the complicated business of making a living, and because the behavior of human beings is not as predictable as the behavior of physical forces, economic laws cannot have the exactness of the laws of physical science. Economic laws describe tendencies. The British economist, Alfred Marshall, expressed it this way: "A law of social science, or a social law, is a statement of social tendencies; that is, a statement that a certain course of action may be expected under certain conditions from the members of a social group."⁵

The experimental method. The natural sciences, as bodies of knowledge, have largely been built up by the use of the experimental method. The chemist or physicist can control the conditions of his experiment. By holding certain factors constant (or at least as constant as is physically and humanly possible), and by varying a given factor, he may note the results. If he always gets the same results under the same conditions he may be able to state a causal relationship, a law of his science, such as the laws of freely falling bodies, or the relationship between the volume of a gas and the pressure to which it is subjected. But the experimental method is not usually available to the economist. He is largely concerned

⁵ Alfred Marshall, *Principles of Economics*, 8th ed. (London, Macmillan and Company, Ltd., 1920), p. 33.

with the choices of human beings, who do not lend themselves very well to controlled experimentation. And even if they did, their reactions to the same set of fixed conditions would be different from time to time. The experimental method has only limited possibilities in economics.

The method of observation. Of inestimable value in the study of economics is widespread observation of how economic society is organized and how it functions in promoting the gratification of human wants. Intensive study of the economic life of a community or region, agricultural, industrial, commercial and financial; inter-regional and international comparisons in this respect; and the projection of such comparisons into the historic past, are all means of making indispensable materials available to the economist. "Look and see" has been the sage advice of many a teacher-scholar to beginners in the field, meaning "Observe and learn to interpret what you see."

The statistical method. Much use is made of the statistical method in economics. Numerical data are gathered and statistical series are constructed concerning the economic phenomena under investigation, such as wages and retail prices. The problem at issue may be whether money-wages currently received are buying more or less of other goods than they did at some other time. After assembling representative statistical facts concerning changes in money-wages and changes in retail prices, one may fairly draw certain conclusions, for the group and period of time investigated, concerning the purchasing power of the workingman's dollar. To give the conclusion wider application than is warranted by the facts investigated, however, is risky and may lead to some false statements concerning wages and the cost of living. One of the limitations of the statistical method is that it can never give us certainty but only probability. Even so, however, it is one of the best substitutes that economics has for lack of the experimental method. Conclusions based on representative statistical facts and properly drawn from their analysis carry greater weight and inspire more confidence than the mere assertions of an observer, no matter how keen.

The method of abstraction. Economic relationships seem infinite, so entangled and complicated, that any complete analysis of them calls for a good deal of abstraction and hypothetical simplification. The method of abstraction consists in isolating from the whole the phase of an economic situation or problem that one wants to study—a property or quality, or quantity, whatever it may be. Perhaps we are looking for an explanation of what determines the price of a single commodity, such as Grade A wheat on the Chicago Board of Trade (where it is sold), on a given day. To simplify matters further certain basic assumptions are made concerning the nature of the market, such as the presence of effective competition among both buyers and sellers. On the basis of the assumptions made,

and the price-determining offers and asking prices that are registered in the market, a tentative conclusion may be drawn that the market price will tend to equal such and such a figure. With different assumptions the conclusion will be different. The explanation may begin as hypothetical under greatly simplified assumptions, and conclude under more complex assumptions which approximate reality. The economist works with concepts and assumptions (the latter also called hypotheses or postulates) in the gathering and analysis of data in the attempt to arrive at cause-and-effect relationships. Such generalizations become the laws of economics, statements of what will tend to happen to B when A is changed under certain conditions that are assumed to exist. From such generalizations first established inductively, deductions are made in applying the principle to problem situations. The method of abstraction has proved very useful in the growth of economics as a distinct branch of human knowledge.

The careful use of the experimental method in the limited cases in which it is applicable, the use of the method of observation, including observations over both space and time (the latter sometimes called the historical method), the use of the statistical method in the analysis of masses of data, and the method of successive abstractions made to approximate reality, are all helping to build up economics as a body of knowledge helpful in understanding the functioning of economic society, in solving economic problems, and in shaping economic policies, both private and public.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. The fact that want-satisfying goods are limited in relation to human wants accounts both for the existence of an economic order and for the development of economics as a study.
2. Economics has closer kinship with the social sciences than with the physical.
3. Economics, as the study of material well-being, is little concerned with human motivation to economic activity.
4. The only purpose of economic activity is production of the material things wanted by society.
5. Individuals engage in productive economic activity chiefly for the social prestige they may gain thereby.
6. The expression in economic life of the driving forces of human desires is not necessarily in the social interest.
7. Man's first economic problem has been to achieve such power over the materials and forces of nature as to ensure himself abundant and regular means of subsistence.
8. Since many industries in the United States are periodically menaced by over-production, it is apparent that economic scarcity has been successfully overcome.

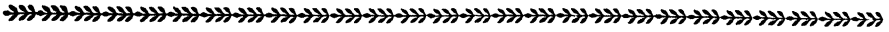
9. The increasing productiveness of modern industry and agriculture foreshadows the disappearance of economic scarcity.
10. If all goods were superabundant it would be unnecessary either to study or to teach economics.

SUGGESTIONS FOR FURTHER READING

- ADAMS, W., and TRAYWICK, L. E., eds., *Readings in Economics* (New York, The Macmillan Company, 1948), Chap. 1.
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CHAPTER II

Factors and Functions in Production



ANY ECONOMIC SYSTEM exists for the purpose of enabling man to produce want-satisfying goods. As has just been suggested, much the greater part of the time and energy of all people is spent in the struggle to obtain these goods. Perhaps it was not always so, and maybe it will some day be different, but today men must produce if they would live. The *Book of Genesis* tells the story of God's planting a garden eastward in Eden, out of the ground of which He made "to grow every tree that is pleasant to the sight, and good for food." He commanded man "to dress it and to keep it," and told him that of every tree of the garden he might eat freely except of one. But Adam and Eve, according to the Biblical story, disobeyed, and expulsion from the garden, together with the cursing of the ground, was their punishment. To Adam God said: "Cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life; Thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field: In the sweat of thy face shalt thou eat bread, till thou return unto the ground."¹ Whatever the cause, throughout recorded history men have had to toil at tilling the soil and at otherwise making a living. Few have found an economic Garden of Eden in which food is abundant and life is easy. The first thought of most people has been to find or to make a place for themselves within the prevailing productive system in order that they might be assured of some sort of living. It is to the nature of the productive process, then, to the factors coöperating in it, and to the productive functions which man must discharge, that we now turn.

THE NATURE OF PRODUCTION

Definition of production. "Production" means the creation of economic goods. The production of economic goods is normally at and for a price.

What is a good? A good is anything capable of satisfying a human want. This power that a good has of satisfying a human want, directly or indirectly, is known as its utility. Strictly considered, utility is a matter of relationship—the relation between a desiring individual and a good external

¹ Genesis 2:9, 15; 3:17-19.

to himself. That *goods have utility*, that they *yield services*, and that they *afford gratifications* are different ways of expressing much the same thought. The good may be something material, such as a loaf of bread, a suit of clothes, or a house; something personal and intangible, such as teaching; something relatively permanent, like the Panama Canal; something that disappears in the very act of creation, such as a dramatic performance by Katharine Cornell; something artistic, such as the Sistine Madonna, the Venus de Milo, or the Milan Cathedral; something ugly but useful, like the elevated street railways of our cities; something wholesome, such as good literature; something injurious, such as poisons; something socially sanctioned, like relief of the destitute; something outlawed in some places, such as the manufacture or sale for beverage use of alcoholic liquors. Whatever it be, if it satisfies a human want, it is a good. It should be noted that the essential idea expressed in the term "good" is the satisfaction of human wants, not the power to confer benefits. Even though the satisfaction of a given want is physically injurious and ethically bad, nevertheless whatever satisfies it is a good. To say that a thing is a good is not necessarily to imply that it is morally good for man.

Free and economic goods. Some goods, however, are superabundant, so that it is not necessary to produce them. Such goods we call free goods in contrast to others relatively limited, known as economic goods. Free goods are goods which at a given time and place, and without cost to anyone, exist in quantities sufficiently large to satisfy all wants for them. Economic goods are goods which at a given time and place cannot be obtained without cost in quantities sufficiently large to satisfy all wants for them. The air we breathe, particularly when out-of-doors, is a free good; but the conditioned air supplied in many buildings and on many railway trains, involving as it does the installation of air-conditioning apparatus, is an economic good. The water of a mountain spring on unappropriated land is a free good, for anyone there may partake of it freely; but the water supplied in cities is an economic good—water meters are placed in buildings, and the consumer is charged for what he uses to defray the expense of supplying it. Great natural wonders such as Niagara or Yosemite Falls are free goods for observation purposes. The fact that the people of other regions might like duplicates of Niagara and Yosemite Falls does not invalidate the statement that they are free goods, for free goods are always relative to time and place. Wild berries and wild flowers may be free goods in their native habitat, even though they might bring high prices if sold in the markets of Chicago or New York. Some goods that were once free have become economic, such as land in this country. Indeed, as property rights become more extensive, the number of free goods grows smaller. Some goods may be free to

individuals, such as textbooks in some public schools, and yet be economic goods because the cost of supplying them is borne by someone else, in this case by some governmental unit.

Economics is not much concerned with free goods. While free goods are sometimes, as in the case of air, absolutely indispensable to human life and welfare, and while often, though not indispensable, they make living easier for all, the fact that they are superabundant puts them outside the realm of economics. No one wants any more of them than he already has; no one would be harmed if there were a little less. Sometimes things that are ordinarily very useful may exist in such quantity as to prove a nuisance or even a menace. In the Netherlands, water was at one time superabundant so that the whole thought of the people had to be concentrated on the task of getting rid of it. In Palestine, on the other hand, water was so scarce that it affected the entire economic life of the people; much of the imagery of the Old Testament expresses the fact that water was relatively scarce. Today most of the things we need for the gratification of our wants are scarce. Some things are economic goods, primarily, because nature has limited their supply, such as the geographic supply of land, which cannot be changed very much. Most things, however, such as clothing, buildings, and machinery, are economic goods because it costs something to produce them. Collectively economic material goods make up the social wealth of a community. To estimate the social wealth of a community it is necessary to make an inventory of all the economic material goods on hand at a given time. Included in such an inventory, for example, would be developed natural resources, buildings of all kinds, machinery and equipment, raw materials, transportation and communication facilities, live stock, and finished goods, whether in the hands of dealer or consumer. The free goods of a given country, such as its pure air, its abundant sunshine, plentiful rainfall, numerous navigable streams and bodies of water, are not usually included in its social wealth, simply because they are *free*, not *economic* goods. They are *wealth* only in the original sense that they promote weal or welfare; but the term "social wealth" has come to have a more restricted meaning in both ordinary speech and economic literature, namely, material things that are not only useful but also scarce.

Forms of production. The production of economic goods, the nature of which has just been set forth, takes two chief forms: first, the production of economic material goods or social wealth; second, the rendition of direct personal services. In either case it means bringing utilities into existence that were non-existent before.

Production of material goods. In speaking of production as the creation of economic material goods, it is to be understood that man is limited to the materials and forces which nature supplies. He neither creates nor

destroys matter; he transforms it; he moves it from place to place; he preserves it in forms that gratify his wants. The production of economic material goods consists in one or more of the following principal activities: (1) changing the *form* of things; (2) changing the *place* of things; (3) holding things until such *time* as they will be wanted; (4) effecting a transfer in the *ownership* of things. Such changes in the form, place, time, and ownership relations of things to human beings render them more usable and so enhance their utility. Form utility is created when the parts composing an object have been brought together in such a way as to make it possible for the object to gratify human wants. The farmer who grows our grains, the lumberman who converts logs into boards, the engineer who builds a bridge, the manufacturer who combines many different materials into a dynamo, locomotive, or watch, are all creators of form utility. Any activity that helps, directly or indirectly, in converting raw materials into finished goods is to that extent productive of form utility. Place utility is created in objects by carrying them from places where they are wanted less, or not at all, to places where they are wanted more. All transportation agencies, whether a slowly moving caravan of camels carrying a cargo of dates and figs across the desert of Arabia or a swiftly moving Southern Pacific train of refrigerator cars rushing fruit from California to Chicago, are creators of place utility. Time utility is created in objects by holding them until such time as they will be wanted. Merchants who store goods for future demand (which accounts for their sometimes being called storekeepers) are conspicuous examples of creators of time utility. Agents, brokers, salesmen, and advertisers, whose activities facilitate the legal transfer of goods from one owner to another for whom it has greater utility, illustrate the creation of additional ownership utility. That the addition of both time and place utility to objects is as truly productive as the embodiment of form utility in them is based upon the simple fact that the identical thing may have very different want-satisfying power at different times and places. If we were to follow iron ore from an open-pit mine on the Mesabi range, where it is scooped up by gigantic steam-shovels capable of lifting ten tons at a time and dumped into the cars, perhaps of the Duluth, Missabe and Northern railway; carried by rail to Duluth and then by ore vessels to the Gary or Pittsburgh regions; transported again to blast-furnaces where it is made into pig-iron; taken to steel furnaces where it is converted into steel; moved to mills where the steel ingots become various structural units, rails, rods, wire, nails, bars, tubes, and sheets; then distributed to all parts of the world, sold and resold, perhaps; and ultimately used in ways that directly or indirectly satisfy human wants—if we were to observe all these operations through an economist's eyes we should see the original iron ore constantly becoming more usable and so more valuable through the addition to it of various form, place, time, and

ownership utilities. New possibilities of want-satisfaction are brought into being at every stage of these productive operations. To enhance utility by changing the form, place, time, or ownership relation of things to desiring human beings is the essence of the production of economic material goods.

Production as the rendition of personal services. But production is not confined to the creation of economic material goods. It is true, economists did at one time limit production to the creation of material commodities or wealth, and consider as productive only those who contributed to the creation of valuable material goods. Adam Smith, the first great interpreter of modern economic society, in his *Wealth of Nations*, published in 1776, makes this interesting distinction:

There is one sort of labour which adds to the value of the subject upon which it is bestowed: there is another which has no such effect. The former, as it produces a value, may be called productive, the latter, unproductive labour. . . .

The labour of some of the most respectable orders in the society is, like that of menial servants, unproductive of any value, and does not fix or realize itself in any permanent subject, or vendible commodity, which endures after that labour is past, and for which an equal quantity of labour could afterwards be procured. The sovereign, for example, with all the officers both of justice and war who serve under him, the whole army and navy, are unproductive labourers. They are the servants of the public, and are maintained by a part of the annual produce of the industry of other people. Their service, how honourable, how useful, or how necessary soever, produces nothing for which an equal quantity of service can afterwards be procured. The protection, security, and defense of the commonwealth, the effect of their labour this year, will not purchase its protection, security, and defense for the year to come. In the same class must be ranked, some both of the gravest and most important, and some of the most frivolous professions: churchmen, lawyers, physicians, men of letters of all kinds; players, buffoons, musicians, opera-singers, opera-dancers, etc. The labour of the meanest of these has a certain value, regulated by the very same principles which regulate that of every other sort of labour; and that of the noblest and most useful, produces nothing which could afterwards purchase or procure an equal quantity of labour. Like the declamation of the actor, the harangue of the orator, or the tune of the musician, the work of all of them perishes in the very instant of its production.²

Even John Stuart Mill, writing nearly three quarters of a century later (1848) and after there had been much criticism of Smith's position, clings substantially to the same distinction:

I shall, therefore, in this treatise, when speaking of wealth, understand by it only what is called material wealth, and by productive labour only those kinds of exertion which produce utilities embodied in material objects. But in limiting

² Book II, Chap. 3.

myself to this sense of the word, I mean to avail myself of the full extent of that restricted acceptation, and I shall not refuse the appellation productive, to labour which yields no material product as its direct result, provided that an increase of material products is its ultimate consequence.³

To exclude from the field of production and to label as "unproductive" activities which are as useful and important to society as is the whole group of personal services is a distinction which could not and did not last. To say that only they who create material wealth are productive and all others are unproductive, however useful their services, was to make an invidious comparison (even though unintentional) which economists could not afford to let stand—for it put them, too, in the uncomfortable position of regarding their own work as unproductive. Nor is there any good reason for drawing this invidious distinction between those who make vendible material commodities and those who render personal services. Certainly the services of great surgeons are as want-satisfying and as important from an economic point of view as the instruments with which they operate. If the making of the instruments is productive, is not the operation also productive? It is attaching an unusual meaning to words to regard the maker of a piano or violin as productive simply because he produces a material good, and to say that the artists who play the piano or violin are unproductive, even though their services delight thousands of people. Such inconsistency is easily avoided by making the criterion of productiveness any activity that results in the creation of economic goods. Whatever and whoever increases the supply of economic goods, whether these be material goods or personal services, must be considered productive.

Material goods alone, however, make up the social wealth of a community. Personal services, which always require direct coöperation between the persons concerned in the satisfaction of the want, disappear in the very act of rendition—though many of them leave a permanent impress behind them.

It has been pointed out that the distinction between material goods or commodities, on the one hand, and personal services, on the other, is more apparent than real, because material commodities, no less than human beings, yield services. Some material commodities, like food, disappear in the very act of rendering the service of which they are capable. Others like the Empire State building in New York are capable of rendering a long series of services through many years. It is quite correct to say that all economic goods are services; some are single services, and others are the carriers or embodiments of a whole series of services. This important distinction remains, however: in a personal service, producer and consumer

³ *Principles of Political Economy*, Ashley ed. (London, Longmans, Green and Company, 1909), p. 48.

must directly coöperate in the satisfaction of the want; in satisfying wants through material commodities, the relation of producer and consumer is more impersonal and indirect. If an opera-lover wants to hear and see Lily Pons in person, he must attend a performance of opera in which this singer appears; her singing is a personal service that disappears in the act of rendition. The phonographic record of her singing, on the other hand, is a material commodity that is a more permanent embodiment of her singing, and that can be used time and time again without any direct personal cooperation between Lily Pons and the lover of opera.

In summary of the nature of production it may be said:

Production means the creation of	{	Economic Goods including	{	<ol style="list-style-type: none"> 1. <i>Material Goods (Social Wealth)</i> (Embodying form, place, time, and ownership utilities) 2. <i>Personal Services</i>
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Relation of productive to acquisitive activities. Most productive activities are also acquisitive; indeed, they are to a large extent motivated by the desire to obtain income and wealth. Some productive activities do not bring a money reward; personal services, for example, are sometimes rendered gratuitously. But for the most part our productively organized society is an acquisitive society, and both the producers of material commodities and those who render direct personal services acquire incomes as a result of their activities. All acquisitive activities, on the contrary, are by no means productive. The inheritance of wealth is primarily acquisitive rather than productive. This is not to condemn it, for, wisely regulated, it serves a very useful social purpose. Some acquisitive activities, moreover, are predatory. A thief enters your house or pocket to get and not to give. He is a parasite living upon the economic goods produced by others. His effort may be great, but it is purely predatory.

FACTORS IN PRODUCTION

In discussing the production of material commodities or social wealth, it became common beginning with the Classical economists (prominent among whom were Adam Smith [1723-1790], David Ricardo [1772-1823], Thomas Robert Malthus [1766-1834], James Mill [1773-1836], and John Stuart Mill [1806-1873]) to distinguish three requisites or factors in production: labor, land, and capital. Land was subsequently more accurately included under nature as a factor of production, and frequently a fourth factor was added: the *entrepreneur* (a French word used to designate the person or group of persons assuming the risk of a business enterprise, the word "enterpriser" serving as an English equivalent). This classification of the factors of production, which many economists still accept, is primarily

technological; it looks upon production from the manager's point of view and regards it as an engineering process in which material commodities are made available for use. Technologically each of these factors may be divided into many subordinate groups, for there are many forms of labor, kinds of land, types of capital, and degrees of risk-taking, all coöperating in the process of production. The classification is merely for purposes of convenience in analyzing the process of production. In the unknown ages of geologic time nature worked alone. Even after man's appearance on earth, nature was for thousands of years the dominant factor in production. As man slowly learned some of nature's productive secrets, the labor factor began to grow in productive efficiency and importance. It is hard, indeed, to conceive of a form of economic life in which labor was not a factor. Even during the early days when men, like other animals, subsisted by direct appropriation, it was often necessary to expend much labor in the successful search for food and in making available for use what nature freely furnished. It is almost as hard, though not impossible, to conceive of a form of economic life in which some sort of crude instruments of production, prototypes of tools, were not a factor. Such instruments of production, themselves the products of man's efforts applied to the materials of nature, came to be known as capital goods. Nature and labor are as indispensable as ever; capital goods, however, have grown relatively more important during the industrial period than they were at any preceding time. The complexities of modern economic society, especially speculative production for future markets, are now serving to emphasize the importance of the entrepreneur in production. While the proportioning of these factors has changed materially, particularly with progress in the technical arts, all are indispensable in the modern production of material commodities or social wealth.

Whether this classification of the factors of production as labor, land, capital, and the entrepreneur, represents a grouping of factors that are truly coördinate, and whether it is really basic to an understanding of the process of production and the distribution of the products thus created, are moot issues that can best be raised after the nature of these factors of production has been set forth.⁴

Labor. Any human effort that helps in the creation of economic goods, whether these be social wealth or direct personal services, is productive labor. Productive labor may be mental or physical, skilled or unskilled, directly or indirectly applied in the creation of want-satisfying goods. Whatever its type, labor cannot be dissociated from human personality. It is the numbers and quality of the people that determine the quantity and the quality of the productive labor supply of any community or nation. The physical powers, mental energy, and moral traits of a people,

⁴ Cf. pp. 23-33 of this chapter, and Chaps. XXII-XXV.

and particularly its stock of acquired ideas, give that people a high or low place on the scale of economic civilization. Of the utmost importance for the general welfare of a people is the productive efficiency of its men and women. Whatever improves the quality and efficiency of the human factor in production directly involves productiveness, for man is the most active agent in production.

Human effort not always productive labor. Not all human effort, it should be noted, is productive labor, because not all of it is spent in the creation of economic goods. Much human effort is exerted in the direct satisfaction of one's own wants. A game of tennis played for the mere pleasure of the participants may involve a large amount of very vigorous activity, but such activity is not productive labor. Some people are so lackadaisical that even eating seems a prodigious task, but the effort of eating is not productive labor. To be sure physical exercise and eating may fit one for future productive labor, but *nothing is gained by classifying as productive one's own activities resulting in the direct and immediate satisfaction of one's own wants.* Some human effort, moreover, is wasted and consequently is not productive. All the energy that has gone into the construction of perpetual motion machines, or into the attempt to accomplish any other Sisyphus-task, has been wasted. Some human effort, again, is merely predatory and accordingly not productive. The clever swindler selling bogus oil securities may make great mental effort, and the daring robber-bandit may have to put forth great physical exertion to get away with his loot, but all this effort is not productive labor. Labor to be productive must result in the creation of economic goods; either a material commodity must be made more usable or a personal service must be rendered.

Technical division of labor. Labor, as a factor in modern production, has become highly specialized. The specialization of labor has very greatly increased its productive efficiency. Adam Smith, who saw the beginnings of the modern division of labor nearly two centuries ago, was so much impressed with its importance in our economic life and organization, that he began his *Inquiry into the Nature and Causes of the Wealth of Nations* with what has become a celebrated discussion of the division of labor. Striking passages from this dissertation have been quoted ever since. "The greatest improvement in the productive powers of labour," says Smith, "and the greater part of the skill, dexterity, and judgment with which it is anywhere directed or applied, seem to have been the effects of the division of labour."⁵ Inquiring into the causes of the superior productiveness of the division of labor, he goes on to say:

This great increase of the quantity of work which, in consequence of the division of labour, the same number of people are capable of performing,

⁵ *Wealth of Nations*, Book I, Chap. 1.

is owing to three different circumstances; first, to the increase of dexterity in every particular workman; secondly, to the saving of time which is commonly lost in passing from one species of work to another; and lastly, to the invention of a great number of machines which facilitate and abridge labour, and enable one man to do the work of many.⁶

Other writers of the Classical School, who lived during the time when new industrial methods, including the division of labor, were being most rapidly introduced, have pointed out additional advantages. Little has been added to the analysis of the Classicists, particularly that of John Stuart Mill.

Six advantages of the division of labor, all contributing to the increase of productive efficiency, may be cited.

First, the development of greater skill. When a workman repeats an operation over and over again, he naturally becomes expert in its performance. Certain workers repeat a single motion 20,000 to 30,000 times a day. "Practice makes perfect" because the constantly repeated operation becomes habitual.

By practice is built up the specialized experience which is the explanation of achievement in all kinds of work—the craftsman's "sense" of the possibilities of his materials, the dealer's "instinct" for his market, the physician's "intuition" of disease, the connoisseur's "feeling" for quality in the objects of his study. Delicate tasks come to be performed with accuracy, the speed of work is increased, the strain involved in the performance of any single task is reduced; the routine of work is, in James's phrase, handed over "to the effortless custody of automatism."⁷

Secondly, a gain of time. Continuity of application to a single task, or at most to a few operations, makes for speed and the most economical use of time, provided the worker does not become overtired. It takes time for the mind and body to adjust themselves to every change of functioning. The division of labor by reducing the number of such changes to a minimum saves time.

Thirdly, the better adaptation of work to the worker. The splitting-up of any industrial process, such as the manufacture of automobiles, into a whole series of operations, provides work for people of very different capacities. Operations requiring high skill, superior intelligence, or great physical strength and endurance can be assigned to those capable of performing them; easier tasks can be found for those not so qualified. The modern scientific management movement is based in part upon the idea of procuring greater efficiency through the better adaptation of tasks to the workers.

Fourthly, the more advantageous use of capital goods. The shoemaker who makes a pair of shoes to order requires a variety of tools, some of

⁶ *Wealth of Nations*, Book I, Chap. 1.

⁷ Henry Clay, *Economics for the General Reader* (New York, The Macmillan Company, 1918), p. 22.

which are idle the greater part of the time. In a modern shoe factory, however, where there is minute division of labor, the machines are in use virtually all the time, so skilfully are materials routed through the factory. This better utilization of capital equipment makes for greater productivity.

Fifthly, the stimulation of inventions and the substitution of machinery for human labor. The simplification of industrial operations has revealed the possibilities of improved methods; inventions of machines have often resulted, leading in the long run to great economies of operation and to increased productiveness.

Sixthly, shortening of the period of apprenticeship required to learn the technique of a job. It often took years to learn a trade; it takes only a few days to become fairly expert in handling machine jobs. This enables both the individual and society to profit more quickly by the laborer's productive powers.

Such obvious advantages of the division of labor have not been obtained without the payment of a price. There is a reverse side to the picture that is not so attractive. The advantages just stated largely emphasize the wealth side of production; there is a human side that cannot be ignored. Is the increased productivity which the division of labor makes possible being purchased at too great a price? Carlyle, Ruskin, and William Morris, and more recently Galsworthy, Wells, and Bernard Shaw, have been scathing in their denunciation of the degrading effects upon the individual of our machine civilization with its accompanying division of labor. Unquestionably, the division of labor, often involving endlessly monotonous repetition of detailed tasks, has a narrowing effect upon the laborer. It puts a premium upon the docile type of mind, often dull of vision and lacking in imagination, which is willing to subordinate itself to the pace of the impersonal machine. It tends to destroy initiative and versatility, qualities badly needed in industrial leadership. It deprives most workingmen of the real joy in work that comes through the gratification of the constructive instinct. It makes the laborer run the risk incident to all specialization, the risk that the market for his services may be suddenly swept away by some industrial change beyond his control.

Such intensely human considerations do not necessarily imply, however, that society should not avail itself of the advantages of the division of labor in production. There is no thought of abandoning them. The division of labor is too large a factor in the great productiveness of modern industry, with the larger incomes and higher standards of living which this makes possible, for society ever to go back to the system of the handicraft era. What is needed, rather, is a more general recognition of the human aspects of the division of labor, and more widespread adoption of means which serve to offset its disadvantages. The shortening of the working day, which has been going on during the past century, has contributed more

than any other single factor to counteracting these drawbacks. It has provided a certain amount of leisure from routine tasks. Intelligent use of leisure time in education, recreation, physical development, and the activities of various groups and organizations helps to make life seem something more than a continuous round of humdrum activities involved in getting a living. It was once customary to emphasize only the market limitations of the division of labor; obviously specialization in production must always be limited by the extent and steadiness of the market for the specialized product. It is now common to emphasize the human limitations of the division of labor and to insist upon correctives to its disadvantages. In striking a balance, it must be admitted that the advantages of the division of labor are far greater than its disadvantages; and that society cannot possibly abandon it without doing much greater harm than the evils that would thereby be eliminated.

Nature. Nature, as a factor in production, designates whatever is supplied without the aid of man and used in the creation of economic goods. Because the most obvious and important of these natural resources was the land that sustained man's life and provided him with the raw materials for his economic activities, it became customary to speak of the land factor in production. The custom still persists, although it is recognized that "nature" is the more exact term, because it is the more inclusive. Most people, except professional economists, balk at referring to air and water as "land." They seem to have had sufficient past experience with all three to have learned that there are some rather important practical differences. In commenting upon the use of terms in another connection, John Stuart Mill very wisely says:

When employing terms which common usage has taken complete possession of, it seems advisable so to employ them as to do the least possible violence to usage; since any improvement in terminology obtained by straining the received meaning of a popular phrase is generally purchased beyond its value, by the obscurity arising from the conflict between new and old associations.⁸

Nature, as a factor in production, includes all the materials and forces supplied without the aid of man and used in the process of production.

Nature then includes *land*. Both the quantity and quality of land are of the utmost importance in production. What the size of the population is to the labor factor, area is to the land factor in production. It takes land area to catch the sunlight and rainfall, and land fertility to bring forth the vegetation upon which man's life depends. Nature includes *water*—the streams, lakes, and seas. Who can measure the importance for production of the Nile to ancient Egypt or of the Mississippi to the United States?

⁸ *Principles of Political Economy*, Ashley ed. (London, Longmans, Green and Company, 1909), p. 48.

Who can estimate the productive importance of the Tiber to Rome, the Thames to London, or the Hudson to New York? Think of the effects of the Mediterranean and of the Great Lakes upon the productive life respectively of Southern Europe and the Northern United States. Nature includes the *atmosphere* which, a hundred miles or so in thickness, envelops the earth and supplies all growing things with the oxygen indispensable to life. The temperature and humidity of the atmosphere, varying greatly from the equator to the poles, have correspondingly affected the economic life of peoples living in the various zones. Nature includes the profusion of *wild life*, vegetable and animal, upon which primitive man had to subsist and which he slowly learned to domesticate. Nature includes the *mineral resources* upon which our modern civilization so largely rests. Nature includes the great forces external to man, such as solar heat and light, gravity, wind, watercourses, natural gases, and electrical energy, which man has gradually learned to control for purposes of production. Nature is indeed an indispensable factor in the production of material goods. Differences in nature's bounty account to no little extent for differences in the productiveness of peoples in different regions of the world.

Since it is the land on which man lives and does most of his productive work, its supreme economic importance among nature's gifts is easily understood. Unlike the seas, the atmosphere, and the great forces of nature, land has become an economic good and accordingly the object of property rights. This is a fact of the utmost importance in our economic life, the consequences of which will be discussed in other parts of this book.

Capital: *Its meaning as a production good.* In contrast to natural materials and forces, capital goods are man-made. Capital, as a factor in production, means concrete capital goods: those material products of man's past efforts which are used for further production. The term "capital" is often used as an abbreviated expression for capital goods. (Its wider meaning, developed in a later chapter,⁹ is all property held for procuring income rather than direct enjoyment for its owner. In this pecuniary or acquisitive meaning of capital, which is the meaning that prevails in the business world, capital includes both capital goods and natural agents as factors in production.) Both capital goods and land or other natural agents, when devoted to the production of economic goods, are sometimes called production goods or producers' goods to distinguish them from consumption goods or consumers' goods. Production goods satisfy human wants only indirectly, that is, through the creation of want-satisfying goods. Consumption goods are goods in the hands of the final consumer intended for use in the direct satisfaction of his wants. A linotype machine and a printing-press are production goods; the newspapers they turn out, when in the hands of readers, are consumption goods. Men are said to *invest*

⁹ Cf. Chap. V, pp. 86-87.

money when buying producers' goods; they are said to *spend* it, when buying consumers' goods. In buying the former the question is "Will the investment pay?" In buying the latter, "Can I afford the expenditure?"

Forms of capital goods. Capital goods include such man-made goods as the following when they are used for the further production of economic goods: (1) buildings used for productive purposes, (2) machinery and tools, (3) raw materials, (4) farm and draft animals, (5) permanent improvements in the physical environment, (6) transportation and communication facilities, (7) finished goods in the hands of dealers.

Roundabout character of capitalistic production. Only the simplest kind of wealth production can be carried on without the aid of capital goods. As long as man had to depend upon his own unaided hands to do what he could with the materials furnished him by nature, his economic life remained very crude and simple. Primitive man was immeasurably aided in his productiveness when he learned how to use sharp stones in killing his prey and in cutting objects, and when he stumbled on the use of flint stones in striking fire. Stones and sticks were among the earliest of man's instruments of production. Man's laborious progress from the scanty production of the early Stone Age to the marvelous productiveness of modern economic society abundantly shows how hard it is to produce wealth without the aid of capital goods, and how greatly productiveness is accelerated when capital goods have once been acquired. No one has expressed this idea more simply or effectively than Eugen v. Böhm-Bawerk:

A peasant requires drinking water. The spring is some distance from his house. There are various ways in which he may supply his daily wants. First, he may go to the spring each time he is thirsty, and drink out of his hollowed hand. This is the most direct way; satisfaction follows immediately on exertion. But it is an inconvenient way, for our peasant has to take his way to the well as often as he is thirsty. And it is an insufficient way, for he can never collect and store any great quantity such as he requires for various other purposes. Second, he may take a log of wood, hollow it out into a kind of pail, and carry his day's supply from the spring to his cottage. The advantage is obvious but it necessitates a roundabout way of considerable length. The man must spend, perhaps, a day in cutting out the pail; before doing so he must have felled a tree in the forest; to do this, again, he must have made an axe, and so on. But there is still a third way; instead of felling one tree he fells a number of trees, splits and hollows them, lays them end for end, and so constructs a runnel or rhone which brings a full head of water to his cottage. Here obviously between the expenditure of the labour and the obtaining of the water we have a very roundabout way, but, then, the result is ever so much greater. Our peasant needs no longer take his weary way from house to well with the heavy pail on his shoulder, and yet he has a constant and full supply of the freshest water at his very door.¹⁰

¹⁰ *Positive Theory of Capital*, tr. by William Smart (London, Macmillan and Company, Ltd., 1891), p. 18.

Capitalist production is roundabout production because it involves the creation of intermediate products which are used in the further production of economic goods. Intermediate products are exemplified by tools and machines which are used in the manufacture of either production or consumption goods. The lathe that helps to manufacture a farm tractor, or the lathe that helps to turn out a passenger automobile, is an intermediate product. Man working in coöperation with nature can produce many things of use in the direct satisfaction of his wants. But if he is willing to spend time and effort in first producing goods that he cannot consume directly, but which will aid him in his future productive efforts, he will ultimately have a greater stock of consumers' goods. One of the greatest needs of primitive man, for example, was to get from place to place. Walking was the direct and immediate way of satisfying this want. Centuries of technical progress have greatly lengthened man's step and accelerated his pace in such modern means of locomotion as the steamship and railway, the automobile and aeroplane. Because millions of workers turn to the production of steel and other metals, of rubber and other raw materials, of dies, patterns, tools, and machines instrumental in the manufacture of automobiles, millions of motor-cars pass down the assembly lines of automobile factories, and become the world's premier consumption good for gratifying the desires of locomotion. It is a long, roundabout way first to produce the raw materials, tools, machines, and other capital goods with which to manufacture automobiles, but indirect and time-consuming though it is, it is also much more productive.

The fact that most men today do not themselves make the tools, machines, and other capital goods with which they work is simply one aspect of our specialization. Men at present must save in order that their savings may buy the capital goods needed for efficient production. Saving is the price men pay for the roundabout methods of production; increased productiveness is the reward they reap. Both saving and productiveness are principles of the utmost importance in our understanding of capital as a factor in production, and of the price we have to pay for its use. Of course there is no independent productiveness of capital. When we speak of the productivity of capital, we mean the productivity that is achieved through the capitalistic application of labor to the materials of nature.

Replacement of capital goods. Capital goods constantly perish in the process of production. Some capital goods, known as circulating capital, are all used up in a single act of production, such as the coal burned and the raw materials used in a manufacturing plant. Such capital goods may be thought of as either bodily passing over into their product or at least of being used in creating it. Other capital goods, known as fixed capital, such as the buildings and machinery of a manufacturing plant, last through a series of productive operations often spread over years. If the life of a

machine is ten years, it may be thought of as giving up only one tenth of its value to its product in any year. Sooner or later, however, any capital good wears out and needs to be replaced. The productiveness of a capital good must be at least great enough to compensate its owner for having saved to get it and also to enable him to maintain it and to replace it when its productive usefulness is over.

Is the distinction between land and capital goods important? Economists who make the distinction between land and capital goods as factors of production chiefly stress differences in their origin and in the readiness with which the supply of each can be increased. The primary distinction between the two as concrete factors of production goes back to differences in their origin. Land in its original condition was the gift of nature, and not, like capital goods, the product of man working upon the materials of nature. As nature's unaltered gift land was long used by man and in some places is still so used. Man has had practically nothing to do with the location of the land on the earth's surface, with its conformation which is of great economic importance, with the extent of the land area, or with its capacity to furnish support for his structures. The fertility of the soil, too, was originally a gift of nature; with use, man has had to replace and improve it. But to some extent it is true that land, as well as capital goods, is man-made. Man has done a great deal in making land available for use, in draining or irrigating it, in reclaiming it from bodies of water, in grading it, in maintaining and improving its fertility. Some of these improvements are now indistinguishable from the land itself. Land is not altogether "ready-made," particularly in an economic world in which land, once a free good, has become scarce.

But the more important technological distinction between land and capital goods, if any is to be made, consists in this: the supply of land is limited; the supply of capital goods is capable of indefinite increase. At any one moment for a given individual, to be sure, the supply of capital goods is as fixed as the supply of land; but society can in the long run indefinitely increase the supply of capital goods, which is quite impossible in the case of land. This characteristic difference between the supply of land and the supply of capital goods, it is said, affects the possible income to be derived from any given unit of land or capital goods. When the supply of a productive agent cannot be readily and indefinitely increased as wanted, there is something unique about it which enables it to command a higher price in the market than would otherwise be the case.

Whether the distinction between land and capital goods shall be maintained or allowed to lapse, is not a matter of paramount importance in the analysis of the productive process. Some may find it more convenient to designate those natural factors of production which are relatively fixed in supply by one name, and those man-made agents that can be readily in-

creased in supply by another. But the distinction is bound to prove somewhat arbitrary, often vague, and usually hazy. Here again the difference is doubtless more a difference of degree than of kind. The actual number of factors in production is legion; whether they are classified as two or three or four is a matter of convenience. Certainly no violence to logic is done in regarding land as a form of capital, and in broadening the concept of capital, as a factor in production, to include all goods other than human services used by man in the further production of economic goods.

The entrepreneur. The entrepreneur (enterpriser) in production is the person (or group of persons) who assumes the risk of the success or failure of the whole enterprise. He is the owner in part or whole of the enterprise and responsible for its management. He profits if the business succeeds and loses if the business fails. To carry his risk with success and profit means above everything else that he must be successful in the organization and direction of the factors of production or at least wise in the selection of competent managers. Risk-taking is the primary function of the entrepreneur. It is the entrepreneur who initiates production, lured on by the hope of profit, and often of power and prestige. It is he who sees, or thinks he sees, the productive opportunity. With faith that the demand of the market will justify his venture, he risks his own capital in the enterprise, commonly borrows some capital funds from others, acquires natural resources, and hires labor. For the services rendered the enterprise and the uses of property made available to it, he contracts to pay stipulated sums. As security for his contractual obligations he pledges his own capital invested in the enterprise. If the business fails, he stands to lose all that he has risked, for all others interested have a prior claim against the business. If the enterprise succeeds, he claims as a reward, for the risk that he has taken, the gains that have been made.

In very small enterprises, such as some retail stores, repair shops, and farms, all the productive functions may be united in a single person, or at most a single family. A man conducting a small-town grocery store may himself furnish all the capital, thus assuming the entire financial risk, wait on all the customers, manage the enterprise—and still run no risk of becoming a nervous wreck. But if his business grows, he may have to borrow additional capital, paying interest for it, or invite others to go into business with him, sharing the risk and the profits; he will have to hire wage-earners to wait on customers, deliver goods, keep books, and attend to other business details; he will have to devote a larger part or all of his time to the management of the enterprise or hire someone to do this for him. In large corporations, on the other hand, there is characteristically almost complete differentiation of functions; risk-taking ownership, for example, is more or less separate from management. Management, once incidental to ownership, has now very largely become a specialized function. To be sure, the

owners are responsible for the delegation of the management, and the managing officers and other managing employees often are stockholders, but ownership and active management are combined in relatively few of the entrepreneurs in our largest corporations. Most such entrepreneurs are absentee owners.

As a factor in production, an entrepreneur is a person functioning in a special way with his accumulated savings. He occupies a pivotal position in our modern economic society. Risk-taking is inevitable and socially necessary if goods in adequate amounts are to be produced. Upon the quality of our entrepreneurs and the wisdom shown by them in the selection of competent managers, who in turn apportion labor and capital, the productiveness of economic society largely depends. Since freedom of enterprise, somewhat regulated by government, is the rule in the so-called capitalistic nations, anyone is at liberty to become an entrepreneur in any kind of business he chooses, provided he is able and willing to take the risk. The competition of others, through years of adversity as well as of prosperity, will tell him whether he has chosen well.

A logically inquiring reader may question the coördinate ranking of the entrepreneur with the other factors in production. He may trace the entrepreneur's ancestry to workers and capitalists (the owners of capital goods). There is no question about the lineage. To the extent that the entrepreneur assumes and performs his managerial duties, he is a specialized worker. He is of course also a capitalist, but instead of lending his capital (as loan capital) to others, as many capitalists do, he risks his capital (as venture capital) in his own enterprise. The risk may be his solely or it may be shared with other capitalists as it is in partnerships and corporations. In the assumption of the risk of business enterprise lies the inescapable duty of the entrepreneur; the ordinary lender of capital funds runs more limited risks. If there is any advantage in classifying all factors of production as basically either labor or capital, there is nothing impossible about such reduced classification. It merely means that some of the factors previously discussed are subordinated to larger groups.

FUNCTIONS IN PRODUCTION

As previously stated, the foregoing classification of the factors of production is primarily technological. The production of material wealth is thought of as an engineering process in which some men must take risks and then under skilful management so apportion labor and capital that through their coöperation greater values will be created than are expended in the process. To a large extent, production is such a process. But more important than any mere differentiation among labor, natural resources, capital goods, and the entrepreneur as technological factors in production

is the differentiation of the socially necessary functions involved in production. These are the functions of *working*, *waiting* or *saving*, *risk-taking*, and *management*. To some extent they have already been suggested in the preceding discussion; they will have to be studied much more fully when we come to consider the value of the various services performed in production.¹¹ Economic systems may come and go; but in a world of scarcity these functions go on forever. Should the economic radical, be he socialist, communist, or anarchist, ever be able completely to reconstruct the economic world according to his liking, it would still be true, however disappointing it might prove to some, that men must work and save, assume risks and manage enterprises.

Working in its broadest meaning is synonymous with all human activity carried on for the purpose of producing economic goods. It is here used in a narrower sense, however, to designate man's labor, physical and mental, exclusive of the activities involved in saving, risk-taking, and managing enterprise. It is commonly performed under the orders of others in return for wages or salaries, though much productive work is also done by men and women working by themselves without anyone to exercise authority over their efforts. Without work by man we should still be back in the direct appropriation stage of economic life. Nature furnishes the materials and some of the most important conditions for production. But man through almost infinite pains has had to learn nature's secrets. By working upon the materials of nature and in harmony with nature's laws, he has been able to produce the goods that have made possible a more abundant life. Nature has slowly learned to obey him for purposes of production.

Saving enables men to work to better advantage. It consists in not consuming all available income. The income saved from immediate consumption then becomes available for investment in capital goods, such as machines, which in turn increase man's productiveness.

Risk-taking is essential to getting production under way. Someone must be willing to risk his own capital upon the success or failure of business enterprise. Risk-taking is accentuated by the lengthening of the productive process. As the number of hands and machines increases through which a good passes from producer to consumer, risks multiply. Man must take them and thereby set the labor and capital into motion that will produce want-satisfying goods. Management is largely concerned with the apportionment and effective coördination of resources of all kinds in productive enterprise. The organization or management of production has become an increasingly important function with the growth in the capitalistic character of production and the development of our division-of-labor economy.

¹¹ Cf. Chaps. XXII-XXV.

This functional analysis of production puts the primary emphasis upon human activities in production. It assumes the existence of the material universe and man's ability to use it. It is man who functions in production. Working, saving, risk-taking, and managing are his activities in the process of making goods available for use. The functional analysis emphasizes activities or processes rather than the question of who's who in production. As a matter of fact, the person labeled a capitalist may be engaged in all four of these activities in production. His primary function may be that of saving and making his capital available for use, but he may also share the risk and management of the enterprise and contribute labor to it. So too, the workingman, who primarily contributes his labor, is now in many corporations participating in other functions as well. In some he has a voice in the management. Part of the loan-capital of many corporations has been created by his saving, and in many he is carrying a direct financial risk because he owns shares of the venture-capital supplied by entrepreneurs.

Working, saving, risk-taking, and managing are today all indispensable functions in production. Should any of them fail to be performed, or should there be an inadequate supply of any, productiveness would at once suffer, with consequent hardships for all. To stimulate the discharge of these socially necessary functions to an adequate extent, economic society offers various inducements: wages for working; salaries for management; interest for savings; profits for the taking of risks. If the present scale of rewards were materially reduced, men would still have to produce in order to live, but unless compulsory measures were adopted the amount of productive activities might show a marked decline.¹² Accordingly it may be said that the production of economic goods, to which all the agents or factors in production contribute, is largely dependent upon the prices that can and will be paid for socially necessary functioning in production.

THE PRINCIPLE OF DIMINISHING RETURNS IN PRODUCTION

One of the most important duties of the management of business enterprise is to bring about the most effective combination of the agents in production. When in any particular enterprise goods are being produced at the lowest cost per unit of output, management has successfully discharged this task. Considerable experimentation, however, may be necessary to achieve this end. Basic to the best possible proportioning of the factors in production is the law of diminishing returns, or the law of diminishing productivity, as it is also called—one of the greatest generalizations of economics.

It was first formulated by the classical economists with reference to

¹² The relation between inducements or rewards and productive functioning will be an important theme in the chapters on wages, interest, rent, and profits.

land, and its application to land and other natural resources remains of paramount importance to mankind. But it is equally applicable to the other agents of production. Perhaps an illustration drawn from farm operations will help to make the meaning of the principle clear. Suppose that we think of how to operate most economically a 320-acre dairy farm for which adequate supplies of labor and capital are available. If an attempt is made to operate the farm with a single worker, equipped with the capital goods customary in dairy farming, a certain result will be achieved. The chances are that the result will fall far short of what it might have been with proper proportioning of the factors in production. The employment of a second man may more than double the result, not because the second man is any better than the first, but because something additional is attributable to the coöperation of the two. A third man may find employment and the productivity show no sign of diminishing. But obviously the employment of additional units of labor and capital cannot go on indefinitely on a 320-acre farm, no matter how excellent it may be. The employment of a fourth man may bring about some increase in the yield of the farm, but at a sharply lesser rate than was attributable to the employment of the third. Still another worker may find employment, but the product attributable to his efforts will be even less than that of the fourth. Practical experience shows (and anyone who has the opportunity can demonstrate it for himself) that after a certain point is reached in the operation of a farm of fixed acreage, diminishing returns will result from the employment of additional units of labor and capital. In this dairy-farm illustration returns diminished with the engagement of the fourth worker, who did not add a product as great as the man who found employment immediately ahead of him.

Whatever the uses to which land is put, the same results will follow. And what is true of land is true of every other factor of production. With a fixed amount of any productive agent, diminishing returns per unit of the variable factors are soon in evidence as increasing quantities of these factors are employed. The law of diminishing returns (or productivity) asserts that when successive equal amounts of the variable factors are combined with a fixed productive factor, a point is reached after which further amounts of the variable factors yield a diminishing return per unit used. The successive increments of the variable factors fail to produce proportionate returns.

The following table illustrates in mathematical terms how the law of diminishing returns operates in the case of a *fixed* amount of land to which *variable* amounts of labor and capital are applied. It is apparent that the total yield of the farm increases as more units of labor and capital are applied (Column 2); that after the application of the third unit productivity increases at a diminishing rate (Column 3); that the average product

INCREASING AND DIMINISHING RETURNS ON FIXED AMOUNTS OF LAND

<i>Number of Successive Equal Applications of Labor and Capital</i>	<i>Cumulative Output in Bushels</i>	<i>Additional Output in Bushels Due to Last Added Unit of Labor and Capital</i>	<i>Average Product per Unit of Labor and Capital</i>
1	1,600	....	1,600
2	4,000	2,400	2,000
3	6,600	2,600	2,200
4	9,000	2,400	2,250
5 ...	10,000	1,000	2,000

per unit of labor and capital is highest when four such units are applied (Column 4). It is conceivable that if enough units of labor and capital were applied the total output of the farm would actually be less than at some point of less intensive application.

Facts such as these must be taken into consideration in the operation of every business enterprise. They are basic to the costs of doing business and the profits to be made. The law of diminishing returns, based as it is upon physical production, is just as true of a communistic or fascistic economy as it is of an economy based upon free enterprise.¹³

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Anything that satisfies a human want is an economic good.
2. Intoxicating liquors and narcotic drugs cannot be regarded as economic goods, since they are dangerous to public health and safety.
3. A manufacturer is productive, but a merchant who merely buys and sells goods is not.
4. Since advertising does not change the physical form of things, it cannot be regarded as productive.
5. The rendition of personal services is as truly economic production as the making of material goods by hand or machine.
6. Land and nature are the same productive factor.
7. There is no distinction between land and capital as productive factors since they are both forms of property.
8. There is no essential difference between productive capital and acquisitive capital, since both are used by the business man to acquire an income.
9. The degree to which the roundabout process of production can be extended depends upon the accumulation of savings.

¹³ For further discussion of the principle of diminishing productivity with reference to wages, interest, and rent, cf. pp. 502-504, 536-537, 561-563.

10. Since the roundabout process of production requires a longer time and a greater amount of capital than does direct production, it is wasteful and inefficient.
11. The performance of the entrepreneurial function in a corporation is confined to the officers who direct the organization.
12. The lengthening of the process of production in modern industry has greatly increased the elements of uncertainty and risk in business enterprise.
13. In our present highly specialized industrial system no one person performs more than a single one of the socially necessary functions in production.
14. There is no fundamental difference between risk-taking and managing as functions in production.
15. Risk-taking as a function in economic production could not be avoided, even if the government owned and managed the means of production.

B

1. The following is the production record on a certain wheat farm:

<i>Number of Successive Equal Applications of Labor and Capital</i>	<i>Cumulative Output in Bushels</i>
1	100
2	220
3	360
4	520
5	700
6	860
7	1000
8	1120
9	1220
10	1300
11	1360
12	1400
13	1420
14	1420
15	1400

- a. Find the point at which the cumulative output (total product) decreases.
- b. Find the point at which the additional output due to the last added unit of labor and capital (marginal product) decreases.
- c. Find the point at which the average product per unit of labor and capital (average product) decreases.
- d. Which of these is the point of diminishing returns?
- e. Construct graphs showing the total product, marginal product, and average product.

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CHAPTER III

The Agricultural Organization of Production



IN THE gratification of his wants for food and shelter, simple as they must have been, primitive man was almost wholly dependent upon what his environment furnished him. He directly appropriated what nature freely furnished. A long process of evolution elapsed before man achieved any important control over the materials and forces of nature. When he finally did, the world saw the beginnings of activities which ultimately developed into the agricultural, extractive, and genetic industries, from which are derived the essentials of man's economic life. Progress from early savagery to modern civilization may be measured from the technological point of view, by man's increasing power over the materials and forces of his environment.

THE RISE OF AN AGRICULTURAL ECONOMY

Before man practiced any real cultivation of the soil he had to subsist on what nature served him. Hunting and fishing were everywhere necessary economic pursuits. In some places a pastoral life developed. Very generally, a crude form of hoe culture of the soil arose. The stage of direct appropriation, the pastoral stage, and the agricultural stage are phases of economic evolution in man's struggle to survive as the master of his environment. Commonly they were successive stages, but often they were contemporaneous, the one superimposed upon another.

The stage of direct appropriation. In the stage of direct appropriation, the dominance of nature over man was the outstanding fact. Man was the subject and slave of nature. He found things; he did not make them. He passively accepted natural conditions as he found them, without attempting to adapt them to his uses. Like other animals he roamed about in groups for food and protection. As Karl Bücher says:

From the beginning man was primarily dependent upon vegetable nourishment, and whenever tree-fruits, berries, and roots were to be gained, he first made use of these. In case of need he turned to petty animals which could be consumed raw, such as shellfish, worms, beetles, grasshoppers, and ants. Like

the lower animals in continuous quest of food, he devoured at the moment what he found without providing for the future.¹

It is not an attractive picture, but it doubtless correctly suggests the nature of man's economic life before he had mastered even the rudiments of the technology that enabled him slowly to adapt nature's forces and materials to his own purposes. This first stage in man's economic evolution has sometimes been called the hunting and fishing stage, but the designation is not exactly appropriate, for hunting and fishing are but two phases—and not the first—of the search for food, which included the direct appropriation of whatever nature furnished. Until man mastered the rudiments of the technology that enabled him slowly to adapt nature's forces and materials to his purposes he was dependent on what nature spontaneously produced, including the fish that he caught and the animals upon which he preyed.

The pastoral stage. While it is erroneous to think that the hunter and the fisher were necessarily succeeded by the herdsman, the succession was common, especially among the people of Asia and Northern Africa, where climatic conditions permitted. The domestication of animals marked a gigantic step forward in man's economic life. However it may have occurred to him, the taming of certain animals, herding them, caring for their increase, and training them to help him in his work had this important result: it afforded man a more abundant and regular food supply, and enormously increased his power over nature. To the mere finding of things, often a precarious means of existence, he could now add the raising of animals. The pastoral stage in the economic life of a people is nowhere more beautifully portrayed than in the Old Testament.

The agricultural stage. Again while it is erroneous to suppose that the herdsman was inevitably succeeded by the tiller of the soil, that succession, too, was common. If we could produce a motion-picture film of the economic evolution of many a social group, we should find that the picture of shepherds dwelling in tents and moving from place to place in search of better pasture for their flocks and herds would gradually dissolve and pictures showing cultivated fields would come into view. In speaking of the development of primitive agriculture, E. R. A. Seligman explains:

When, again presumably by accident, it was found that the seeds would multiply themselves, and that the stick was more effective for grubbing than the finger, we have the beginning of the cultivation of the soil. Just as human foresight led men under certain conditions to preserve animals in order to secure an increase, the same quality led them under other conditions to pre-

¹ *Industrial Evolution*, tr. by S. M. Wickett (New York, Henry Holt and Company, Inc., 1901), pp. 42-43.

serve plants. If flock tending is a result of the domestication of wild animals, agriculture is a result of the domestication of wild plants.²

While there had been some rather primitive cultivation of the soil in the earlier stages, it was distinctly subordinate to hunting, fishing, and herding. For thousands of years man did little more than scratch the surface of the earth. Gradually, however, he acquired some knowledge of nature's operations. He learned how to prepare the soil, what kind of crops to grow, when to plant the seed, how to care for the growing plants, when to gather the crops, and how animals and simple tools could help in this work. The agricultural stage, accordingly, marked a well-defined advance over the pastoral stage in man's control over nature. To the finding of things and the raising of animals man added the food resource found in the raising of plants, thus making his food supply both more abundant and more regular. The agricultural stage is very well illustrated by the manorial economy of England, which with modifications also prevailed on the European continent during the Middle Ages. The plantation system of the South and frontier life in the settlement of the American continent, although not uninfluenced by the industrial changes already taking place, also suggest what life was like in the agricultural stage.

To make sure that the basic essentials of life should be forthcoming regularly and abundantly, much human behavior both individual and collective has been in response to what may be called "land hunger." The term is synonymous with the quest for natural resources as a means of providing for the satisfaction of human wants. There is a stirring passage in *Gone with the Wind*, in which Gerald O'Hara, devoted to his old plantation Tara, indignantly cries out to Scarlett, "Land is the only thing in the world that amounts to anything, for 'tis the only thing in this world that lasts, and don't you be forgetting it! 'Tis the only thing worth working for, worth fighting for—worth dying for." And when Scarlett disgustedly replies, "Oh, Pa, you talk like an Irishman!", he hotly retorts, "To anyone with a drop of Irish blood in them the land they live on is like their mother."³

Man's turning to Mother Nature for sustenance is like the heliotropic behavior of plants. Food and fuel, fibers and raw materials she yields him. With improvements in transportation and communication, and particularly with the development of the technology that we associate with the industrialism of the past two hundred years, man has been able to give less attention to the mere struggle for existence and more thought to the problem of how to live better and to enjoy a richer life. But the land and its

² *Principles of Economics*, 6th ed. (New York, Longmans, Green and Company, 1914), p. 73.

³ Margaret Mitchell, *Gone with the Wind* (New York, The Macmillan Company, 1942).

resources still condition his economic behavior. That land hunger directs the behavior of nations no less than of individuals, the ghastly business of war has again demonstrated. More *Lebensraum* was Adolf Hitler's justification for German aggression and his promise to the German people. The conquest and retention of the rich natural resources of the East Indies and of the other islands of the Pacific, as a basis for the expanding Japanese economy and population, was the manifest intention of the Nipponese war-lords.

APPROPRIATION OF THE NATURAL RESOURCES OF THE UNITED STATES

Throughout the eighteenth and nineteenth centuries the undeveloped resources of the United States fired the imagination of venturesome spirits all over the world. The lure of land brought settlers to our shores and drew them across the continent. Whatever part the desires for religious toleration and political liberty played in the early settlement of this country, and they were strong factors, these motives were soon powerfully reinforced by the desire for greater economic opportunity. This opportunity millions of people found in the appropriation of agricultural land, forests, mineral-lands, and running water. America was preëminently the land of economic opportunity; nowhere were resources more abundant; nowhere was there greater freedom of action on the part of the individual and less interference on the part of the government.

Appropriation of land. The territory of the United States, exclusive of Alaska and our island possessions, amounts to nearly 3,000,000 square miles, or more accurately to 1,903,290,880 acres. Of this vast area it has been estimated ⁴ that 1,441,436,160 acres, approximately three fourths, constituted the original public domain of the United States; the rest remained in the control of the states or passed directly to private settlers without ever coming into the possession of the United States Government. From the beginning it was our policy to accelerate the development of the country, and consequently our public lands were either "sold for a song" or given away. Tens of millions of acres were sold for not more than \$1.25 per acre; and tens of millions more were given away under the Homestead Act of 1862. Enormous grants were made as subsidies for elementary and higher education, for railway and other internal improvements. In the 150 years that have passed since the establishment of our federal government, more than two thirds of our public domain of some 1,400,000,000 acres have passed from federal control. Millions of people found their economic opportunity in the appropriation of the land.

⁴ *Report of the Public Lands Commission, 58th Congress, Third Session (1904-1905), Senate Document No. 189, p. 139.*

Appropriation of forests. As the country developed, one of the greatest sources of wealth was found in the control of our forest lands. Says Charles R. Van Hise:

The United States originally had a forest which for extent and value was not equaled by that of any other civilized nation; indeed, it is doubtful if anywhere else in the world in an area of 3,000,000 square miles was contained a forest so valuable for all purposes.⁵

It has been estimated that 822 million acres of our land, somewhat less than one half, were once forest-covered. And what a magnificent heritage it was, not only in extent, but also in density and variety! There were the white pines of the North, the yellow pines of the South, the giant firs and redwoods of the West. There were widely scattered forests of almost every hardwood tree, including oak, walnut, maple, basswood, elm, ash, hickory, and many more. These forests promised untold millions of wealth for what seemed countless generations to come. And as a matter of fact many fortunes, large and small, were made by the appropriation of these virgin forests. Today, after decades of cutting and slashing and much ruthless exploitation resulting in such colossal waste that less than one half of the standing wood appeared in the manufactured articles; after devastating fires that wrought a loss, it is estimated, equal to the value of the timber used—and more's the pity, largely an unnecessary loss; after short-sighted taxation policies and belated measures of reforestation; today, in accounting for our forest inheritance we are confronted with the fact that at least two thirds have been used, squandered, or destroyed. It is evident that many people have found their economic opportunities in the appropriation of forest lands, using them today with little or no thought for the needs of tomorrow.

Appropriation of minerals. One of the most stirring chapters in American economic history deals with the quest for and appropriation of our mineral resources. Sub-surface wealth was considered part of the land. Nature was most bountiful in her gift of minerals to the land that became the United States, both our mineral resources and our annual mineral products largely exceeding those of any other nation.⁶ Indeed our known coal deposits are still said almost to equal those of all other nations of the world put together. Our supplies of iron ore are still among the richest in the world. The significance of this is appreciated when we recall how much of economic civilization is today based upon coal and iron, and how the nations that control these will inevitably dominate the world as long as our present industrial age continues. In addition nature stored billions of

⁵ *The Conservation of Natural Resources in the United States* (New York, The Macmillan Company, 1910), p. 208.

⁶ C. K. Leith, *The Economic Aspects of Geology* (New York, Henry Holt and Company, Inc., 1921), pp. 61-66.

barrels of petroleum in our rocks, the appropriation of which since 1859 has made a few fabulously rich and has given employment to many. The supplies of copper, next to iron the most important of our commercial metals, have been so great that for many years the United States produced nearly one half of the world's annual supply of copper. We have valuable deposits of almost all the other important commercial metals. Gold, long the coveted prize of fortune-hunters, was discovered here more abundantly than anywhere else before. Gold amounting to nearly nine billions of our present dollars has been taken from the mines of the United States. With such an abundance of mineral wealth, it is no wonder that many sought to find their economic opportunities in the quick exploitation of what it had taken all time to form.

Appropriation of water-power. Increasingly, the appropriation and development of water-power have become more attractive to men in search of large economic rewards. Our whole economic system of producing want-satisfying goods is today largely based upon the use of machines, driven by power supplied by coal or petroleum. Our machine civilization is dominantly based on iron and coal. As the better coal becomes more scarce and consequently more costly, men turn from black coal to the "white coal" of running water, and generate hydro-electric power. With growth in our population and decline in the power resources of coal and petroleum, who can exaggerate the economic opportunity and the mastery over our destiny in the hands of those that control the nation's water-power?

Property rights in natural resources, a source of economic power. There was a time when our natural resources, including fertile land, dense forests, rich minerals, and vast water-power, awaited only the magic touch of hands that were willing to appropriate them for use. In less than three hundred years, however, the country has been settled, and they who have come into the possession of our natural resources through settlement or on easy terms have converted their possession claims into property rights. Possession of a thing affords the opportunity to use it. Property in a thing conveys the right of exclusive control over it, including use and withholding from use. Property rights represent something more than the mere opportunity to use; they represent power or control over use. Property rights are so-called "vested rights" of which no man can be deprived without due process of law and reasonable compensation. Our natural resources have now become the objects of property rights, private and public. And property is power. With the passing of the opportunity for simple appropriation, and with the conversion of the opportunity of possession into the power of property rights, the economic struggle has changed in character. Men who today want natural resources for their own must acquire them through purchase. That requires accumulated wealth. If men lack such

purchasing power, there is no economic choice left to them; they must for a time at least become job-holders. As long as the option of free land existed in the United States, in the days when the country was rich enough to furnish every one who wished it with 160 acres of land, the severity of competition for jobs was softened. But the frontier is gone. Because men feel that the ownership of natural resources confers a unique certainty and independence of economic status, land hunger persists, and many men will continue to seek their economic opportunities in obtaining control over what nature has furnished.

CHARACTERISTICS OF THE AMERICAN AGRICULTURAL ORGANIZATION

The economy of the United States was predominantly agricultural until about the beginning of the twentieth century. It was not until after the first decade of this century that the value of the agricultural exports of the United States no longer exceeded the value of all other merchandise exports. At about the same time the value of its agricultural imports came to represent about one half of the total of all American imports and has done so ever since. In the settlement and development of this new country of vast area and rich resources, agriculture was bound to be the basic industry for a long time. With the proper management of the country's resources it will always continue to be one of the most important of American industries. Among the more important characteristics of the American agricultural economy of today are the prevalence of small individual enterprise over large corporate enterprise; the owner-operation of farms rather than operation by permanent classes of tenants; the mechanization of farming to save labor and to improve efficiency; diversified farming in some regions and specialization in others; and increasing co-operation, particularly, though not exclusively, in the marketing of farm products.

Predominance of small-scale individual enterprise in American farming. While there are striking exceptions to the rule, American farming is predominantly small-scale enterprise. The typical American farm is owned and operated by a single family with such hired help, if any, as the larger operators may require and be able to obtain. The farm is both a production unit and the home of the farmer and his family. The first of the accompanying tables shows that in 1945 the farm population was 17.0 per cent of the total population; that 59.9 per cent of the land area of the country was in farms; that the average acreage per farm was 194.8; and that the average value of land and buildings per farm was \$7,917, of implements and machinery, \$878, and of livestock, \$1,446. The second table reveals that almost 80 per cent of the farms of the United States are under 180

FARM POPULATION, FARMS AND FARM PROPERTY IN THE UNITED STATES, 1920-1945

	1920	1930	1940	1945
Farm population	31,614,269	30,445,350	30,546,911	23,558,488
Per cent of total population	29.9	24.8	23.2	17.0
Number of farms	6,448,343	6,288,648	6,096,799	5,859,169
Per cent of land area of				
United States in farms ...	50.2	51.8	55.7	59.9
Average acreage per farm ..	148.2	156.9	174.0	194.8
Average value of specified farm property per farm				
Land and buildings (dollars)	10,284	7,614	5,518	7,917
Land only (dollars) ...	8,503	5,554	3,811	*
Buildings only (dollars)	1,781	2,059	1,707	*
Implements and machinery (dollars) ...	557	525	502	878
Livestock (dollars)	1,243	921	747	1,446

Statistical Abstract of the United States, 1943, p. 572; 1949, p. 613.
 * This breakdown is no longer furnished.

FARMS IN THE UNITED STATES, NUMBER AND ACREAGE, 1945

Size of Farm	Number of Farms	Per Cent Distribution of Number of Farms
Under 3 acres	98,966	1.7
3-9 acres	495,595	8.5
10-29 acres	945,608	16.1
30-49 acres ..	708,796	12.1
50-99 acres	1,157,320	19.8
100-179 acres	1,199,809	20.5
180-259 acres	493,215	8.4
260-499 acres	473,184	8.1
500-999 acres	173,777	3.0
1000 acres and over	112,899	1.9
Total	5,859,169	

Statistical Abstract of the United States, 1949, p. 621.

acres in size, and almost 60 per cent do not exceed 100 acres. These data unmistakably support the statement that American farming is small-scale business enterprise. But in general the farm tends to be large enough to provide productive employment for the farm family. As the children grow to maturity some remain on home farms or acquire the use of other agri-

cultural land; the rest migrate to the cities in search of other types of economic opportunity. The size of the farm varies, of course, with the type of agriculture practiced. It is relatively small in truck-farming and large in stock ranching.

The widely expressed conviction that small-scale individual enterprise in farming was doomed to perish, because large-scale corporate enterprise could be so much more efficient, has not been substantiated by American experience. It was thought that the corporate-financed farm could demonstrate great economies as a result of superior management and equipment. But the large farm no less than the small is exposed to the vagaries of the weather—a drought such as that of 1934, for example—and to the “ups and downs” of the prices obtainable for its products—such as the devastatingly low prices of the great depression of the thirties. In such economic situations the greater flexibility of the small-scale enterprise with its lower overhead costs (such as interest on borrowed capital) is a positive advantage. Moreover, there are seemingly more formidable difficulties in managing an enterprise spread over thousands of acres of land than in managing thousands of men assembled in plants in close proximity to each other.

Owner-operation rather than operation by permanent classes of tenants. The prevalence of small-scale enterprise in farming is conducive to the owner-operation of farms. In 1920 the land and buildings of the average farm represented a value of \$10,284.⁷ By 1940, as a result of the preceding great depression which affected agriculture longer and more adversely than any other industry, this value of the average farm was down to \$5,518. It has been rising sharply since then: to \$7,917 in 1945. Such capital sums (again on the average), required to acquire farms, have not proved beyond the savings, past and prospective, of millions of farm operators.

Acquiring farm property by purchase, however, usually requires the down payment of a substantial percentage of the purchase price. It is neither customary nor convenient to acquire a financial interest in a farm as one might in a corporation, namely, by buying one or more shares of its capital stock. On their business side, farms are characteristically sole proprietorships. When a farm is bought, the new owner usually becomes the sole proprietor, not merely a share owner. He commonly finances the transaction by executing a mortgage on the farm for such part of the purchase price as he cannot cover by his cash payment. The mortgage is an instrument which conditionally transfers the farm back to the former owner, or his assign—the condition being non-payment of the amount still due in accordance with the terms of the transaction.

Many farm-operators in the United States rise to the status of owner-

⁷ This average farm value is obtained by dividing the aggregate value of all farms by the number of farms.

ship through the prior status of tenancy. Farm tenancy is an arrangement by which the owner of a farm conveys to an operator in return for acceptable consideration the right to use the farm for a stipulated period of time. The consideration may be a cash payment, such as \$3 per acre or \$300 a year, in which case the operator is a cash tenant. Or the consideration may be that the tenant shall supply the labor and capital equipment, and that owner and tenant agree to some mutually satisfactory allocation of other expenses and of the net income. Such a system is known as share tenancy. If the farm operations are successful, the tenant can usually over a period of years save enough to acquire title to a suitable farm, though more years may pass before his title to it is unencumbered. Farm laborer, farm tenant, part owner, and full owner are economic stages in agriculture that have often been described as rungs on the "agricultural ladder" by which a farm boy climbs to the top. If tenancy is merely a route to full ownership there is nothing disturbing about it. But if tenancy is a permanent status, then its growth is indicative of some important changes in the economy.

Tenancy in the United States has been most continuous and widespread in the southern states but historical reasons associated with the uprooting of slavery have been largely responsible for it. The emergence of propertyless populations previously attached to the land made tenancy inevitable. The persistence of poverty among other groups, who also turned to the cultivation of cotton under the new conditions, had the same effect. And relatively permanent tenancy has continued to the present day. In other parts of the country, however, tenancy is normally only a transitional stage.

The extent of ownership and tenancy in the United States during the present century is set forth in the accompanying table. In 1945, 67.6 per cent of all farm operators were owners. Tenancy has shown a substantial decline in thirty-five years.

PER CENT DISTRIBUTION OF FARM OPERATORS ACCORDING TO TENURE,
1910 TO 1945

	1910	1920	1930	1940	1945
All farm operators	100.0	100.0	100.0	100.0	100.0
Owners	62.1	60.9	56.7	60.7	67.6
Full owners	52.7	52.2	46.3	50.6	56.3
Part owners	9.3	8.7	10.4	10.1	11.3
Managers . . . . .	.9	1.1	.9	.6	0.7
Tenants	37.0	38.1	42.4	38.7	31.8

Statistical Abstract of the United States, 1943, p. 583; 1949, p. 623.

Mechanization of American farms. That part of American farming—perhaps one half of the total—which produces much the larger part of

the agricultural commodities sold as contrasted with those consumed on the farm, has undergone a technological revolution during this century. The new techniques have been introduced to save labor and to improve efficiency. The mechanization of American farming is typified by the tractor, which easily pulls plows and harrows, seeders and cultivators, and other machines, across fields devoted to the raising of grain. There were only about 1,000 tractors on American farms in 1910; the Bureau of the Census in 1940 reported 1,567,430, and the number in 1945 was reported as 2,421,747. The tractor enabled farmers to increase the acreage they cultivated. At the same time the tractor replaced many horses and mules. The number of these animals on American farms declined from 23,321,000 in 1910 to 9,130,000 in 1948.⁸ This reduction in the number of horses and mules used as motor power on farms liberated millions of acres of land previously devoted to the raising of feed and permitted their use for the production of other crops. The tractor enabled the farmer to produce more and to do so at lower labor costs.

Other changes in farm technology are represented by the "combine" which cuts and threshes grain in a single operation, the milking machine, and a newly developed mechanical picker of cotton. All these changes in mechanization together with equally important improvements in the selection of seeds, the use of fertilizers, the balanced feeding of livestock, and the constant fight to control plant and animal diseases, have worked to the same end: greater production and the saving of labor.

The technological changes in progress in American agriculture since the turn of the century are resulting in a gradual reduction in the number of persons required for agricultural production, on the one hand, and a marked increase in the volume of production per worker on the other. Savings in labor costs have more than offset increases in equipment costs.

Diversified farming versus specialization. American agriculture today is both diversified in some regions of the country and specialized in others. In the early development of the country, diversified farming had to be practiced in order that the farm might be as self-sufficing as possible. Specialization in agricultural production—the development of so-called "commercial farming"—had to await the development of transportation facilities and the improvement of markets. Diversified or general farming, in which no one crop accounts for as much as 40 per cent of the total value produced on the farm, persists in many sections of the country. It diversifies risks as well as crops. Risks both of adverse weather and of adverse price changes are often serious in one-crop farming.

Specialization in farming is first of all an outgrowth of geographic conditions. The southern states, notably Texas and Oklahoma, in soil and

⁸ *Statistical Abstract of the United States*, 1949, p. 708.

climate furnish the natural growing conditions for cotton. For similar reasons, Kansas and Nebraska specialize in the growing of wheat, and Iowa is known the country over as the state in which the tall corn grows. While the dairy industry is widely scattered, the northern states, notably Wisconsin and New York, provide ideal conditions for its development. The vast grazing lands of the West are the natural feeding grounds for beef-cattle and sheep. The citrus fruit ranches are distinctive of California and Florida. The mechanization of farming promotes its specialization. Specialization makes possible the fullest use of the natural resources of the country. If all goes well, specialization leads to the highest efficiency and the greatest productivity.

For various reasons peculiar to the geographic regions and to the people themselves, both diversified and specialized farming characterize, and will doubtless continue to characterize, American agriculture.

Coöperation in the marketing of farm products. A rapidly growing phase of American agriculture is coöperation in the marketing of farm products. As the agricultural and industrial economy of the country developed, the spread between the prices the farmer received and the prices the consumer paid for the identical farm products, aroused the interest of the farmer and the public. The "middlemen," meaning the dealers in farm products, became the targets of spirited attacks, and were accused of accentuating the spread. The impulse was to get rid of them, and to let farm products move directly from producer to consumer. Observation and experience demonstrated, however, that this was not easy of accomplishment. The fact was that the middleman performed indispensable services in the assembling, grading, transportation, storage, and selling of these farm products. The identity of the middleman could be changed, but his functions could not be eliminated.

A partial solution of the problem was, and is, to organize farmer coöperative associations to assume the functions which the middleman performed, and to collect for the services thus performed. The aim of these coöperatives is to procure higher prices for the farmer and lower prices for the consumer, than were possible when a third party served as middleman. The most important factor conditioning the success of the coöperative associations is their ability to obtain and to retain highly trained and experienced managements.

That agricultural coöperative associations are doing a substantial business, and that they have a large field for expansion in the United States, are conclusions supported by the following data. They show that in 1939 more than 22 per cent of American farms did some business through coöperative associations. In the early forties,⁹ over 10,000 farmer coöperatives

⁹ *Ibid.*, p. 614.

with a membership of 3,600,000 were doing an annual business approximating \$3,000,000,000.¹⁰

FARMER BUSINESS THROUGH COÖPERATIVES

	1929	1939	Per Cent of All Farms, 1939
Number of farms doing any business through coöperatives .....	.....	1,364,402	22.4
Number of farms selling through coöperatives	691,895	827,285	13.6
Number of farms buying through coöperatives	410,914	743,638	12.2
Number of farms buying service through coöperatives, such as fire insurance, telephone, trucking, electrification .....	.....	712,651	11.7

Statistical Abstract of the United States, 1943, p. 613. Comparable data for 1949 (such data are published in the ninth year of the decade) are not available at this writing.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Economic progress is a measure of the degree to which man controls the materials and forces of his environment.
2. The emergence of an agricultural economy from the previous stages of economic evolution was made possible only by the development of adequate capital instruments.
3. "Land hunger" is one of the strongest economic factors directing human behavior.
4. While "land hunger" may direct individual behavior, it has nothing to do with the behavior of nations.
5. The disappearance of the frontier greatly changed the economic life of the United States.
6. With the passing of the frontier, American agriculture became a declining industry.
7. Small-scale enterprise in farming may be a positive advantage when times are bad.
8. Because the large corporate-financed farm can command so much more capital equipment, and thereby achieve greater efficiency, it is bound to supplant the family farm.
9. The dignity and esteem of farm life in the United States are primarily based on the independent-owner status of most farmers.
10. Farm tenancy is not disturbing if it ultimately leads to full ownership.

¹⁰ For discussion of the law of diminishing productivity as applied to agriculture, cf. pp. 35-37, 557-565; for marketing, cf. pp. 378-384; for agricultural prices, cf. pp. 478-483; and for coöperative enterprises, cf. Chap. XLI.

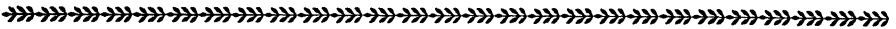
11. The emergence and persistence of relatively propertyless farm populations in the United States would be unfortunate from a political as well as economic point of view.
12. The mechanization of agriculture will inevitably drive the small operator from the field.
13. The mechanization of farming promotes specialized production.
14. Coöperation in the marketing of farm products can both increase the returns of the farmer and lower prices of farm products to the consumer.
15. Coöperative marketing may be reasonably expected to supplant all other types in the marketing of agricultural produce in the United States.

SUGGESTIONS FOR FURTHER READING

- BLACK, JOHN D., *Parity, Parity, Parity* (Cambridge, Harvard University Press, 1942), Chaps. 2, 3.
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- MALOTT, D. W., and MARTIN, B. F., *The Agricultural Industries* (New York, McGraw-Hill Book Company, Inc., 1939).
- SCHULTZ, THEODORE W., *Production and Welfare of Agriculture* (New York, The Macmillan Company, 1949), Chap. 5.
- WILCOX, WALTER W., *The Farmer in the Second World War* (Ames, Iowa The Iowa State College Press, 1947), Chaps. 2, 5, 8, 17, 18.

CHAPTER IV

The Industrial Organization of Production



RELATIVITY OF ECONOMIC INSTITUTIONS

THE WANTS OF MAN, which motivate his economic behavior and which impel him to struggle for the economic opportunity and power that ensure steady want-gratification, must all at any given time be satisfied through the prevailing economic system. Had we been born thousands of years ago, we might have been members of some social group subsisting on what nature freely furnished; or perhaps members of some roaming pastoral clan; or possibly of some tribe that had already begun to cultivate the land. Hundreds of years ago we might have been born into the slavery or serfdom which long prevailed in agricultural communities; or into the guild system of medieval cities; or into the domestic system of manufacturing, that thrived during the centuries immediately preceding the present economic era. As it happens, the economic system we find prevailing through most of the Western World differs strikingly from all preceding systems. We call it capitalistic industrialism. It is not yet two hundred years old, which is mere youth as economic systems go. It is as members of this industrial order that we must obtain the incomes with which to gratify our wants. The present system may endure or perhaps be overthrown; it may be modified or perhaps decay. What deserves emphasis is that economic systems are created by man for the purpose of satisfying his wants; that economic institutions are relative to time and place; that each succeeding generation is trustee of all the economic progress that has been made; that abuse of this trusteeship may easily put economic civilization back thousands of years; that man, who has created all, can also destroy all. Nothing is permanent. Heraclitus' ancient philosophy, teaching that all is change, seems strikingly exemplified in the economic world of today. Certainly in economic relations nothing is permanent except as we will to make it so.

EVOLUTION OF INDUSTRIALISM

The present industrial organization of economic society can be better understood by surveying the economic systems that preceded it. Industrialism is the culmination of a long evolutionary process that reaches back into the beginnings of man's conquest of the materials and forces of nature. Writers on the evolution of our economic society distinguish various periods, according to the point of view from which they make their studies. For present purposes it will serve to show how the self-sufficiency of social groups has steadily diminished and the interdependence of groups has constantly increased, as the area in which goods could be bought and sold has grown larger. To see our present industrial period in perspective, three periods in the evolution of our economic society must be differentiated: (1) the self-sufficing household economy, (2) the commercial or handicraft economy, and (3) the industrial economy.

The self-sufficing household economy. The self-sufficing household economy was an economic organization in which the household, whether of family, clan, or tribe, produced what it consumed and consumed what it produced. The food that was eaten, the clothing that was worn, and the shelter that was needed were all produced within the household. Economic self-sufficiency has characterized many groups, in both ancient and modern times. Wherever and whenever a group has been isolated, it has had to be self-sufficing or perish. In the main, the period of the self-sufficing household economy included the stage of direct appropriation, the pastoral stage, and the agricultural stage described in the previous chapter.

Throughout the thousands of years represented by these stages, during which man slowly learned how to work with nature rather than merely to take what nature offered, economic self-sufficiency was largely characteristic of every group. With increasing control over the means of subsistence, population grew. When man had learned how to make a living by cultivating the soil, he largely gave up his wanderings in quest of food for himself and his beasts and settled down. With a fixed abode, private property in land arose. Wealth came to be measured not only in herds and flocks, but also in lands. Slavery, and later serfdom, prevailed. There was very little trade. To be sure, some groups that possessed advantages in the production of certain coveted commodities, whether the advantage was in skill or in available natural resources, came to produce a surplus and to barter it with other groups for goods they wanted. Such trade, however, in the beginning was inter-group rather than intra-group, and distinctly supplementary to an otherwise complete economic life. But with the gradual growth of trade between groups and between members within a given group, the self-sufficiency of the household began to disappear, and trade led to a new era in the economic evolution of society.

The commercial or handicraft economy. In the commercial or handicraft economy production was carried on primarily for the market rather than for home consumption. Both within the group and between groups there was regular exchange of surplus goods. Many men lived by trading rather than by raising, growing, or making things. The typical unit of economic life in the commercial economy was no longer the family, clan, or tribe, no longer the manor, plantation, or *mir*, but rather the town—notably the medieval town. Trade was the great builder of towns. The economic unity of the town, however, consisted not only of the aggregation of buildings and people we ordinarily associate with the term, but also of all the surrounding agricultural territory commercially tributary to the town. Sometimes, as a matter of fact, the town was nothing more than a manorial village, grown somewhat more populous than was usually the case. The commercial or handicraft economy found its most conspicuous expression in the guild system and the domestic system.

The guild system. Guilds were organizations first of merchants, and somewhat later of craftsmen. The merchant guilds were the most influential economic organizations in Europe from the eleventh to the fourteenth century. They were organizations of traders. To the markets of the towns were brought the surplus products of surrounding manors, food products in particular; foreign goods were brought there, especially goods which the town itself could not produce, such as salt, spices, rare wines, and scarce metals; goods manufactured by the tradesmen themselves and by craftsmen living on the rural manors were also either offered in the shops of the trading craftsmen or brought to the town markets for sale. The merchant guilds existed for the purpose of controlling this trade—of monopolizing it, we should say today. No one could trade in the towns except with the permission and under the regulations of the merchant guilds. Since practically everyone in the towns lived by trade, virtually all the burgesses (as the citizens of the towns were called) were members of the guild merchant. Indeed in the heyday of the guild, it dominated the government of the town; in some towns the government of the guild was indistinguishable from the government of the town. The guilds were the “big business” of the Middle Ages, and apparently were as interested in the politics of their day as business is interested in politics today.

The merchant guilds were gradually superseded by the craft guilds as the dominating economic organizations of the time, but for many decades the two types of organization existed side by side. Craft guilds were common beginning with the twelfth and continuing through the sixteenth century. In many towns a man was a member both of the guild merchant and of the guild of his own special craft; as a seller of cloth, for instance, he belonged to the merchant guild; as a weaver of cloth, to the craft guild of weavers. The development of the craft guilds coincided with the de-

velopment of the handicraft system and with the growing importance of industry in the economic life of the town. The early craftsman doubtless arose in the agricultural stage. Special aptitudes set a man aside as shoemaker or miller or carpenter. This early craftsman was an itinerant who traveled from household to household in search of a market for his services, as the scissors-grinder and umbrella-mender still do today. As time went on the craftsman set up a shop in town and expected the customer to come there to place his order. Since no work was done until the order was placed, there was never a surplus of goods to worry the trading craftsman. But while there was little of the speculative element in this custom-order business, it suffered from the disadvantage of alternating busy and dull seasons. Accordingly the craftsman began to anticipate future orders by making standard units of his product during the dull season and offering them for sale at a lower price in the retail shop that he conducted in connection with his higher-priced custom-order business. It is this custom-order and retail shop business that the craftsmen of medieval towns were engaged in. As the number of crafts multiplied, the guild merchant, consisting of all the merchants of a town, proved unequal to controlling the economic life of the town. The masters of a given craft found they had more in common among themselves than they had with all the other merchants of the town belonging to many different crafts. The craft guilds that were formed gradually absorbed the functions of the guild merchant, which slowly disappeared. What the guild merchant had done in controlling the trade of the town as a whole the craft guilds, each composed of artisans belonging to a single craft, sought to do for their particular crafts. No one could engage in any craft except with the permission and under the regulations of the craft guilds. In the beginning membership requirements were liberal. Any competent workman could hope, after serving for some years as apprentice and journeyman, to be admitted to the guild of his trade as a master workman. Subsequently membership was much more restricted for the purpose of monopolizing a craft in a given town for a limited number of craftsmen.

The domestic system. The craft guilds which had been so powerful during the thirteenth, fourteenth, and fifteenth centuries began to wane during the latter part of the fifteenth and practically disappeared by the end of the sixteenth century. Internal dissensions and divisions destroyed the unity of their membership. The national government assumed many of their functions. But, most important of all, industry grew up outside their sphere of control. Artisans there had always been who were not members of the guilds, even at the height of guild domination, but these free-lance craftsmen became more numerous during the fifteenth and sixteenth centuries in spite of the efforts of the guilds, backed by town and national government, to suppress them, the increase being most marked in

the rural districts. Some of these independent craftsmen were men whom their craft fraternity had failed "to pledge." Others were cut-price competitors of the guilds. Still others were non-conformists, who refused to abide by guild regulations of all sorts as to materials and methods. Being business rivals of the guild craftsmen, and socially not recognized by them, they naturally established themselves in the country and in rural villages rather than in the towns, which the guilds dominated. The industry which they conducted in their homes came to be known as the domestic system. Beginning in the sixteenth century, it was the prevailing economic system until the close of the eighteenth century, traces of it still remaining.

The domestic system has been so called to distinguish it from the present factory system, in which the work is no longer done at home. Home work was just as characteristic of the independent craftsman living on some manor and of the guild craftsman as it was of the artisan of the domestic system. But there was this important difference. The relatively few craftsmen of the manorial economy, which was largely agricultural, produced goods for home consumption on the manor. The master workmen of the guild period produced goods for the special customer or, in the retail shop stage, sold goods directly to the consumer. The artisans of the domestic system produced goods for unknown consumers. Situated in the country, they were at a disadvantage in marketing their products. Consequently a new group of economic functionaries arose, the merchant employers, whose specific task it was to provide the market opportunity. They soon not only marketed the finished goods but brought business orders to the artisans, supplied them with the raw materials which it was often difficult for the country artisans to obtain, and occasionally even furnished them with tools. Initiative in industry was taken by these merchant employers, who organized the scattered artisans into a producing system, the products of which the merchants owned and marketed. In the domestic system the functions of capitalistic employer and of workman are for the first time separated.

The industrial economy. When the changes associated with the industrial revolution of the eighteenth century came, involving the substitution of power-driven machinery for simple hand tools and the housing of these machines in factories rather than in the homes of the workers, it was the merchant-capitalist employers of the domestic system who became the "captains of industry." It was they who had the capital and credit with which to build the factories, install the new machines, buy the raw materials, advance the wages, and hold the finished goods until they could be sold to advantage. Modern economic society has become industrialized; the economic methods and relations at first characteristic only of manufacturing have spread throughout our entire economic system, so that the present economic age is appropriately called the "age of industrialism."

Men may idealize the economic past and long for the "good old days" when chivalry reigned and "kighthood was in flower," when artisans took great delight and pride in the product of their handicrafts and there was time to live as well as to work; the fact remains that today nearly two billions of people, incomparably the largest population the world has ever known, require the large-scale methods of modern industrialism if they are to live. Industrialism distinguishes our age from all others, and provides the structures, devices, and institutions which constitute the means for the satisfaction of our wants.

What has happened during the last two hundred years has more sweepingly transformed the economic relations of men than the events of all the preceding centuries of human history. If Pericles, after living in the fifth century B.C. and contemplating the highest expression of Greek civilization, could have returned to earth in the early part of the eighteenth century and beheld the world as it then was, he would have found it less strikingly changed than Sir Isaac Newton, who closed his career early in the eighteenth century, would find it today. Previous to those marvelous changes that ushered in the modern economic era, the progress of the world had been steady but slow; since that time the changes have been so amazingly swift that the human mind has been almost bewildered in the attempt to grasp and measure their significance.

This emphasis upon the achievements of the last two hundred years is not intended to detract from the wonderful accomplishments of preceding ages. It is impossible to exaggerate the importance of such great discoveries or inventions as the use of fire, the handling of the bow and arrow and spear, the weaving of cloth, the manufacture of pottery, the construction of boats, the use of metals, and the domestication of animals. All of these greatly aided man in getting a living and in slowly making his way from savagery to civilization. But the progress of preceding ages is somewhat overshadowed by the vast changes of modern industrialism crowded into a comparatively short period of time, changes so kaleidoscopic in character that they have frequently and permanently altered many of the previous relations of men.

Foremost among the industrial changes that have swept over the world in this new era stands the use of power-driven machinery, often uncanny in its marvelous operations, which has replaced the simple tools of the hand laborer in manufacturing and is increasingly doing so in mining and in agriculture. Steam, electricity, and gasoline have almost relegated the faithful horse to oblivion and have reduced wind and water to subordinate positions as direct sources of power. Myriads of lights have converted night into day, enabling the wheels of industry ceaselessly to turn. No less wonderful have been the changes in transportation and communication. Fulton's "Clermont," triumphantly steaming up the Hudson in 1807, was

so great an improvement on the sailing vessels of earlier centuries that in the newspapers of the day she was described as the new "water monster." What would our ancestors say if we could send them a motion-picture film (if that itself did not bewilder them) showing a replica of the 160-ton "Clermont" entering the harbor of New York, shortly followed by the "Queen Elizabeth," registering not 160 but 85,000 tons? Improvements in transportation have been so amazing that the "Queen Mary," the world's fastest ocean liner, has been able to cross the Atlantic in about four and a half days and that planes now provide regular passenger service between the United States and Europe on a twelve to fifteen hour basis. A network of steam and electric railways and millions of automobiles furnish conveyance for those who still prefer the solid land to rolling waves and unsubstantial air. The telegraph, telephone, and radio have controlled electricity with and without the use of wires and made it possible for people in the uttermost parts of the earth, day by day, to follow the activities of the world.

All of these marvelous changes in industry, transportation, and communication have helped to create a new economic world; a world in which individuals, communities, and nations specialize, produce on an enormous scale, and exchange their surpluses for the surplus products of others. Consequently, one of the most significant facts about the world today is that it is a world the parts of which are economically interdependent. The time was when communities and nations were isolated and accordingly had to be largely self-sufficient, but today communities and nations, whether they like it or not, find their physical and economic isolation gone. A new economic world has arisen in which distance and time have grown shorter and all parts have been more closely knit together. What has happened during the past two hundred years has promoted the economic interdependence of the world, which persists in spite of recent revivals of intense political nationalism.

NATURE OF MODERN INDUSTRIALISM

The new industrialism that has so strikingly transformed the economic relations of men and that indirectly has contributed so much to the transformation of their political and social relations as well, needs first of all to be understood structurally, if its functioning, maladjustments, and possible readjustments are to become intelligible. Industrialism means the whole modern organization of productive activities. It is the successor of the self-sufficing household economy of early times, in which goods were produced within the household for consumption by its members; and of the commercial economy or handicraft system of later times, in which goods were produced primarily for exchange in the local markets and

fairs. If Pericles, proud of the world he knew 2,500 years ago, were to return to earth today, and if it fell to the lot of an economist to explain to him how the economic world today differs most distinctively from the economic world that Pericles knew, the story he would have to tell would certainly include a recital of how men have substituted power-driven machinery for simple hand tools; of how the factory has replaced the home workshop; of how the large-scale use of capital has put the capitalist into control of industry; of how men are free to compete with others in any economic activity for which they have the ability and means; of how production has become highly specialized; of how men characteristically produce for large general markets rather than for small local markets; of how much the greater part of all exchange transactions is done on a credit rather than on a money or barter basis; of how group action, on the part of both capitalists and laborers, characteristically prevails over individual action; and of how all this has resulted in an economic interdependence of groups, communities, and nations that is unique in the history of the world. These are the outstanding characteristics of modern industrialism.

Machine industry. Most prominent among these features that distinguish modern industrialism from all preceding economic systems is the use of machines. Accordingly, our era has not inaptly been described by the term *machino*-facturing to differentiate it from the *manufacturing* of earlier times. For ages men produced what they did with the aid only of simple tools. It is difficult to draw a sharp line of demarcation between tools and machines. Karl Marx long ago pointed out that modern machinery consists of three parts: the motor mechanism, such as the steam-engine, which operates the whole; the transmitting mechanism, such as fly-wheels, shafting, and gearings of every kind, which regulates and distributes the motion; and the working machine.¹ Tools are properly comparable with this "working" part of the machine. In the case of tools, man both directs their activity and supplies the energy with which they are worked. Machines may be driven by man, but the action of the working part is determined by the construction of the machine itself. An ordinary pair of scissors is a tool; the muscles of the arm operate it, and the fingers of the hand guide its action. Electric cutters, cutting more than fifty thicknesses of cloth in a modern clothing factory, are machines; the power is supplied through an electric motor, and the action of the cutting blades is controlled by the mechanism itself. A carpenter's saw is a tool; the circular saw of a lumber mill is a machine. Tools are simple, machines are complex. Tools are directly guided and propelled by man; the action of machines is merely initiated by man, their course of action being determined by a series of mechanical devices through which the driving power is applied. The age

¹ *Capital*, translated from the third German edition by Samuel Moore and Edward Aveling (New York, D. Appleton and Company, Inc., 1899), p. 367.

of modern industrialism is predominantly the age of machines rather than of tools.

Transition from tools to machines. The transition from tools to machines and from muscular to mechanical power began in England during the latter half of the eighteenth century and has been in progress somewhere in the world ever since. It was the textile industry that witnessed the first great changes. As early as 1738 Kay's invention of the flying shuttle had enabled the weavers to double their output, with the result that it became difficult to obtain the necessary yarn. But Hargreaves' spinning jenny (1764-1767), Arkwright's roller spinning (1769)—inaptly called the "water-frame" because driven by water—and Crompton's spinning mule (1774-1779) combining in one machine the devices of Hargreaves and Arkwright, solved the problem. The ingenuity of these men supplied the weavers with yarn of superior quality and in quantity beyond the power of the hand weavers to use. Spinning had now left weaving far behind. But with the invention of Cartwright's power loom (1784-1787) and the application of Watt's steam-engine (1785) to the driving of the new textile machines, weaving caught up and the manufacturing of cotton cloth on a large scale really began. Whitney's cotton-gin (1792), which enabled one man to remove the seeds from a thousand pounds of cotton a day compared with the four or five pounds he could clean with the old hand-tool methods, ensured the manufacturers a plentiful supply of cotton. The substitution of power-driven machinery for simple hand tools, which began in the textile industry, spread to all other industries with such rapidity and effected such fundamental changes that the period came to be known as the "industrial revolution."

For the driving of the new machines, heavy and cumbersome as they were, the old sources of power proved inadequate. But a rapid succession of inventions controlling the expansive force of steam and gas and the generation of electric current has furnished man with unlimited power to operate the machines of manufacturing, agriculture, and mining, and at dizzy speeds to send his engines across land, over seas, and through the skies. The age of modern industrialism is the age of steam and gas and electricity rather than of man- and horse- and wind-power.

Machine industry based on modern science. The great majority of the marvelous mechanical inventions of the past two centuries would have been impossible except for the rapid development during that time of experimental science. Prior to the development of modern science and the technology based upon it, inventions were usually either the result of accident or of laborious trial-and-error experimentation. But science has discovered many of the secrets of nature, and through knowledge of natural laws it has been possible to harness natural forces to serve the needs of man. So modern science has revolutionized industry and continues to

make it incomparably more dynamic than any other form of economic activity. Many of the largest industrial enterprises of our time, such as the General Electric Company, the American Telephone and Telegraph Company, and the United States Steel Corporation, maintain great scientific laboratories and spend huge sums for the services of engineers, chemists, physicists, geologists, other scientists, and technical experts for the purpose of discovering still better ways of producing goods.

Superior productivity of the machines. If it be true that the power-driven machine is the distinctive feature of modern industrialism, it is the unparalleled productiveness of machine industry which has most deeply affected our economic and social life. How great the increase in productiveness has been is evidenced by countless striking facts. An old-time cobbler considered himself efficient if he made one good pair of shoes in a day. The modern shoe-factory operative tends a machine through which 1,200 shoes pass each day. The capacity of the old hand printing-press was limited by the skill and endurance of its operator. A large modern newspaper, with a maximum speed of 30,000 cylinder revolutions per hour, when combined with eight printing units, can turn out 480,000 eight-page papers in a single hour.

... The best flour mill in Athens at the time of Pericles produced only two barrels of flour in a day; one of the mills in Minneapolis produces enough to fill 17,000 barrels. In the early part of the last century a skilled workman could make in a day about thirty needles; at the end of a century a girl with the help of a machine could make in a day 500,000 needles. Ore vessels on the Great Lakes, 600 feet long, are loaded with 10,000 tons of ore, in twenty minutes, and the same cargo can be unloaded in three hours and twenty minutes by huge machines called clam-shell unloaders. The blacksmith once made nails by hand, now we poke the end of a long roll of wire into a machine, and it rapidly pulls in the wire and drops out nails by the kegful.²

... In the manufacture of a certain quantity of house brooms the number of hours of labor required was reduced from 445, which was necessary when hand labor was used, to 295 when machinery was employed; in the manufacture of a farm wagon from 221 to 48; for making a dozen pairs of knit woolen gloves from 360 to 8; for shelling 100 bushels of peas from 175 to 1; for making 25,000 pounds of soap from 432 to 21; for manufacturing 100,000 cigarettes from 520 to 14; for crushing 100 cubic yards of stone from 630 to 10; for unloading 100 bales of cotton from a ship from 120 to 37; and for loading 1,000 bushels of wheat from an elevator to a ship from 37 to 9 hours.³

Facts such as these show us why our economic era has with a good deal of appropriateness been called the era of machine civilization. The

² Marshall and Lyon, *Our Economic Organization* (New York, The Macmillan Company, 1921), pp. 216-218; illustrations taken from U.S. Bureau of Education, *Lessons in Community and National Life*.

³ Ernest L. Bogart and Charles E. Landon, *Modern Industry* (New York, Longmans, Green and Company, 1927), p. 363.

machine more than anything else has made possible large-quantity production and low unit costs; it has greatly increased the production of wealth and brought about higher standards of living; it has robbed work of much of its back-breaking drudgery and, notwithstanding periods of unemployment, has greatly extended the economic opportunities open to all.

The factory system. The substitution of power-driven machinery for simple hand tools resulted in the replacement of the home workshop by the factory. For centuries the home had been the center of the family's economic activities. It had been common for the members of a family to be jointly engaged in their home upon the goods, such as woolen cloth, which they were producing for the market. But modern industrialism has utterly changed the economic character of the home. If the activities of father, mother, and children at one time centered around a common hearth, that time is gone. If home and industry were once inseparable, so much does modern society disapprove any such connection that home industry is today described as sweatshop industry. With the invention of the new power-driven machinery, the factory came and the city grew, and industry left the home and has never since returned. Industrially, home today is but a shadow of its former self. For many people it is but a lodging-place.

Factors influencing the establishment of the factory system. What has brought about the change? Among the more important factors that took industry from the home and established it in the factory was the character of the new machinery. Its size and weight were too great for the small homes and adjoining workshops of the artisans. What is more, the new machinery was power-driven; that necessitated locations in proximity to water-power or to easily available coal supplies. Power-driven machinery, the installation of still other machines for the generation or transmission of the necessary power, and the rapidity of motion of these substitutes for hands and feet were all such that especially constructed buildings for the housing of both machinery and workers became necessary. And still another factor must be mentioned. The new machinery was much too expensive for the artisans to buy, even had they been able to house it. For all of these reasons industry was established in the factory, where it is today. In the factory under one roof workers, machines, and materials were assembled, and under a single management goods were produced in such quantity that the artisans of the old régime were unable to compete with the new factory system. The large-scale methods and mass production of the factory system have brought about such a reduction of costs per unit of output that the independent artisans, except in unusual crafts, have been forced either to become "factory hands" (often little "head work" being required) or to do repair work on factory goods, together with such custom order work as a few fastidious customers enamored of the old

handicraft days may supply. The machine and the factory distinguish modern economic society from all preceding forms of economic organization.

Large-scale use of capital. Modern economic society is preëminently capitalistic both in its extensive use of capital goods and in the direction of our productive activities by entrepreneurial capitalists. The use of capital on the present colossal scale is one of the most distinctive features of our time. No such use was made of capital in the self-sufficing household economy or even at the high tide of the commercial economy as is made today. Riches there were in abundance, but they were often idle fortunes. The conversion of surplus wealth into capital goods and the use of capital in the further production of wealth are marked developments of the industrial period. The typical great fortunes of today are not represented by the fine flocks and herds of a Jacob, or the vast land holdings of a Duke of Westminster, or even the commercial riches of such a family as the Medici or the Fuggers, but rather by fortunes made in such highly capitalized industries as oil, steel, railroads, motors, and mining by the Rockefellers, Carnegies, Vanderbilts, Fords, and Guggenheims of modern industrialism.

The capitalistic character of modern economic society is strikingly shown by the marked increase in the supply of active capital used in the United States during sixty years of its most rapid development. The last column in the following table,⁴ shows this strikingly.

QUANTITY OF ACTIVE CAPITAL IN THE UNITED STATES
(Outlying possessions excluded)

<i>Census Year</i>	<i>Total Value of the Active Capital Supply in Millions of Dollars</i>	<i>Per Capita Value of Active Capital</i>	<i>Price Index</i>	<i>Index of Quantity of Capital per Capita</i>
1850	2,757	\$119	139.2	85
1860	5,900	188	141.3	133
1870	8,978	233	221.6	105
1880	13,636	272	132.4	205
1890	19,298	307	113.6	270
1900	24,783	326	101.7	321
1910	47,961	521	126.5	412

Allowing for necessary corrections on account of price changes, Dr. King's calculations show that by 1910 the quantity of capital per capita existing in the United States in 1850 had more than quadrupled. Not a

⁴ W. I. King, *The Wealth and Income of the People of the United States* (New York, The Macmillan Company, 1915), pp. 43-44, which see for source of data.

little of the constantly growing prosperity of the American people has been due to this steady increase in our capital equipment.

How great the accumulations of capital are in our largest business enterprises is conspicuously shown by our "billion dollar" corporations. Modern business enterprise has characteristically taken form in the corporation (the nature of which will be explained in Chapter V). The capital of a corporation is primarily supplied by its owners, known as stockholders, and secondarily by its creditors, known as bondholders. The capital and surplus,⁵ including capital furnished by both stockholders and bondholders, of the American Telephone and Telegraph Company and its associated companies are over \$4,000,000,000; of the Standard Oil Company of New Jersey, \$2,600,000,000; of the General Motors Corporation and the United States Steel Corporation, each about \$2,000,000,000; of the New York Central Railroad, \$1,300,000,000; of the Consolidated Edison Company, the DuPont Corporation, and the Baltimore and Ohio Railroad, each over \$1,100,000,000. Each of them has capital obligations in excess of one billion dollars, a sum quite beyond the comprehension of most people. These and many other industrial enterprises are so vast that they require the investment not only of the surplus furnished by a few very wealthy individuals, but the small savings of hundreds of thousands of people. The American Telephone and Telegraph Company, for instance, toward the close of 1950 had 982,000 stockholders, with an average holding of thirty shares, each share having a par value of \$100. Modern capitalism, such examples show, is distinctly coöperative.

How does it happen that capitalists so generally are in control of our economic enterprises? The answer is not far to seek. Expensive power-driven machinery, costly factories, the lengthening of the process of production involving the purchase of vast quantities of raw materials and the advance of wages to laborers—all these conspired to throw the control of industry into the hands of men who had some accumulated wealth or had the credit to obtain it. Given its initial start, they were able to profit by the fabulous productiveness of modern industry and, through the ownership of rapidly increasing capital, to consolidate their control over industry. Then too, during a time in which capital was relatively scarce and accordingly the limiting factor in production, they who had it were in a strategic position to dictate the terms of its use. Those terms were control over the investment, which meant capitalistic control over industry. Such capitalistic control, based upon the institution of private property, has passed from hand to hand through sale and inheritance and remains today in most countries one of the distinctive features of modern economic life.

⁵ Figures are as of December, 1949. Surplus appropriated for specific purposes, such as additions to property or for miscellaneous objects, is not included in the totals, though in some cases it would be proper to do so.

Free enterprise and competition. Closely related to private property in capital, as an outstanding characteristic of the present economic order, is freedom of private enterprise—and that implies freedom to compete. Henry Clay points out:

Property, that is, the exclusive use of wealth, is the prize offered by society to induce individuals to compete in producing wealth; freedom of enterprise is the device on which society relies to insure that no one shall acquire wealth without competition.⁶

What is meant by freedom of enterprise? There is perfect freedom of enterprise when any individual is legally at liberty to engage in any economic activity he chooses. In the main, in the United States, men today are free to compete with others in any economic activity they choose, though choice is limited by ability and means. Men are free to engage in an old type of business, such as wagon-making, or to develop a new one, such as making automobiles. They are free to seek new markets for their finished goods and new supply sources for raw materials. They are free to buy and sell, or to refrain from buying and selling, whenever and wherever they please. They are free to come and to go in the pursuit of their business, as they see fit.

To the men of medieval times such freedom of private enterprise would have seemed preposterous. In those days business activity was restricted. In the towns, trades and occupations were strictly controlled by the guilds, which prescribed the conditions of admission, dictated the entire technique of production, and regulated the price of the product. In the country, most men were not free to work when they pleased for anyone who would employ them. On the contrary many were serfs, bound to the service of a feudal lord and limited in their economic activities to certain holdings of land. What is more, government later minutely regulated trade for fiscal and military reasons, never hesitating to subordinate the interests of the individual to the interests of the state. The past century and a half has swept away most of these irksome and hampering restrictions and has substituted the régime of individual initiative and free enterprise.

Some limitations on free private enterprise still exist, however, and doubtless will always exist. Legal freedom to engage in any enterprise one chooses does not convey the economic power to do so. Lack of means effectively closes the door to many enterprises. Often, too, lack of means has precluded the higher education which might have increased the individual's range of choice. The government, too, has sometimes undertaken certain economic activities to the exclusion of private enterprise, the mail

⁶ *Economics for the General Reader* (New York, The Macmillan Company, 1918), p. 357.

service being perhaps the most conspicuous example in our country. In some places the railways, telephone, and telegraph are operated by the government, and water, light, and power service are furnished by it. Government today also regulates many private enterprises. Rates of the public utilities just mentioned are strictly regulated where they are not operated by the government. Private individuals must be licensed to practice certain professions and occupations. Dealing in foods, drugs, or securities is subject to many restrictions. Industry must conform to many governmental regulations as to whom it shall employ and the conditions of their employment. But with all these modern restrictions, it is still true that never have individual initiative and private enterprise had greater scope than during the industrial period.

Free enterprise implies competition. If one man is free to engage in a given enterprise, another is free to enter into competition with him. Throughout the industrial period society has encouraged free enterprise and has relied upon the competition of many enterprises to protect its interests. There is competition for trade; accordingly the buyer has a choice to make as to the product he will take and the seller he will patronize. There is competition for goods; accordingly the seller has a choice to make as to disposing of his goods at once or of holding them for more acceptable prices. Should this force of competition fail to work reasonably well, it would endanger the whole system of free private enterprise.

Specialization, exchange, and interdependence. One of the most distinctive ways in which the modern economic world differs from the ancient and medieval is in the specialization which exists and the interdependence it has brought about. The modern producer, be he capitalist or laborer, is apt to be a specialist. Present-day specialization is of many kinds.

Specialization of trades and crafts. The most obvious and persistent form of specialization is seen in our trades and crafts. In the days when men led a self-sufficing economic life, producing what they consumed and consuming what they produced, there was no differentiation of labor. But the need of specialized services developed early and has grown steadily ever since. Speaking of this specialization of crafts, Frank W. Taussig says:

This dates far back into antiquity. The familiar crafts are of very old standing. The extent to which their names have been adopted as surnames shows how, among modern peoples, occupations were separated in a comparatively simple state of society, such as that of the Middle Ages, when patronymics were in process of formation. The Carpenters, Masons, Smiths, Weavers, Drapers, Tailors, Dyers, Saddlers, Shoemakers, Millers, Bakers, Coopers, and such other common surnames indicate what sort of division of labor was maintained with comparatively little change for hundreds of years.⁷

⁷ *Principles of Economics*, 4th ed. (New York, The Macmillan Company, 1939), p. 30.

Such specialization still exists. Although some crafts have declined in importance and others have disappeared altogether, many new ones have taken their places.

Specialization of functions within industrial units. The most distinctive specialization of our day, however, is not this time-honored separation into trades or crafts but the specialization of functions within industrial units. Many of the crafts of the Middle Ages, such as those of the tailor and cobbler, have grown into gigantic industries like our modern clothing and shoe manufacturing. In the clothing industry, if we may choose an industry in which the transition to the factory system is still going on, the making of clothing has been split up into many distinct processes, such as sponging, shrinking, finishing, shearing, pressing, cutting, basting, stitching, and many more, and usually these processes are divided into detailed operations, such as the fifty or more distinct cutting operations involved in the making of a man's suit. Highly specialized workers and machines are "detailed" for the performance of these operations. This is what is usually meant by our modern technical division of labor. In a shoe factory, for instance, about 100 workers, each performing some highly specialized task, must coöperate today in the making of each pair of shoes. The making of a plain standard coat in one of the Hart, Schaffner, and Marx factories requires the coöperation of eighty-seven different workers. In a meatpacking plant, such as Armour's or Swift's, from 200 to 250 men are needed to convert a bullock into dressed meat. "The animal has been surveyed and laid off like a map," says John R. Commons, and "skill has become specialized to fit the anatomy."⁸

"In a leading automobile plant," writes another reporter, "the chassis assembly line moves at six feet per minute and has forty-five operations. The first man puts on the mudguard brackets, the motor arrives in the tenth stage, and so on. Some men do only one or two small operations. The man who places a part does not fasten it; the man who puts in a bolt does not put on the nut; the man who puts on the nut does not tighten it. On operation No. 34 the motor gets its gas, having received its oil earlier. At station No. 44 the radiator is filled with water, and at No. 45 a button is pressed, a pair of rollers in the floor under the rear wheels begins to revolve rapidly, the wheels spin, the engine turns over, and the car glides away under its own power with a driver at the wheel."⁹

Specialization of functions within a modern industrial plant is characteristic not only of labor, but also of capital goods. Highly specialized

⁸ "Labor Conditions in Slaughtering and Meat-Packing," in *Trade Unionism and Labor Problems*, First Series (Boston, Ginn and Company, 1905), p. 224.

⁹ W. J. Showalter, "The Automobile Industry," *National Geographic Magazine*, Vol. 44 (1923), p. 390. Inquiry to a leading automobile manufacturer early in 1941 elicited the reply that the above description is still substantially correct.

labor usually means highly specialized machines. Indeed to a large extent the introduction of specialized equipment has been attributable to the division of labor. Whenever industrial processes have been divided into routine operations, and whenever there has been need for the constant unvarying repetition of a single operation, human inventiveness has sooner or later produced a machine to do the work. Such routine tasks are performed better by tireless machines than by periodically tired workers. So specialized are many machines and so complex the operations they perform that many a visitor to a modern woolen mill, locomotive works, or watch factory, for example, receives a weird impression from the magic operations and results of machine industry. Many of the machines seem to possess an extraordinarily high degree of intelligence—which is true enough when we think of the intelligence which their inventors, designers, and makers have expressed in them.

Management, too, no less than labor and capital, is specialized in modern large-scale industry. Industries such as the refining of oil, the production of steel, and the making of automobiles present tremendously intricate management problems, all the way from the assembling of the raw materials to the marketing of the finished product. Specialization in management has been necessary to achieve efficiency. The general manager of a large manufacturing business is today the person who coördinates the managerial functions of many specialists. Working under his direction are many subordinates in charge of various departments of the enterprise, such as the production manager in charge of output; the purchasing agent in charge of procuring supplies and equipment; the employment manager in charge of labor; the sales manager with advertising assistants in charge of the marketing of the product; the treasurer, auditor, and accountant, all concerned with the financial administration of the enterprise.

Territorial specialization. The extent to which specialization has been carried in the modern economic world is strikingly shown in the industrial specialization of regions. Not only individuals, in the selection of their occupations; nor industries, in the division of their work into many functions and operations; but also geographic regions, in the industries they develop, have learned to specialize. Much of this territorial specialization is of course directly attributable to the natural resources of the region, such as the agricultural industries of the Middle West, the coal-mining of Pennsylvania, the cotton-growing of the South, the citrus fruit industry of Florida and California. But some forms of trade and of manufacturing industry also have become concentrated in certain localities. Conspicuous examples are furnished by the prominence of the manufacture of automobiles in Detroit and southern Michigan; of automobile tires in Akron; of meat products in Chicago; of wheat-flour in Minneapolis; of brass and

bronze products, clocks, fire-arms and ammunition in Connecticut; of collars and cuffs in Troy, New York; of shoes in Massachusetts; of wines in California; of beer in Milwaukee and St. Louis. Such territorial specialization has been made possible through the development of modern means of transportation and communication; without them there could have been neither a steady supply of raw materials nor a steady market for finished products. The factors responsible for this territorial specialization vary with different industries and localities. Among the more common have been the proximity of cheap power, supplied by water or coal; availability of raw materials and necessary grades of labor; and accessibility to markets.

Interdependence. The specialization of individuals and communities, so characteristic of modern industrialism, has brought about an interdependence that is unique in the world's history. The object of specialization is greater productivity; the price paid for it is dependence upon others. Specialization always implies a high degree of social organization. It is impossible for individuals and communities to specialize except as they are assured a fairly steady market for their special products and a fairly constant supply of the goods they need. This has been made possible by our modern exchange system, in which, through the instrumentality of money and credit, the commodities and services of one group of specialists are exchanged for those of another. Man is no longer a jack-of-all-trades but a specialist, and as such he is dependent upon others for most of the necessities and comforts of life.

Speculative production. Modern industrialism is speculative. All over the world production is being carried on in anticipation of future demand. Millions of scattered producers are estimating this demand as best they can. If their estimates are correct, their enterprise prospers; if not, it suffers loss. Men are growing wheat and cotton, raising cattle and sheep, digging coal and iron, manufacturing clothing and machinery, all in the hope that they will find a ready and constant future market for their products. In some cases materials are produced years in advance of the time when they will be sold as finished goods. This lengthening of the process of production, removing some groups of specialists much further from the final market for finished goods than was once the case, has greatly increased the elements of uncertainty and risk in business enterprise. It has made production more speculative. Manufactured goods, for instance, may pass from maker to wholesaler, from wholesaler to jobber, from jobber to retailer, and from retailer to consumer. It is the consumer who prompts the activities of all the rest, but those activities in very large part are carried on in anticipation of the consumer's wants. Should there be miscalculation anywhere, someone is bound to suffer loss.

There was a time when production was typically for the special-order customer. Goods passed directly from the hands of the maker into the

hands of the consumer. But modern industrialism has replaced custom production for small local markets with factory production for large general markets. With improvements in transportation and communication the marketing area has constantly grown larger, until today many industries supply a world market. The wider the market for goods, the safer it is to specialize and the further can specialization be carried. But the development of groups of specialists, all estimating the future demands of other groups, has brought about an interdependence of groups and has given to modern production much of its speculative character.

Credit economy. A very striking characteristic of modern economic society is the large part which credit plays. By credit in this connection may be understood a person's ability to obtain something of value in return for the promise of a future equivalent. Credit is an important factor in modern production. As has just been shown, much of our production is conducted on an estimate of future demand. Usually, too, there must be a considerable lapse of time between the original outlay for land, building, machinery, and other equipment, as well as for the ordinary expenses of conducting business, and the eventual receipt of income to cover such expenditures. Customers are not usually either able or willing to pay in advance for the goods they want. Laborers are in no position to wait very long for their wages. Many who supply materials are in almost equally necessitous circumstances. And yet someone must be able to invest capital in this time-consuming process of production, to meet all current expenses, and to wait to the end for his own compensation. This is peculiarly the function of the owners of a business, and from them, it is true, comes a considerable part of the funds out of which the permanent investments are made and the current expenses are met. Nevertheless almost every large business is also a borrower, in part for long-term investment and in part for current operating needs. A very large part of modern productive enterprise is based on the credit furnished by banks and other financial institutions.

Credit is also a most important factor in exchange. By far the larger part of all exchange transactions is done on a credit basis rather than by the direct use of money. Barter, the exchange of goods for goods without the use of money, characterized primitive societies and was revived among modern peoples when faith in money faded and the confidence essential to a credit system faltered. Goods today are to a large extent bought and sold on credit. Sometimes the customer has them charged instead of paying cash. Even when he pays for them at once, the chances are that he will pay for them by means of a check or draft, either of which is a credit instrument. Often payment is made by drawing upon borrowed funds, the credit, perhaps, being furnished by a bank. In all the intricate financial processes of modern production and exchange, credit enters.

One very obvious and far-reaching effect of our credit economy is the financial interdependence it creates. What specialization effects in the field of production, credit effects in the field of exchange—the parts of the system become so interdependent that they are incapable of functioning alone. If men did not borrow to do business or to buy goods, there would be fewer business failures. But men do borrow, constantly and largely. The result is that the solvency of one depends upon the solvency of others; his ability to pay, upon his ability to collect. The inability of important groups to pay their obligations promptly, such as occurred during the depression beginning in 1929, or even the failure of some important single financial institution, affects the solvency and credit of countless others. The almost universal use of credit in this country is the intangible tie that binds us into a business unity and that makes every part of the business community keenly sensitive to the improper functioning of any other part.

Prevalence of group action. Finally it must be pointed out that modern industrialism has led to the substitution to a greater extent of group action for individual action. It is impossible correctly to understand the present industrial system without understanding that the group today holds the place held by the individual 150 years ago. Industry has become so much more complex than it was that individual effort counts for very little except as it takes place in coöperation with others. Employers have come to recognize this fact, and huge corporations and other industrial combinations have been the result. Laborers have come to recognize this fact, and labor organizations have been the result. The substitution of corporate for individual ownership of industry, of organized labor for individual labor, of group initiative and responsibility for individual initiative and responsibility, furnishes the clue to many of the present persistent problems of economic society.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Economic development has been characterized by a movement from economic independence to economic interdependence.
2. The evolution of industry from the days of the guild system to the present has been accompanied by a gradual loss of independence on the part of workers.
3. There are no important reasons for differentiating between the domestic and self-sufficing household economies, since in both cases the work is done in the home.
4. The domestic system of production was characterized by the economic self-sufficiency of each household.
5. Increasing division of labor has paralleled the extension of the market.

6. The master craftsman of the guild system performed the same functions in production as did the merchant capitalist of the domestic system.
7. The root of the modern capital-labor conflict may be found in the separation of the worker from ownership of his tools in the domestic system.
8. The functions of saving and risk-taking were not important during the days of the guild system.
9. The master craftsman of the guild system performed all four functions in production, whereas the performance of these functions is largely specialized in the modern corporation.
10. Modern trade unions can be said to be lineal descendants of the medieval craft guilds, since both organizations were designed to protect the interests of the worker.
11. Modern specialization differs not only in extent but also in kind from that of the guild system.
12. Because of the speculative character of modern production the use of credit has become indispensable to the functioning of our present economic system.
13. Speculative risks in the modern economy have developed with the roundabout process of production.
14. At the present time the further utilization of machine technique and of specialized methods of production is limited chiefly by the extent of the market.
15. Group action is more characteristic of modern industrial organization than it was of the guild system.

B

1. Show how the guild system, the domestic system, and the factory system differed in the following particulars:
 - a. Ownership of raw materials
 - b. Ownership of tools and machinery
 - c. Ownership of the work-places
 - d. Control over the labor-power
 - e. Work of superintendence and management
 - f. Control of the marketing
2. The functions of working, saving, risk-taking, and management are essential in production, whether production is organized as the guild system, domestic system, or factory system.
 - a. Show how all four functions were at one time performed by a single individual.
 - b. Explain how the last three of these functions came to be discharged by specialists rather than by the worker.
 - c. Are the functions all performed by distinct producers today? Illustrate.

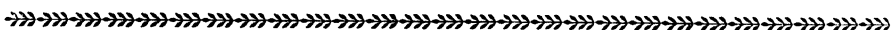
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CHAPTER V

The Business Organization of Production



THE NATURE OF BUSINESS

SINCE ALMOST every productive activity is designed to yield income, it follows that almost every form of productive activity has its business side. Business is primarily acquisitive. This is not to imply that business is not productive, for almost all acquisitive enterprises are also productive. But certainly the quest for gain is the essence of business. Business men are engaged in selling goods or the rights to use goods in the expectation that they will gain by these transactions. Many good producers are poor business men. This has notoriously been true of large numbers of farmers. No matter how excellent a farmer may be in the raising of grain or of livestock, unless he has learned how and when to market his products to advantage he will have to suffer a loss on his operations which may drive him from the productive field altogether. Many small shopkeepers do not really know what it costs them to do business, and consequently they often fail. Incidentally, it may be said, men who fail often are sometimes shrewd business men, whatever may be said of their morals. Many professional men are lamentably weak in their business activities, however excellent they may be in their professional work. Some men naturally have "an eye to business," others, in accordance with an old Chinese proverb, find that "It is easy to open a shop but hard to keep it open."

There are three important and widely prevalent forms of business organization: the sole proprietorship, the partnership, and the corporation. Of these the first two have been most numerous, but the third is now most distinctive of the modern business world. There are still other forms, but they are of minor importance and illustrate no essentially different principles of business organization.

THE SOLE PROPRIETORSHIP

The sole proprietorship is the primary form of business organization from which all others have developed. It is a business owned and con-

trolled by one person. In its earliest stages all the functions of the business enterprise were performed by the owner. The sole proprietorship was the prevailing type of business organization in the Middle Ages; the merchants and the craftsmen of those days, though organized into guilds, were mostly sole proprietors. It is still the most frequently found type of business organization in this country. Most of the 5,859,169 farms in the United States in 1945, whether operated by owners (full owners 56.3 per cent, part owners 11.3 per cent) or by tenants (31.8 per cent), were sole proprietorships in their form of business organization.¹ Most repair shops, small retail businesses, and professional activities are conducted by sole proprietors. Sole proprietorships are not necessarily small businesses. The Wanamaker Stores of New York and Philadelphia are an outstanding example of a sole proprietorship which grew to be one of the two or three largest businesses of its kind in the world. The corporate form was not adopted until 1907 and 1909, long after this preëminent position had been attained.

Advantages. In considering why a given business should be organized in one way rather than another, it is necessary to examine the advantages and disadvantages of the various types of business organization. What distinctive advantages does the sole proprietorship have? In no other business unit are financial interest, control, and responsibility so fully vested in a single person. Such combination of ownership and management in a single person is conducive to business efficiency, if the person is competent, for no one is more vitally interested in the successful management of a business than the owner. Ownership directly stimulates prudent management, for it is the owner who either makes a profit or sustains a loss. A second advantage is furnished by the ease with which such a business can be organized and dissolved. No articles of agreement are necessary as in a partnership, and no charter is required as in a corporation. The business begins and ends at the pleasure of the owner.

Disadvantages. But there are three important disadvantages. The first is limitation of capital to whatever the owner can furnish or has the credit to borrow. This may be entirely adequate for many enterprises, but most growing businesses sooner or later need additional capital, and this need may strain the resources and credit of the proprietor beyond the breaking point. The second is unlimited personal liability for the financial obligations of the business. Whoever goes into business for himself risks all that he has. The law does not permit a man to segregate his private property, risking some in the enterprise of which he is the sole proprietor and safeguarding the rest. In the event of the failure of the business, all of his property, barring certain small exemptions stipulated in our federal and state bankruptcy laws, whether invested in the business or not, may

¹ *Statistical Abstract of the United States*, 1949, p. 623.

be taken in the satisfaction of the claims against the bankrupt business. The third is limitation of management to the managerial skill supplied by the owner or to the managerial ability that he can afford to hire. High-class managerial ability, however, is so much in demand that most sole proprietors cannot pay the price necessary to obtain it; and what is more, many men of real executive ability either prefer to go into business for themselves or at least to become associated with a business in which they can acquire some financial interest. The disadvantages of the sole proprietorship are such that it is usually restricted to small-scale enterprises for which the capital, credit, and managerial ability of the owner are sufficient.

THE PARTNERSHIP

Nature. The partnership as a form of business organization is an association of two or more individuals who are severally and jointly responsible for the enterprise. It substitutes a group of persons for an individual as the joint owners and managers of a common enterprise. The partners may have whatever agreements they please among themselves. Some may be "general" partners, having full voice in the management of the business, as well as full liability for its obligations; others may be "silent" or "sleeping" partners, their participation being restricted to sharing the gains and losses. The partners may contribute very unequally to the capital invested in the enterprise and may share the income very unevenly. Whatever the valid agreements binding among themselves, every general partner in an ordinary partnership is personally liable for all the obligations of the partnership to outsiders. The laws of some states and countries recognize partnerships in which there is limited liability, but such partnerships are not much in vogue in this country because almost all their purposes can be better achieved by corporations. A partnership is not a legal entity, that is, a being having all the rights and duties of a person before the law. Legal action must always be brought by and against the partners as individuals. In the business world, on the other hand, the partnership operates as a single unit.

Advantages. The partnership, like the sole proprietorship, combines ownership and management in the persons of those most directly interested in the business. It is accordingly well adapted to enterprises in which the personal efforts or services of the owners are the most important factor. It is a common form of business organization among professional men, such as lawyers, physicians, consulting engineers, building contractors, and accountants, and is also to be found in many moderate-sized mercantile and manufacturing establishments. There is in the partnership a direct correlation between effort and income, which spurs the owners on to give to their common enterprise the best management they can. A second

advantage which the partnership shares with the sole proprietorship is the fact that it is easily established and dissolved. Unlike the sole proprietorship, the partnership is not limited in its command over managerial ability. Young men with business brains can usually be found when they are needed, and membership in the firm generally proves attractive to them. There is usually sufficient elasticity in the contractual relations of the partners themselves to provide an acceptable place for whatever type of man is needed. The partnership is also relatively free from state regulations, which is an advantage that appeals particularly in certain types of business.

Disadvantages. Limitation of capital, and consequently unadaptability to the largest enterprises, is a disadvantage of the partnership no less than of the sole proprietorship. The relations of business partners are highly personal. Every member of a partnership must be acceptable to all the rest. A man may have the capital needed by the growing business of a partnership, but if in ability and character he is *persona non grata* to the present partners, his admission to the partnership is inadvisable, if not impossible. On the other hand, a man may be most acceptable, but if he lacks capital and it is capital that the partnership needs, his addition to the firm would serve no useful purpose. The fact is, if a partnership needs new capital beyond the ability of the partners themselves to furnish or to borrow it, new partners must be found who can supply the capital and at the same time prove personally acceptable. Such necessity is apt to unfit the partnership form of business organization for the largest enterprises.

The disadvantage of unlimited personal liability is even greater in the partnership than it is in the sole proprietorship. If an individual owner comes to grief, his misfortune is at least due to his own lack of ability or mistakes in judgment. A general partner, on the other hand, is personally liable for all the business blunders of his associates. It often happens that some of the members of a partnership have private assets in addition to what they have invested in the firm, while other partners have none. If the partnership should fail, such private assets can be taken in settling the debts of the partnership. Choosing a business partner, like choosing a partner in matrimony, is a serious undertaking. Both partnerships are "for richer, for poorer, for better, for worse." But while a man cannot legally have more than one wife (at least at a time), there is no limit to the number of his business partners, and since the business indiscretion of any one of his associates may jeopardize his private funds, his personal liability is correspondingly greater.

A third disadvantage of the partnership compared with the corporation is its instability. The highly personal character of the partnership is responsible for this. The death of a partner, the insolvency of a partner in private business not connected with the partnership, the withdrawal

of an old partner, or the admission of a new one may dissolve the partnership unless an agreement satisfactory to all concerned can be reached.

Such disadvantages obviously greatly restrict the use of the partnership form of business organization, practically limiting it to enterprises in which the personal services of the owners are a necessary and preponderant element. Conspicuous examples of partnerships are furnished by Dillon, Read and Company, one of the country's leading investment brokers, and Price, Waterhouse and Company, a prominent firm of accountants. As a form of business organization in the United States, the partnership is declining in relative importance.

THE CORPORATION

Nature. A business corporation is an association of individuals known as stockholders, sanctioned by government and empowered by charter, through a board of directors and under a corporate name, to act as one person in the conduct of a specified business. A corporation is a legal person entirely separate from its members—an artificial person created by the state. In carrying on the enterprise for which it was created, a corporation may buy and sell property, borrow and lend money, enter into contractual relations, sue if necessary and be sued if someone has cause for action, all in its own corporate name and capacity, without in any way involving its officers or stockholders as individuals. According to their chief purpose corporations are of two types: non-stock corporations, which are not conducted for private gain; and business corporations, which are conducted for the private profit of their stockholders. Municipal governments and other political subdivisions of the state, educational institutions, scientific societies, religious bodies, and charitable institutions are usually chartered as non-stock corporations. Business corporations organized for profit prevail in the fields of large-scale manufacturing and merchandising, lumbering and mining, transportation and other public utilities, and banking and insurance.

Importance of corporations. Business corporations first developed in Europe during the sixteenth century, and became fairly common during what is sometimes called the "business revolution" of the seventeenth century. They were long in disrepute because so often used for fraudulent purposes. Today, however, the corporation is the world's leading form of business organization. Its growth in the United States has been most rapid during the past century. Dun and Bradstreet, Inc. (which is a commercial agency furnishing the credit rating of all types of business which are possible seekers of commercial credit in this country), in 1950 listed over 2,600,000 business enterprises. Of this number perhaps 20 per cent were corporations. The Sixteenth United States Census (1940) shows that

in 1930 corporation-owned plants produced 89 per cent of the country's mineral output and 92 per cent of our manufactures.² Practically all of our lumber and oil, electric power and light, and railway, telephone, and telegraph service are supplied and controlled by corporations. Large department stores and chain-stores, requiring huge sums of capital, make the corporation's further invasion of the field of merchandising inevitable. Only in agriculture and professional service has the corporation failed to make much headway.

The importance of the corporation in our modern economic life is evidenced not only by the large percentage of the nation's annual income produced in corporation-owned plants, but also by the large and constantly growing number of people who own the stocks and bonds of corporations. While no official census of stockholders in the United States has ever been taken (except to the extent that income tax returns record the list), it has been estimated that there are over fifteen million. There is a distinct movement away from the "close" corporation, the stock of which is held by a few persons, and toward the "open" corporation, the stock of which is freely bought and sold on the stock-exchanges of the country. Armour and Company, the country's largest meat-packing company, was a very "close" corporation, indeed a strictly family affair, for nearly fifty years after its founding in 1870. It was not until 1918 that its stock was even listed on a stock-exchange and a public market thereby provided for the corporation's securities. The American Telephone and Telegraph Company is at present the most "open" corporation in the United States, in the sense that it has the widest distribution of stock. Toward the close of 1950 it had 982,000 stockholders. Of the total stockholders 780,000 held less than 100 shares each. No stockholder owned as much as one half of one per cent of the total stock. The average number of shares held was thirty. While the number of individuals owning the stocks and bonds of corporations is very large, indirectly an even larger number of persons is interested, because among the owners of the securities of corporations are included many insurance companies and financial institutions, which are themselves the custodians of the savings of many people.

How corporations are established. The establishment of corporations is today largely a matter of routine. It no longer requires a special act of a state legislature, for every state has now provided for incorporation under general corporation laws. Any group of persons (the minimum number, usually three or five, being specified by law) who have decided to form a corporation may submit articles of organization to the secretary of state or other state officer designated to receive them, and ask permis-

² *Sixteenth Census of the United States (1940), Mineral Industries, I, p. 17; Manufactures, I, p. 229.*

sion to incorporate. As soon as the application has been approved and filed, the charter of the corporation is granted.

The chartering of a corporation by any state does not *ipso facto* give the corporation any right to do business elsewhere. As a matter of fact, however, many corporations do most and some do practically all of their business outside the state granting them a charter. In practice there is "interstate and international comity" which permits corporations that are "foreign" to a given state nevertheless to do business with that state. As a consequence many corporations have found it to their advantage to incorporate in states whose laws and regulations pertaining to corporations are liberal. New Jersey, until the revision of its corporation laws in 1913, was a prime favorite, largely because the state combined lenient laws with proximity to the financial center of the country. Delaware is a much favored corporation home today; indeed this little state, with only a few hundred thousand people, has not inaptly been called the country's "corporation bargain counter" because it has issued the most liberal charters in exchange for franchise taxes. The legal domicile of a corporation in a state may consist of nothing more than a so-called "principal business office" maintained in the quarters of some trust company. Trust companies in Jersey City and Wilmington, for example, are the legal residences of hundreds of corporations. Here legal papers may be served and the annual meeting may be held, but of course the real business of the corporation is conducted elsewhere. It is quite possible and sometimes very desirable for a state to require conformity to its own standards on the part of so-called "foreign corporations." The State of Wisconsin did this to the advantage of all concerned after many irregularities had been discovered in the practices of insurance companies during the period 1905-1907.

Many businesses organized as corporations make it a practice to set that fact forth in their legal names. Sometimes the word "corporation" itself appears, as in the name of The United States Steel Corporation. More frequently the abbreviation "Inc." (meaning "incorporated") is used, as in Pullman, Inc. The British use the abbreviation "Ltd." (limited), as in The Macmillan Company, Ltd.; the Germans often add the letters "G. m. b. H." to the name of a corporation, the letters standing for *Gesellschaft mit beschränkter Haftung*; the French designation for corporation is *société anonyme*, but as a rule neither the term itself nor an abbreviation appears in the name of the business so organized.

The government of a corporation. In form the government of a corporation is a representative democracy; in substance it is often a self-perpetuating autocracy. The stockholders of a corporation usually have the right to vote, but voting may be restricted to a single class of stockholders. A voting stockholder usually casts as many votes as he holds shares of stock. Voting takes place at the annual or special meetings of

stockholders. Not infrequently the larger the corporation, and the more widely scattered its stockholders, the briefer and more perfunctory is the meeting. In such meetings the overwhelming majority of the stockholders are conspicuous by their absence. They may, however, be represented by proxies, if they have not been too indifferent to execute proxy certificates. A majority of the voting stock (and sometimes even more) must be represented either in person or by proxy for binding action to be taken at either annual or special meetings. Power often becomes concentrated in the hands of a very few men. Corporations the stock of which is widely distributed, while retaining the outward form of representative government, are autocracies in fact. Those in control of the corporation may never abuse the confidence placed in them; indeed they may prove benevolent autocrats in watching over the interests of minority stockholders and others; but the fact remains that, through the indifference of stockholders or their inability to cooperate, a comparatively small fraction of the total stock often gives control over the affairs of the corporation.

The election of a board of directors, supposed to represent them, is usually the most important business in which the stockholders, in person or by proxy, participate at the annual meeting. This done, the average minority stockholder pursues a policy of watchful waiting for dividends which he hopes efficient management will be able to earn and the board of directors see fit to declare. The board of directors is first of all the representative assembly of a corporation, but in addition to legislative functions it also exercises judicial and executive powers. It is the ultimate source of authority in the management of the corporation. It determines fiscal and other policies, declares or "passes" dividends, and elects the active officers of the corporation. The president, vice-president, secretary, treasurer, or such officers as the corporation may have, as well as the executive and finance committees, are all responsible to the board of directors. General and department managers, such as production, sales, personnel, purchasing, financial, and accounting managers, if they are needed, may be appointed by the board or the officer to whom such subordinate officials are directly responsible. Since busy men who serve on several and sometimes even on a score or more of boards of directors cannot possibly keep thoroughly informed concerning all of them, it not infrequently happens that the actual direction of the affairs of a corporation is assumed by some one person, such as an energetic chairman of the board or president of the corporation, the board largely restricting itself to the criticism or approval of his actions and policies. In form, then, the government of corporations is democratic; in practice it is often oligarchic or autocratic.

Advantages of the corporate form of business organization. The phenomenal growth in the number and importance of corporations in the

United States during the past century would not have occurred except for distinct advantages which the corporate form of business organization has to offer. What are these advantages? More than any other form of business organization the corporation is in a position to command whatever capital is needed for the largest enterprises. The steady industrialization of economic society during the past century and a half and the extensive introduction of large-scale methods have necessitated the accumulation and use of vast amounts of capital. The corporate form of business enterprise, the capital of which can be split up into small unit shares, is sufficiently flexible to use the hundred dollars of a person who has little to invest as well as the millions of a multi-millionaire. The pooling of the funds of thousands of investors, large and small, makes the corporation equal to the financial challenge of any socially necessary undertaking.

What appeals to the prospective investor in the stock of a new corporation is the fact that his liability for the obligations of the corporation is limited to the par value of the stock he holds. The holding or transfer of fully paid-for shares of stock is without further liability on the part of the stockholder. This advantage of limited liability which the corporation has over the sole proprietorship and the partnership is the only condition on which the investor with small means can possibly afford to become a minority stockholder. The possible failure of the corporation, through no fault of his own, might otherwise wipe out his entire assets. It is the limited liability which it can promise each stockholder that helps to give the corporation control over practically unlimited amounts of capital.

A third advantage of the corporate form of business enterprise is its stability. While composed of individuals, its life is independent of the personal fortunes of individual stockholders. The retirement or insolvency of the average stockholder means little or nothing to a corporation. The death of a prominent stockholder and officer like James J. Hill, who had been active in the direction of the Great Northern Railroad and heavily interested financially in the Northern Pacific and the Chicago, Burlington, and Quincy, while a great loss to these railroads, did not in any way affect their permanency. The life of a corporation is limited only by the state granting the charter; and while few states today charter corporations in perpetuity, the renewal provisions are so liberal that most corporations enjoy an indeterminate existence. Courts, however, may terminate the life of a corporation for violation of law; creditors may force it into bankruptcy or effect a reorganization; and the stockholders themselves may vote to dissolve the corporation.

Investment in corporate securities is further attractive because of the perfect freedom and relative ease with which such securities can be transferred from one person to another. They can be freely transferred because

the average stockholder's relation to the business of the corporation of which he is part owner is highly impersonal. They can be easily sold because the stock-exchanges furnish a fairly constant market for the securities of the country's most important corporations.

A fifth advantage of the corporation is its freedom in procuring the most efficient management obtainable. As a corporation grows in size, ownership and management tend to diverge. While the largest stockholders may serve as directors and officers of the corporation, the active management of the various departments of the operating organization, which produces the commodities or services of the corporation, is likely to be in the hands of managerial experts. These specialists in management may or may not be members of the corporation, although they frequently acquire some financial interest in it. In the partnership, on the other hand, the partners themselves usually fill the most important managerial positions, which, for reasons already cited, greatly limits the range of choice.

Disadvantages of the corporate form of business organization. There are few insurmountable disadvantages, from the standpoint of the stockholder, in the corporate form of business organization. The rapid growth in the number of corporations, including almost all the largest enterprises, is sufficient evidence of this. Perhaps the greatest danger lurks in the possibility that hired managers may not feel the spur that owners do, or at least not feel it in the same degree. Much depends upon the type of men employed, the rewards offered them, and the opportunities afforded them of acquiring some financial interest in the business for themselves. It is unquestionably true, however, that "absentee capitalism," the separation of ownership from control of capital, removes a check on inefficiency and an incentive to enterprise which the owner-manager has.

What is more, the corporation furnishes the opportunity for such concentration of control that exploitation of minority stockholders is relatively easy if directors and officers prove unscrupulous. While many corporation officials today regard themselves as virtual trustees of the interests of stockholders, abuses of power have been much too common in the past. Among such violations of trust have been the payment of exorbitant salaries to officers; profiting on the part of officers by the purchase or sale of securities through the possession of information temporarily withheld from the rest of the stockholders; and their committing the corporation to contracts in which directors or officers had a private interest. While stockholders can seek relief through the courts, most questions of internal corporation management are beyond the province of the courts. As a New York court decision has substantially expressed it, a board of directors may be compelled to act honestly, but not wisely.

A third fact, which many regard as a disadvantage of the corporate form of business organization, is governmental supervision and control.

Numerous reports are required by local and federal governments; many regulations are imposed governing the operation of corporations; and increasingly corporations have become subject to heavy taxation. The exactions of government, and the fear of what the future may bring, have deterred some businesses from incorporating.

From the social rather than the investor's point of view, it may be remarked in passing that corporations have the disadvantage of being rather impersonal in their relations to the public. While corporations are persons before the law, and while their affairs are administered by men and women, there is some ground for the widespread feeling that corporations are "soulless" beings. The average stockholder's relation to the corporation of which he is a part owner is highly impersonal. He is apt to be ignorant of the corporation's dealings with its workers, customers, and the general public. While as an individual he might emphatically disapprove of certain corporation practices, his ignorance of the situation makes his private code of morals of no particular help in the development of corporate morality. In practice he is apt to be indifferent to everything but dividends, which he expects good management to earn. The managing officers, on the other hand, who represent the owners of the business, are apt to feel that their primary responsibility is to the stockholders. Men have been known as corporation officials to sanction practices which they would have regarded as quite beneath them in their private relations. Much progress is being made, however, in bringing home to corporation directors and officials a sense of personal responsibility for the practices of the corporations they are managing.

Corporation capital and the securities issued to represent it. The concrete capital of a corporation, as well as of any other business enterprise, consists of all wealth or property held for procuring income for its owners. In the business world any property held for procuring income rather than direct enjoyment for its owner is capital, whatever its origin and whatever its concrete form. It may originally have been produced by man or merely have been appropriated by him. It may find expression in such tangible material goods as land, buildings, tools, machinery, raw materials, and finished goods; or in such intangible goods as franchise privileges, patent rights, and goodwill. Its legal ownership may be evidenced by stocks, bonds, notes, deeds, or other instruments conveying title. Its value may be measured in dollars, and this monetary equivalent of the concrete forms of capital constitutes the total assets or resources of a corporation or other business enterprise.

In a somewhat narrower sense, capital means the long-term investment in a business enterprise. The capital of a corporation may all be owned by the stockholders, or it may be partly borrowed. The term "gross capital" is sometimes used to describe the investment of the owners plus their bor-

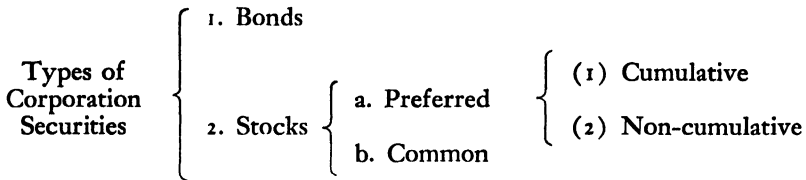
rowed capital, and "net capital" to indicate that part of the capital of a business unit which is owned by the proprietors themselves. The Eastman Kodak Company and General Motors Corporation—two conspicuous examples—have no funded debt, which means that they have no borrowed capital invested in the business requiring repayment at the expiration of a stated period of years. Almost all our railway corporations, on the other hand, have heavy funded debts—they are operating in large part with borrowed capital.

Capital stock is the term customarily used to designate that part of the permanently invested capital of a business enterprise which has been contributed by the owners themselves. The original investment in the capital stock may be increased, if opportunities for new stock subscriptions are offered, or if surplus earnings, which belong to the owners, are allowed to remain invested in the business and are made part of the capital stock. On the other hand, the capital stock may become impaired through disastrous business operations resulting in heavy losses. A corporation, for example, may have capital stock of \$1,000,000, representing the original investment in it. If stockholders are given the right to subscribe to new stock to the extent of 50 per cent of their holdings and exercise these rights, the capital stock will then be \$1,500,000. If after a lapse of years \$500,000 of accumulated earnings are permanently invested in the business, the capital stock may be increased to \$2,000,000. Should the corporate enterprise meet with reverses and incur a loss of \$400,000, that cannot otherwise be provided for, its capital stock would be correspondingly impaired and actually amount to only \$1,600,000. This may necessitate action by the corporation resulting in a revision of the outstanding capital stock to \$1,600,000. Sometimes the amount recorded as capital stock is inflated; the deception may be hidden by writing-up or overvaluing the assets of the corporation. If such practices have been countenanced, the entry for capital stock does not represent the real contribution of stockholders to the invested capital of the enterprise.

The ownership of corporation capital is divided into parts or shares and is evidenced by stock certificates of ownership. A stock certificate may be issued by the appropriate officers of the corporation for any designated number of shares, which may be freely transferred from one person to another. If the corporation has borrowed funds to invest in the business, the usual procedure is to issue bonds, which are instruments binding the company to pay back the borrowed sums at a stipulated time. Stocks are entrepreneurial or ownership interests in the corporation, representing permanent investments in the business. Bonds are creditor interests representing loans to the business for a limited period of time. The earnings of a corporation paid to its stockholders are called dividends; the return on bonds is interest. Stocks and bonds together are commonly

known as securities. They are freely transferable, and consequently it is possible for any investor, large or small, to acquire an interest in almost any large corporation at any time, and to dispose of his holdings with equal ease.

Corporate securities may broadly be classified as follows:



Bonds. Stocks and bonds are of many different kinds so as to appeal to all types of investors. They differ widely in the assets supporting them, in the priority of their claims upon income, in the degree of risk which their ownership involves, and in the control which their owners have over the corporation. Since bonds are always a promise to pay and since most persons do not care to lend their funds except upon reasonable security, it is usual for bonds to have some definite supporting value. The underlying security of a bond may be a mortgage on all or part of the property of the corporation, which makes it a *mortgage bond*. It may be the securities of other corporations owned by the corporation issuing the bonds and pledged as collateral security for payment of the bonds, which makes them *collateral trust bonds*. It may be equipment, such as the rolling stock of railways, which makes them *equipment bonds*. It may be merely a prior claim on future earnings, which is the essence of *income* or *debenture bonds*. Such bonds resemble unsecured promissory notes. The bondholder as a rule not only has prior claim upon the assets of a corporation but also upon its earnings. The claims of creditors, including bondholders, must always be met before the owners of a corporation (the stockholders) can take anything for themselves. The penalty of not meeting obligations to creditors is foreclosure and bankruptcy. Since the bondholder's claim upon assets and earnings is prior to that of the stockholder, the bonds of a given corporation involve less risk than its stocks.³ While the bondholder occupies a favored position as to assets and earnings and consequently carries a smaller risk than the stockholder, he has no voice in the management of the corporation. Only if the corporation proves insolvent do the bondholders, as the largest creditors, assume control of the enterprise. In such case if the business is kept going and is successfully reorganized, it not infrequently happens that the bondholders emerge as the stockholders of the reorganized company.

The illustration on the following page shows one type of bond.

³ Income or debenture bonds, which practically shade into stocks, have a prior claim upon earnings but not upon assets.



UNITED STATES OF AMERICA

AMERICAN

0000

0000

1000



1000

TELEPHONE AND TELEGRAPH

COLLATERAL TRUST 4 PER CENT BOND

For Value Received the American Telephone and Telegraph Company will pay to the order of its Treasurer at New York N. Y. the bearer hereof or in case of registration to the registered holder hereof — **One Thousand Dollars** — in lawful money of the United States, on the first day of July in the year nineteen hundred and twenty nine with interest at the rate of four per cent per annum payable semi-annually on the first days of January and July in each year to the bearer of the coupon or record coupons or presentation and surrender thereof.

This bond is one of the bonds secured by the indenture of trust of even date herewith between said American Telephone and Telegraph Company and the Collateral Trust Company under which certain shares in the capital stock of certain telephone corporations and other securities of said corporations, the property of said American Telephone and Telegraph Company have been vested in said Trust Company to which and in favor of which reference may be had for the rights of the holders of bonds secured thereby.

This bond when payable to bearer may be registered on the books of the American Telephone and Telegraph Company in the name of the holder and such registration shall be in full hereon. This certificate shall pass only by transfer registered on the books of the Company and certified hereon by the Treasurer and/or any authorized officer or officers shall have become registered and certified. Such registration shall apply only to the principal of this bond and not to its coupons.

This bond shall not be obligatory until the said Trust Company has signed the certificate endorsed hereon to the effect that it is one of the bonds described in the indenture of record.

In Witness whereof the American Telephone and Telegraph Company has caused its corporate seal to be hereof fixed and this obligation to be signed by its President and Treasurer, and the coupons hereof annexed to be authenticated by the name of said Treasurer at New York N. Y. this first day of July in the year Eighteen Hundred and Twenty nine.

• SPECIMEN •

ONE THOUSAND DOLLARS
1000

• SPECIMEN •

COLLATERAL TRUST BOND OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY

Preferred stock. The control over a corporation very properly rests with the stockholders who are its owners. In practice, however, it has often seemed desirable to differentiate risk and control even among the stockholders. Under such circumstances it is usual for a corporation to issue two kinds of stock: preferred and common. The issuance of preferred stock with the stipulation that its owners shall be paid a designated rate of return from the earnings remaining after the bondholders have been paid, but before the common stockholders are paid anything, usually arises out of the necessity of catering to a group of investors who desire a higher return than it is ordinarily possible to obtain from first-class bonds and yet who wish to avoid some of the risks inherent in common stock.

The claim of the preferred stockholder upon the earnings of a corporation that are available for distribution is of course inferior to that of the bondholder, but superior to that of the common stockholder. As to dividend rights, preferred stock is of two types: *cumulative* and *non-cumulative*. If a corporation has issued cumulative preferred stock, it is under obligation to pay the holders thereof each year the return promised—7 per cent for instance—before paying any dividends to the holders of common stock. If unable to do so in any year, the dividend arrears of that year must be paid out of the earnings of subsequent years before the common stockholder can get anything. The United States Steel Corporation was 15 per cent in arrears at the close of 1935 in meeting its dividend obligations on its 7 per cent cumulative preferred stock. The arrears were cleared up in August, 1937, and dividends on the common stock were resumed regularly beginning in 1940. On December 25, 1945, the American Woolen Company was 58¾ per cent in arrears on its 7 per cent cumulative preferred stock. The arrears were cleared up in 1946 by the issuance of new preferred stock in exchange for the old plus the payment of the balance in cash. If the preferred stock is of the non-cumulative kind, however, the owner has the promise that *in any given year* his dividends at the specified rate must be paid before the common stock can be paid anything; but if the corporation is unable to pay the dividends in any given year, it is under no obligation to make up the arrears in any future period. The preferred stock of the United States Rubber Company is 8 per cent non-cumulative. No dividends were paid from January, 1929 to December, 1938. The dividends which the company “passed” during that decade were permanently lost to the preferred stockholders.

Preferred stock is usually paid a fixed return—a specified annual rate on the stock’s par value, which is generally \$100. The United States Steel Corporation pays 7 per cent and no more on its preferred stock. Occasionally preferred stock has a participating feature, entitling it to share with the common stock any earnings beyond a designated rate of return. While preferred stock is usually restricted to a specified rate of return, it

should also be understood that this return is in no way guaranteed. All that the preferred stockholder has is the assurance that his dividends at the specified rate will be paid before the common stockholder gets anything.

Not only does the preferred stock have rights to dividends that take precedence over those of the common stock, but it usually also has prior claims upon the assets in the event of the failure of the corporation. The risk of owning it is therefore less than the risk of owning common stock. Because of the smaller risk he carries as to the payment of dividends and as to the security of his investment, the preferred stockholder is frequently denied voting power in the meetings of the corporation. On the other hand, in many corporations, such as the National Lead Company, preferred and common stockholders have equal voting rights, share for share.

Common stock. The holders of the common stock of a corporation are the residual claimants to its earnings and assets. They have no right to either until all other claims are satisfied. They assume the greatest risk of loss and accordingly expect to have the surplus profits. The final equity in the business resides in them. Control over the corporation is the condition, and the chance to make indeterminate profits is the reward, which they ask for the risk they assume. The common stockholders of many corporations have received nothing for years; and again, many have received large dividends, 30, 60, and 100 per cent. It is the common stock of a corporation that has the greatest speculative possibilities.

Common stock may have a face or par value of a specified number of dollars per share, or it may carry no assigned nominal value at all, in which case it is known as no-par value stock. Some of the well-known railway common stocks, such as those of the Illinois Central, Union Pacific, and Atchison, Topeka, and Santa Fe, have a par value of \$100 per share; the common stock of the Pennsylvania, however, has a par value of \$50 per share, and that of the New York Central is no-par value stock. Shares with a par value of \$10, such as those of General Motors and the F. W. Woolworth Corporations, and of \$5, such as those of the General American Transportation Corporation, are not uncommon. The par value of a share of stock multiplied by the number of shares of such stock outstanding represents the figure at which such kind of stock is entered in the capital stock of the corporation. No-par value stock is now issued more often than par value stock. Preferred stock may also have no-par value, but preferred stock with par value is more usual. The issuance of no-par value stock enables the corporation to avoid the appearance of putting an official valuation on stock the real value of which, regardless of its par value, is determined by constantly changing earnings. Shares without par value represent merely a proportionate claim upon earnings and a proportionate equity in the assets of a corporation after all liabilities have been met. Sears, Roebuck and Company is a well-known corporation which has



COMMON STOCK CERTIFICATE OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY

issued stock without par value. Although issued without par value, such stock must of course be carried at some stated value on the books of the corporation and so entered on its balance-sheet.

Some corporations issue but a single type of stock, which is then, whatever it may be called, common stock. This is true of the American Telephone and Telegraph Company, a stock certificate of which is shown on the preceding page.

What the financial statement of a corporation shows. The meaning of "capital stock," "bonded debt," and many other items can be made more concrete by examining the statements of corporations. Sometimes it takes an expert accountant to construct them and even more to interpret them, but the surface facts at least ought to be intelligible to any interested reader. There are two accounting statements of interest in this connection: the financial statement or balance-sheet, and the operating statement showing profits made or losses incurred.

The financial statement or balance-sheet is a statement of the assets and liabilities of a business on a given date. Under assets are included what the business *owns*, the total value of its resources; under liabilities, what the business *owes*, the amount of its obligations. Such a statement can be drawn up at any time from the ledger records of a business. The balance-sheet has not inaptly been described as a photographic snapshot of a business on a given date.

The statement on pages 94 and 95 of the assets and liabilities of Sears, Roebuck and Company is typical of the information furnished by a balance-sheet.

Most of the items on this balance-sheet are self-explanatory. An important grouping of accounts on the assets side, commonly made by corporations in drawing up their financial statements, is that listed under the heading of *current assets*. These stand in contrast to *fixed assets*, which in the accompanying Sears, Roebuck and Company statement are chiefly represented by land, buildings and equipment. Current assets represent cash or what is fairly readily convertible into cash. Fixed assets represent the more permanent investments in the business.

Liabilities may also conveniently be grouped under several general headings, the chief of which are *current liabilities* and *fixed liabilities*. Current liabilities represent relatively temporary obligations of the business, such as accounts payable for materials or services. Fixed liabilities include the obligations of a corporation to its bondholders, the holders of its funded debt. Obligations to stockholders include both the capital which they have invested (the capital stock) and the earnings which have been allowed to remain invested in the business (surplus). In strict construction the capital account of a business with its owners is not a legal liability, but it is general practice in corporate financial statements not to list the pro-

SEARS, ROEBUCK AND CO. AND CONSOLIDATED

ASSETS

January 31, 1950

CURRENT ASSETS:

Cash		\$190,008,871
Marketable Securities (<i>Market Value</i> \$9,591,414)		4,945,582
Accounts and Notes Receivable:		
Customers Installment Accounts	\$390,048,602	
Less accounts sold to banks (less Company's equity therein)	<u>302,570,068</u>	
	87,478,534	
Other Customers Accounts	13,658,532	
Manufacturers and Miscellaneous Receivables	<u>13,465,378</u>	
Total	114,602,444	
<i>Less estimated Collection Expenses and Losses on Installment Accounts and Other Receivables</i>	<u>39,339,124</u>	75,263,320
Inventories— <i>At lower of cost or market</i> .		321,396,365
Prepaid Advertising and Other Charges .		<u>13,672,596</u>
Total current assets		605,286,734

INVESTMENTS AND ADVANCES:

Unconsolidated Subsidiaries:		
Insurance Companies	4,848,347	
Foreign Subsidiaries	19,783,521	
Other Investments and Advances	<u>8,608,605</u>	33,240,473

FIXED ASSETS (AT COST):

Land		23,370,155
Buildings	173,528,515	
Less <i>accumulated depreciation</i>	<u>56,914,238</u>	116,614,277
Furniture, Fixtures and Equipment	93,619,874	
Less <i>accumulated depreciation</i>	<u>63,674,629</u>	29,945,245
Total fixed assets		<u>169,929,677</u>
		\$808,456,884

SUBSIDIARIES CONSOLIDATED BALANCE SHEET

LIABILITIES

January 31, 1950

CURRENT LIABILITIES:

Accounts Payable	\$ 43,592,543
Due Customers—Refunds and Unfilled Orders	16,812,174
Federal Taxes on Income	76,000,000
Accrued Taxes Other Than Federal Income Taxes	24,463,562
Other Accruals	<u>32,872,595</u>
Total current liabilities	193,740,874

CAPITAL STOCK—WITHOUT PAR VALUE:

Shares

Authorized	24,000,000	
Issued and Outstanding	<u>23,646,513</u>	191,298,972

ACCUMULATED EARNINGS

423,417,938
\$808,456,884

proprietary interest separately, but to include it in the corporation's liabilities. The item *surplus* appears on the liabilities side to offset gains in assets derived from successful business operations. It is out of profits that dividends are periodically declared and paid. If all of the profits are not distributed as dividends, it is common corporate practice to transfer part or all of the remainder to the surplus account. Surplus is not what many people suppose it to be, namely, cash or its equivalent immediately available for any corporate use. It is the important balancing item of a financial statement. Surplus is the difference between the stated total value of the assets of a business and its total liabilities, including debts and either the stated or par value of its outstanding stock. Surplus that is "earned" as distinguished from "paid-in" surplus represents reinvested corporate earnings. The reinvestment may be embodied in any one or all of the items appearing on the assets side of the balance-sheet, exactly as is the case with the capital sums realized from the sale of stocks and bonds. "Paid-in" surplus represents payments to the corporation by owners over and above the sums recorded for the par or stated value of the capital stock. Still another, though closely related, item appearing on the liabilities side of the balance-sheet is that of *reserves*. Such items, for there is often more than one, are usually earnings "earmarked" for special purposes.

One of the principal purposes served by a financial statement or balance-sheet is to reveal the owners' equity in the business, the so-called *net worth* of the business to its owners. The sum of the amounts set down for the *common capital stock* and *surplus* equals the common stock owners' equity. This sum is what remains of the assets of a business after all its liabilities, except those to common stock owners, have been met. The sum representing the owners' equity divided by the number of outstanding shares of common stock is the *book value* of each share of common stock.

The most obvious and striking characteristic of a balance-sheet is that it must always balance; the total listed value of the assets must always equal the total amount of the liabilities. If the "profit and loss surplus" item should disappear from the liabilities side, and it becomes necessary to set up a "profit and loss deficit" item on the assets side in order to balance the accounts, such procedure is of course a "red ink" announcement to the world that the capital of the business has been impaired and that there is trouble ahead.

What the operating statement of a corporation shows. The operating statement of a business sets forth its income and expenditures over a given period of time for the purpose of showing profits made or losses sustained. It is thus a motion-picture revealing the results of the corporation's activities during the designated time interval. The statement of income and expenditures should not be confused with the statement of receipts and disbursements. The latter is a mere record of the inflow and outflow of

money over a period of time and for all purposes. The former compares earnings and expenses so as to show profit or loss. The operating statement in fact is frequently called the "profit and loss statement."

The following operating statement of the earnings and expenses of The National Cash Register Company for the year ending December 31, 1949, shows what an operating statement reveals concerning the results of the year's activities.

THE NATIONAL CASH REGISTER COMPANY

CONSOLIDATED STATEMENT OF INCOME AND EARNINGS RETAINED AND EMPLOYED
IN THE BUSINESS

YEAR ENDED DECEMBER 31, 1949

	1949
Sales (net)	\$167,345,417
Interest, purchase discounts and other income	3,258,682
	<u>\$170,604,099</u>
Deduct:	
Manufacturing, selling, general and administrative expenses ..	\$135,228,814
Cost of pension plans	4,666,896
Experimental and development expenses	2,420,122
Provision for depreciation	4,050,163
Interest on loans	1,006,443
Income taxes	
United States	6,800,000
Foreign	4,298,000
	<u>\$158,470,438</u>
	\$ 12,133,661
Less—Net income of subsidiaries and branches outside of the Western Hemisphere not remitted to the United States	1,536,363
<i>Net income for year</i>	\$ 10,597,298
Earnings retained and employed in the business—Balance January 1	20,523,442
	<u>\$ 31,120,740</u>
Dividends:	
Cash—\$2.50 per share	\$ 4,474,062
Stock—10 ⁰⁰ —162,800 shares at \$40.72 (approximate market value) per share	—
	<u>\$ 4,474,062</u>
Balance December 31	\$ 26,646,678

Corporation capital and capitalization. The term "capital" as used both in economics and in business practice is a bewildering concept. Many different meanings prevail and, unfortunately, both speakers and writers slip from one use to another without clearly indicating the transition and the precise meaning they have in mind. It is idle to hope that a single uniform meaning will ever be established. Contexts will usually have to determine the intended meaning. So far in this book four meanings have been pointed

out. First, capital as an abbreviated expression for capital goods (a factor in production) means in its narrower connotation, those material products of man's past efforts which are used for further production; or in its broader connotation, all goods other than human services used by man in further production.⁴ Secondly, capital means all property held for procuring income rather than direct enjoyment for its owner.⁵ A third meaning, more limited than the second, designates as capital the long-term investment in an enterprise. Capital is gross capital, representing the permanent investment of owners plus their long-term borrowed capital.⁶ Fourthly, capital is sometimes used in an even more restricted sense to mean the owners' equity or the net worth of the business to its owners. Part of this net worth is represented by the capital stock and the rest by accretions to the capital stock in the form of surplus.⁷ In the discussion that follows, in which the capital of a corporation is compared with its capitalization, it is capital in the third of the foregoing meanings that is under consideration. It is the gross invested capital, both owned and borrowed, that concerns us here. Naturally, this amount is somewhat less than the total assets of a corporation (the second meaning of capital indicated above), because some or all of the current assets are needed to offset the current liabilities.

The *capitalization* of a corporation may be defined as the total par value of its outstanding stocks and bonds. If the corporation has issued no-par value stock in addition to other securities, its capitalization is represented by the total par value of its outstanding stocks and bonds, plus the stated value, carried on the books of the corporation, of the no-par stock that has been issued. In the business world capitalization is understood to represent both the capital furnished by the proprietors (stockholders) and the relatively permanent or funded debt incurred for investment in the business, the funds for which are supplied by creditors (bondholders). In the statement of Sears, Roebuck and Company the capitalization is represented by 23,646,513 shares of common stock without par value but with a stated value of \$191,298,972. The capitalization of a corporation only changes when new shares of stock or new bonds are issued, or old securities are retired.

What is the relation between a corporation's capitalization and the value of its invested capital? Capitalization can be easily ascertained by inspecting the books of a corporation or its balance-sheet. But the exact value of a corporation's capital is not easily determined and various methods of calculating it can be used with very different results. "What deter-

⁴ Cf. pp. 28-32.

⁵ Cf. p. 86.

⁶ Cf. pp. 86-93.

⁷ Cf. p. 96.

mines the real value of the capital invested by stockholders and bondholders?" is the question that concerns us here. Of course the capital invested in a business is not kept as a lump sum of money; it is converted into all of the goods, such as land, buildings, equipment, and materials, which an enterprise needs in order to do business. While the capitalization and the value of invested capital may coincide when the corporation is organized (provided the corporation has received full par value for its stocks and bonds), this equality is lost as soon as the corporation begins business operations. Profits made or losses incurred change the value of the invested capital, but they do not affect the outstanding capitalization. This divergence between the capitalization and the value of the invested capital of a corporation gives rise to the question, How can a *fair capital value* and a *reasonable capitalization* be determined? A corporation is said to be over-capitalized when the capitalization is in excess of or over this capital value; and it is said to be under-capitalized when the capitalization is less than or under this capital value. For the determination of capital value, four methods are used: the methods of ascertaining the *historical cost*, the *prudent investment*, the *cost of reproduction*, and the *capitalized earning capacity*.

The determination of fair capital value and reasonable capitalization is of fundamental importance to both the investing and the consuming public. The investor, actual or prospective, is interested in knowing what the value of the capital assets is that secures each share of stock. Governmental bodies, responsible for the regulation of public utilities to protect the consuming public, are interested in determining what constitutes a *fair rate of return on fair capital value*. The determination of a fair rate of return is sometimes puzzling. The determination of fair capital value presents exceedingly great difficulties in the fields of both competitive and monopolistic enterprise.

The historical cost standard. Perhaps the most popular and easily understood standard for determining what constitutes fair capital value and *ipso facto* reasonable capitalization is the historical cost or original investment. Money or its fair equivalent actually paid into the corporation, either at its establishment or subsequently, constitutes the historical cost or original investment. Whether the money is directly invested by stockholders and bondholders, or represents re-invested earnings of the corporation, is immaterial as far as the historical cost is concerned. The amount of the actual investment can be ascertained from the books of the company, provided accurate and honest accounting records have been kept. At first sight it seems eminently fair that this historical cost and nothing more should be represented by a corporation's outstanding stocks and bonds—that the corporation should be capitalized for no more and no less than the money actually paid into it by the stockholders and bondholders. But

a little reflection shows that such capitalization soon proves an inadequate representation of the real capital value. It may be either too high or too low; too high, if there has been extravagance, incompetence, or dishonesty in converting the invested capital into concrete capital goods, or if there has been a recession in the general price level; too low, if management has proved efficient, or if there has been an advance in the general level of prices.

The prudent investment standard. In order to eliminate from consideration such costs as are due to mismanagement, it has been suggested that the historical cost standard for determining fair capital value and reasonable capitalization be modified to mean *historical costs when prudently incurred*. The principle was first stated by Mr. Justice Brandeis of the United States Supreme Court in a concurring opinion in the case of the Southwestern Bell Telephone Company v. Public Service Commission of Missouri.⁸ "The term 'prudent investment' is not used in a critical sense. There should not be excluded, from the finding of the base, investments which, under ordinary circumstances, would be deemed reasonable. The term is applied for the purpose of excluding what might be found to be dishonest or obviously wasteful or imprudent expenditures. Every investment may be assumed to have been made in the exercise of reasonable judgment, unless the contrary is shown."

The cost of reproduction standard. To meet some of the objections to original investment as a basis of valuation and capitalization, it has been suggested that the cost of replacing the business in its present condition be taken. To estimate such replacement cost it is necessary to compute cost of reproduction new and to subtract therefrom an amount equal to the probable depreciation for the number of years the present plant and equipment have stood. To arrive at the current value of the long-term capital (gross capital) investment in the enterprise, the current value of the gross assets must be further reduced by an amount sufficient to cover the current liabilities. Cost of reproduction new minus depreciation fully covers any general changes in prices that may have taken place since the original investment was made, and, if the estimate is conservative, it also eliminates any possible inflation of value due to lack of prudence, incompetence or worse. Cost of reproduction is a fairly satisfactory standard for determining fair capital value and reasonable capitalization, so long as only the tangible physical assets of a business are considered. But corporations are "going concerns." To make them such it has been necessary to build up an organization, to acquire a good reputation, and to develop good-will. These intangible assets it is often impossible to reproduce, and accordingly the allowance made for them in figuring reproduction costs is usually a rather vague and often generous guess.

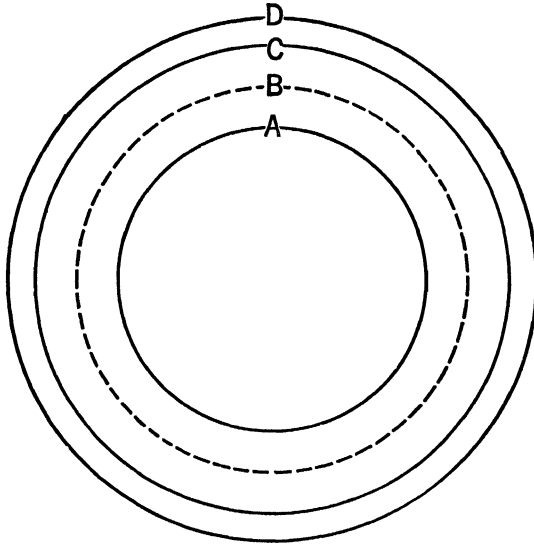
⁸ 262 U.S. 276, 280 (1923).

The earning capacity standard. The business world is most partial to earning capacity as a standard for determining what is a fair capital value and a reasonable capitalization of any corporation. It is argued that, when men buy an interest in a corporation, what they are buying of real value is a claim upon future income. No matter what the original investment in a business may have been, nor how much it may cost to reproduce it, if its present and future earnings are nil, it has no value. Accordingly, the contention is that earning capacity is the only fair measure of the capital value of a corporation, and the only gauge as to whether the outstanding stocks and bonds represent a reasonable capitalization. Indeed, it is common in the business world to speak about "capitalizing earnings," meaning by that to find the amount on which the earnings, present or prospective, represent an assumed rate of return. Thus, average annual earnings of \$140,000, if a 7 per cent return is expected, may be said to represent a capital value of \$2,000,000, and to be able to carry a capitalization in outstanding stocks and bonds of like amount." In such capitalization of earnings it not infrequently happens that hope and imagination play an important, if not controlling, part. The capitalization of earnings method for finding fair capital value of competitive business appeals strongly to all investors, actual and prospective. Assets, as evidenced by historical cost or cost of reproduction, are chiefly important to them as means of developing earnings, upon which the capital value of a business rests. It is obvious, of course, that the earning capacity method of finding capital value cannot be applied to a public utility corporation, since the earning capacity of a public utility subject to regulation is itself determined by the rates it is allowed to charge.

In actual practice all four standards—historical cost, prudent investment, cost of reproduction, and earning capacity—are used by either private business or public bodies in arriving at a judgment as to what constitutes fair capital value and a reasonable capitalization for a corporation. Private business favors earnings; public bodies emphasize assets, as revealed by original investment and as corrected by the cost of reproduction under normal conditions.¹⁰

⁹ Given the average annual net earnings of a corporation and the expected rate of return on capital invested in such enterprise, the capital value is found by dividing the net earnings (\$140,000) by the expected rate of return (.07), which gives as quotient, the capital value (\$2,000,000) calculated according to the earning capacity method.

¹⁰ The United States Supreme Court in the celebrated case of *Smyth v. Ames*, decided in 1898, said: "We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its stocks and bonds, the present as compared with the original



Circle A represents historical cost or original investment, prudently incurred.
 Circle B represents capitalization.
 Circle C represents cost of reproduction.
 Circle D represents capitalized earning capacity.

Over-capitalization and under-capitalization. It follows from the preceding discussion of corporation capital and capitalization that almost every corporation at some time in its history shows a wide divergence between its outstanding capitalization and the real value of its invested capital. The discrepancy is described by the terms “over-capitalization” and “under-capitalization.” The former exists whenever the total par value of all the outstanding stocks and bonds of a corporation is in excess of the actual capital value; the latter, when it is less. Capitalization may in practice be either highly inflated or grossly inadequate. It should be noted, however, that any conclusion as to whether a corporation is over- or under-capitalized turns on the standard adopted for measuring fair capital value and reasonable capitalization. A corporation may indeed at any given time be over-capitalized when judged by one standard and under-capitalized when judged by another. The preceding diagram will help make this clear.

The business illustrated by the foregoing diagram is obviously over-capitalized as to historical cost and under-capitalized as to cost of reproduction and earning capacity. The facts may be very different for other corporations, and the position of the circles representing the facts would

cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration and are to be given such weight as may be just and right in each case.”—169 U.S. 546-547.

be correspondingly altered. To establish these facts is often a laborious undertaking. Historical cost can only be ascertained from the books of the company, provided accurate accounting records have been kept. Capitalization is revealed by the balance-sheet of the company.¹¹ Cost of reproduction is a matter of computation—often lengthy and difficult, and in the case of intangible assets an estimate at best. Earnings are shown by the operating statement, setting forth profit or loss.

The most important inquiry into the relation of the value of the invested capital and capitalization ever made in this country, or probably in any other country, is the valuation of the railroads ordered by Congress in 1913. For nearly a score of years a large staff of engineers, accountants, and lawyers in the Bureau of Valuation of the Interstate Commerce Commission, in coöperation with an even larger staff of railway employees, was engaged upon the enormous task of ascertaining the value of the 800 to 900 railroads or railroad systems of the country. The commission found that the complete original cost of most railroads could not be determined. For the most part the commission was engaged in computing what it would cost to reproduce the railway properties new and in their present condition, most primary valuations being based on the years 1914, 1915, or upon the average net prices paid during the five-year periods ending in those years. The results published seem to indicate that the net capitalization of the railroads (the funded debt plus par value of stock outstanding in the hands of the public), amounting in 1937 to \$18,942,650,037, is less than the cost of reproducing the railways in their present condition if an allowance is made for land. This indicates under-capitalization with reference to cost of reproduction.¹²

¹¹ This can be obtained from the annual report of the corporation to its stockholders, or from such published manuals as Moody's *Analyses of Investments* or the reports of Standard and Poor's Corporation.

¹² "On call of the Commission the Bureau of Valuation presented in Ex parte 123, Fifteen Percent case, 1937-1938, comprehensive exhibits and analyses with respect to the valuation elements of all the railroads in the United States. These exhibits cover the original cost, original cost less depreciation, cost of reproduction new, cost of reproduction less depreciation, present value of land and rights, and working capital. . . . The grand totals for all carriers are as follows:

Original cost to date, except land and rights.....	\$23,019,167,406
Original cost less depreciation	16,590,227,439
Cost of reproduction new, except land and rights.....	26,238,856,914
Cost of reproduction less depreciation.....	18,906,861,318
Present value of lands and rights.....	2,606,869,985
Working capital including materials and supplies.....	300,193,743

The Commission found the approximate aggregate value for rate-making purposes to be \$21,060,000,000 as of January 1, 1937.

A recheck disclosed a duplication of certain figures which necessitated a reduction of \$40,000,000 in the final values above referred to, making the aggregate value \$21,020,000,000 as of January 1, 1937."

"The total capital actually outstanding on December 31, 1937 was \$21,694,645,000

When the United States Steel Corporation was organized in 1901 through the consolidation of about a dozen companies, at least \$600,000,000 of the outstanding capitalization of \$1,400,000,000 represented no value whatever—neither original investment, nor cost of reproduction, nor demonstrated capitalized earning capacity. The corporation was grossly over-capitalized. (Circle “B” in the diagram fell outside the other three.)¹¹ But the Steel Corporation prospered. For fifty years there has been a steady conversion of earnings into physical assets and the substitution of these for over-capitalization, until today such over-capitalization has disappeared (Circle “C” now falls outside of Circle “B.”) Many corporations at times show a capitalized earning capacity far in excess of their actual capitalization (which was notably true of corporations profiting by unusual war-time prosperity), and again when earnings shrink, such capitalized earning capacity may be less than the outstanding capitalization.

covering both solvent and insolvent companies, except for debt matured and unpaid, which for Class I railways amounted to \$572,015,000. If all the inter-railway holdings are excluded, the total capital falls to \$18,319,002,557. If switching and terminal companies are included the net capitalization is \$18,942,650,037 and the value found by the Commission \$21,020,000,000.”

—*Fifty-second Annual Report of the Interstate Commerce Commission, 1938.* pp. 113-116.

¹³ “The capitalization of the company in 1901 after the acquisition of the Shelby Tube Company (in August) was as follows:

Steel Corporation bonds	\$ 303,450,000
Underlying bonds	59,091,657
Purchase money obligations, etc.	21,872,023
Preferred stock	510,205,743
Common stock	508,227,394
Total	\$1,402,846,817

The Bureau of Corporations made a detailed study of the value of the properties of the Steel Corporation in 1901 in order to determine whether the company was over-capitalized, and if so, to what extent. Three different methods were employed. The first method was an historical study, an analysis of the investment of the constituent companies at the time of their organization. The second method was a mathematical computation, a summation of the market value of the securities of the constituent companies, using the average weekly prices from the date of the organization of these combinations up to December 31, 1900. The market prices during the early months of 1901 were not included, since these were naturally influenced by the prospective organization of the Steel Corporation. This second method represented the estimate put by the public on the securities of the constituent companies, and it therefore reflected the probable earning power of these combinations. The third method was a physical valuation, a detailed estimate of the physical properties of the Steel Corporation by departments of its business, the valuation of the ore properties being made in particular detail. The valuation arrived at by the Bureau by the first method was \$676,000,000; by the second method, which included intangible items, \$793,000,000, and by the third and more accurate method, \$682,000,000.”

—Eliot Jones, *The Trust Problem in the United States* (New York, The Macmillan Company, 1921), pp. 207-208, based on the U.S. Commissioner of Corporations, *Report on the Steel Industry*, Part I, 14-15.

Almost all of the railways of the United States at some time during the great depression beginning in 1929 had insufficient earnings to carry their outstanding capitalization. When the earnings of a corporation over a period of years are regularly insufficient to meet the combined claims of its bondholders and stockholders, it is over-capitalized. Failure to pay interest on bonded indebtedness means bankruptcy and receivership. Inability to pay dividends on cumulative preferred stock, if there is any, means ultimate reorganization of the company. Only the claims of the common stock can be indefinitely deferred. (Circle "D" representing capitalized earning capacity, under such circumstances falls inside Circle "B"; it is constantly expanding and contracting with changes in the fortunes of the business.)

Stock-watering versus stock dividends. When over-capitalization is due to the issuance of stock without the receipt or possession by the corporation of an equivalent value, the stock is popularly said to be "watered."¹⁴ A "stock-watering" operation should not be confused with the usual issuance of stock dividends. The former is a case of over-capitalization; the latter, an attempt to rectify under-capitalization. "Watered stock," as just pointed out, represents no equivalent value received or owned by the corporation. A stock dividend (which is a dividend paid stockholders in the form of additional shares of stock rather than in cash) represents a capitalization of surplus. It means that earnings have been allowed to accumulate in the business in the form of surplus, which of course represents an increase in the assets of the corporation and in the supporting value of its stocks. When a stock dividend is declared, the proper book-keeping procedure is to decrease surplus by an amount equal to the increase in stock. During 1921-1922 there was an avalanche of stock dividends in this country, 50 per cent, 100 per cent, and 200 per cent being common; one company, the Brown and Sharpe Manufacturing Company of Providence, declared a 15,900 per cent stock dividend, increasing its capital stock from \$100,000 to \$16,000,000.

Changes in the capitalization sometimes take the form of "stock split-

¹⁴ "There are a good many stories as to the derivation of this term 'watered stock.' The one that seems most plausible is built around an incident in the life of Daniel Drew. It seems that this famous financier, in his cattle-ranging days (Drew sprang from the soil, and was illiterate to the day of his death), once had occasion to drive a herd of cows many miles to market, and that, in true Drew fashion, he drove them half to death in the effort to 'get there quick.' Arriving near the market, his beasts gaunt with hunger and thirst, Drew realized that he could never sell them as they stood. They must be either watered or fed, and preferably both. Drew took the canner way. He watered them only. As a result, their sides swelled out to abnormal proportions, at no cost to him, and they could be brought to the block looking like pampered calves. 'Watered stock' they were, in every sense of the word, stock that was given the appearance of value, but which very quickly deflated after buying enthusiasm had cooled off."

ups," which involve no change in the aggregate stated value of the outstanding stock. For each share of stock a larger number of shares is issued, such as five for one. Sometimes the opposite procedure is followed and the number of shares outstanding is reduced. Such changes are usually made with an eye to the enhanced marketability of the shares.

Objections to stock-watering. The chief valid objection to "watered stock" is offered by the investor. If all investors, small as well as large, in a corporation's securities could be sure of equal treatment in the distribution of "watered stock," even this objection would lose some of its force. But the minority stockholder does not have this assurance; consequently "stock-watering" often affects his interests adversely. The issuance of stock for which the corporation has received or earned no equivalent reduces the value of each outstanding share; if the minority stockholder does not receive his pro rata amount of the "watered stock," the value of his interest in the business is lowered. "Stock-watering" furnishes a tempting opportunity, hard to resist, for some persons to acquire their stock on much easier terms than others. If a corporation's prospective earnings look reasonably promising, and unissued stock is available, it is a great temptation for those in control to issue it to themselves as promoters in return for services, fictitious or greatly over-valued; or to issue it in return for some of their properties turned over to the corporation at highly inflated values. While a careful and intelligent investor presumably investigates both the earning capacity and the assets supporting the securities he is contemplating purchasing, and consequently makes due allowance for any over-capitalization, deception is exceedingly easy. At the organization of a corporation only "insiders" know whether properties have been acquired at a fair price and what their earning power really is. What is more, it is a notorious fact that many otherwise careful and intelligent persons are anything but careful and intelligent in making their investments. "Stock-watering" makes deception easy.

The objection of the consumer to "watered stock" is more questionable. It is sometimes argued that inflated capitalization is the cause of high prices; that it brings pressure to bear upon the officers and directors of a corporation to raise prices in order to make the profits out of which dividends can be declared. But under truly competitive conditions such procedure is impossible, and a corporation's capitalization has nothing to do with the most profitable level of prices for its commodities or services. Only when the corporation is a monopoly, that is, has such power over the supply of a good as to fix its price, is the consumer's objection under some circumstances a valid count in the indictment against "stock-watering."

THE SUPER-CORPORATION

The combination movement. In the field of business organization one of the most striking movements of the last fifty years has been the development of huge corporate combinations. The corporation has bred the super-corporation. Many regard these combinations of our day as inevitable, the natural product of economic evolution. Some even profess to see in them the most efficient and socially beneficial forms of productive organization. Others roundly denounce them as malign and sinister influences in our economic life, bound ultimately, unless themselves crushed to death, to destroy the most precious institutions of a free people. To such critics "big business" means tyranny; "Wall Street" is the head of an "octopus," the arms of which suck in and devour the small enterpriser; the "interests" are the real government, even if "invisible government," of the country, political officeholders being mere puppets on a stage set and directed by master hands. Surely, a movement that calls forth such contradictory praise and blame, that inspires both hope and fear, must contain within itself something both of promise and of menace.

It is impossible to present an accurate picture of the extent to which corporate combinations have grown, because we lack comprehensive and trustworthy data. Census reports and other reliable studies can be used to show the decreasing number of companies in given industries and the enormous increase in capital per establishment; but such data do not begin to reveal the degree of concentration of economic power in this country. The interlocking branches can easily be sketched, but the interlocking roots are hidden from the eye. Corporate combinations are not confined to a single economic field; they are common in manufacturing and mining, in transportation and other public utilities, in banking, and increasingly in merchandising.

Capitalistic combinations of business units follow two main types, not inaptly described by the terms "horizontal combination" and "vertical combination." The combination is of the "horizontal" type when it is a grouping under a common management of previously independent establishments of the same sort. When a number of sugar refineries, or oil refineries, or gas and electric lighting plants, or retail stores are brought together under a common management, there is "horizontal" combination. It is a "side-to-side grouping of like plants." The early trusts such as the Standard Oil Company and the Sugar Refineries Company with its successor, the American Sugar Refining Company, as well as the familiar "chain-stores" of today, are illustrations of "horizontal" combinations. The combination is of the "vertical" type when the organization controls a number or all of the stages from the production of its raw materials to the marketing of its finished product. One of the best examples of

“vertical” combination is furnished by the United States Steel Corporation. To be sure, this company is also a “horizontal” combination of a number of one-time competing plants, but it is today distinguished by the successful way in which it has brought together under a single management all of the steps in the production of steel commodities. It owns mines of iron ore and coal, deposits of limestone, steamship and railway lines, smelters, mills for the conversion of pig-iron into steel and for the manufacture of numerous steel products. The United Fruit Company owns great plantations in Central America and the West Indies devoted to the raising of tropical fruits and sugar-cane; railways to bring their products to port; a great “White Fleet” for the ocean transportation of their products as well as the carrying of passengers; and refineries for the manufacture of sugar. The International Paper Company, the International Harvester Company, and the Aluminum Company of America are other illustrations of so-called integrated industries or “vertical” combinations.

Economic conditions favorable to combinations. Corporate combinations are much more likely to appear in some economic fields than in others. They are rare in agriculture, even though large amounts of capital are needed in the aggregate, and very common in manufacturing and transportation. Under what economic conditions are combinations of business units likely to arise?

Existence of natural monopolies. Foremost among the conditions favorable to the development of corporate combinations is the existence of natural monopolies. The essence of monopoly consists in such control over the supply of a good as to give control over its price. Some businesses are natural monopolies; the control over supply and price is not so much due to human arrangements as it is to natural conditions.

The natural monopoly may be due to an actual limitation of the natural supply of a good; this is conspicuously true of the anthracite industry of the United States, which is almost wholly confined to less than 500 square miles in northeastern Pennsylvania. In such an industry the additional profits to be made by a combination controlling the market supply of the commodity prove an almost irresistible force in effecting such combination. For many years there was some form of combination in the anthracite industry of the United States; particularly after 1898 the coal-owning and -controlling railroads—the Delaware and Hudson, the Lackawanna, the Erie, the Lehigh, the New York, Ontario and Western, the Pennsylvania, and the Reading—developed a most effective combination, controlling at least 80 per cent of the annual output of anthracite.¹⁵ This

¹⁵ U.S. Federal Trade Commission, *Report on Anthracite and Bituminous Coal* (1917), p. 49. The United States Coal Commission appointed by President Harding reached substantially the same conclusion

“Eight producing interests affiliated to some extent with the railroads, produce

combination of coal and railway ownership after a decade of litigation (1909-1920) was successfully prosecuted by the Government under the so-called "commodities clause" of the Interstate Commerce Act, which among other things makes it unlawful for any railroad company to transport in interstate commerce, coal which it owns itself. The coal-owning railroads were forced to dispose of their coal properties. The usual procedure, however, was to transfer them intact to corporations the stock of which was largely owned by the stockholders of the railroads.

Another form of natural monopoly is due to peculiar characteristics of the business itself, rendering the multiplication of competing plants impracticable; this is notably the case in the field of the so-called public utilities, such as gas, electric light and power, the street railway, and the telephone. Competition of independent concerns in such industries is not the way either to ensure low prices or to secure good service. When tried, it has almost invariably proved expensive and frequently disastrous. Both the economic necessity of the operating companies and the need for efficient service to the public have forced the elimination very largely of any attempt to maintain competition in the field of the public utilities. Today, for instance, the Commonwealth Edison Company, itself a consolidation of a number of companies, supplies practically all of the electric light and power for the city of Chicago, while the People's Gas, Light, and Coke Company, the survivor of a number of consolidations, similarly supplies the gas. What is more, these two corporations are controlled by the same financial interests. The Consolidated Edison Company of New York, an actual consolidation of a number of independent concerns and now a corporation with a controlling interest in other corporations, supplies most of the gas, electric light, and power for the city of New York. The chief consideration making for combination among businesses furnishing gas, electricity, and street railway transportation is the fact that expenses per unit of output or service decrease as the volume of business grows. For this reason a combination once established can successfully defy any venturesome competitor in the same field. In the case of the telephone, the convenience and efficient service of the public are the controlling forces in making the telephone business a natural monopoly. Combination has proved inevitable wherever and whenever there have been conditions of natural monopoly. The additional profit to be made, the necessity of preventing self-destructive competition, or the need of rendering efficient service to the consuming public has created the combination.

74 per cent of the total output and control 90 per cent of the underground reserve. The remaining 26 per cent of the output is contributed by so-called independent companies, but the largest of these companies (The Susquehanna Collieries Company) retains a community of interest with one of the railroads."

United States Coal Commission, *Report*, U.S. Senate Document 195, 68th Congress, Second Session, 1925, Part I, p. 38.

Large-scale standardized businesses capable of centralized control. A second condition favorable to the development of combinations is the existence of large-scale standardized businesses capable of centralized control. Such businesses do not necessarily enter combinations, but they are the unit enterprises out of which the most successful combinations have been built. Combinations play for big stakes; large-scale enterprises, requiring huge investments of capital and producing for wide markets, furnish the necessary opportunity. The very bigness of some enterprises tends to discourage possible new competitors from entering the field and to invite the combination of those already there for the purpose of more completely dominating the field. Combinations thrive best among standardized businesses producing standardized commodities; among businesses in which the routine element is large and the personal element can afford to be small. It is such enterprises that afford managerial genius its widest scope, for they lend themselves to the most centralized control. The most distinctive feature of combinations, it should be emphasized, lies in large-scale management, rather than in large-scale production.

An examination of our largest and most successful combinations, whether natural monopolies or not, shows them to be capitalistic enterprises producing fairly standardized commodities or services under the direction of centralized managements. This is true of such industrial combinations as those in steel, oil, sugar, tobacco, and farm machinery. These are industries in which there has been such marked improvement in the technique of production and such standardization of output that it has been found profitable to extend greatly the scale of operations. Today it costs millions of dollars to build steel plants, oil and sugar refineries, and all that goes with them. This very fact restricts the number of entries in the tournaments of steel and oil and sugar and makes it inadvisable for anyone but giants to enter the lists in the contest for supremacy.

The most successful merchandising combinations that have yet appeared have been in businesses permitting such conditions of standardization as to afford efficient management the widest scope. The most conspicuous example is furnished by the retail chain-stores. The great Atlantic and Pacific Tea Company successfully operates over 5,100 food stores in the United States and Canada. The F. W. Woolworth Company is operating nearly 2,000 variety stores in the United States and Canada.¹⁶ The success of these and similar merchandising combinations is largely based upon the economies of large-scale buying (to take full advantage of which requires an extensive selling organization) and upon the fact that the merchandising is standardized.

The railways and other public utilities have offered tempting fields for combinations not merely because for the most part they are natural

¹⁶ Figures are for close of 1949.

monopolies but because they represent businesses in which there is so much routine and standardization that combination can go far before it reaches the limits of efficient management. It is businesses engaged in standardized production which profit most by large-scale methods and which can most readily become members of still larger combinations.

Public and private favoritism. A rather adventitious condition which has greatly facilitated the formation of combinations in this country has been public and private favoritism. Public favoritism has found unwitting expression in our protective tariff laws. While it cannot seriously be argued that protective tariffs, designed for quite other purposes, have been the cause of industrial combinations, there can be little doubt that in some industries they have materially helped by shutting out foreign competition. Indeed, Mr. Havemeyer, long head of the American Sugar Refining Company, testified before the United States Industrial Commission that "the mother of all trusts is the customs tariff bill," being careful, however, to make an exception of his own industry.¹⁷ It is doubtful, however, whether any combination ever profited more by tariff protection than did the so-called sugar trust. In its beginnings, when protection was most helpful in facilitating combination, the tariff on the importation of refined sugar was more than the cost of refining the sugar. The industry enjoyed more than ample protection continuously until the passage of the Underwood Tariff Act in 1913.

Public favoritism expressed in the granting of patent rights, although intended for a very different purpose, has also proved a condition facilitating some combinations. Perhaps the most notable illustration is afforded by the United Shoe Machinery Company. This corporation, organized in 1899, was originally a combination of seven concerns, and it subsequently acquired control over some fifty others, all of them manufacturing shoe machinery and supplies. Through its control of the basic patents, the company has had a monopoly of the manufacture of shoe machinery. It has sought to make the most of its power by leasing, not selling, its machines to the hundreds of shoe manufacturers scattered over the country; and by various tying clauses in its contracts, such as forbidding the use of any machines of competitors during the period of the lease, the company made its own position even more secure.

Private favoritism is well illustrated by the rebates which some railways have granted favored customers. The early and long-continued supremacy of the Standard Oil Company was largely due to the preferential treatment which it received from the railways. As early as 1879, twenty years after the first successful oil well had been drilled, the Standard Oil Company is said to have controlled over 90 per cent of the oil-refining business of the country, in spite of the fact that during this period it had

¹⁷ U.S. Industrial Commission, *Report* (1900-1902), Vol. I, p. 101.

had hundreds of competitors. In accounting for its dominating position, the United States Commissioner of Corporations said: "Unquestionably, the most important single element in this early extension of the company's power was the railroad rebate."¹⁸ The Standard Oil Company, though an extensive producer of crude oil, not only never had a monopoly of the oil wells of the country but never produced more than a relatively small part of the crude oil which it refined. The fulcrum of its power was transportation. It had at one time a practical monopoly of the pipe-lines by which the crude oil is conveyed from wells to refineries, and it received untold favors, rebates, and concessions from the railroads in the marketing of its refined oil products. Sometimes formal contracts were made with the railroads providing for rebates on the shipments of the Standard Oil Company (and occasionally even for drawbacks on the shipments of its competitors). More frequently secret discriminatory railway rates were established for the benefit of the company. In the petroleum industry transportation costs represent a very large percentage of the total cost of marketing a gallon of oil. A company which enjoyed especially favorable transportation rates, therefore, in addition to controlling systems of pipe-line for gathering the crude oil, was in a position to undersell its competitors in any field it chose.

Forms of combination. The spirit of capitalistic combination has found embodiment in a number of representative forms. Often seemingly annihilated in one form, it has presently burst forth in another, apparently stronger than ever. It may well be asked in the light of historical experience whether it is in the power of man to destroy combination as long as economic enterprise endures. Lawmakers have vehemently legislated against it; executive officers of state and nation have vigorously sought to suppress it; and courts have solemnly ordered its dissolution. But somehow the spirit of combination has survived. Its corporeal forms have varied from the loosest, flimsiest sort of association to gigantic corporate mergers. And today on occasion when the law, executives, and courts prove uncomfortably hostile, it seems able to "shuffle off this mortal coil" altogether and to live again in invisible understandings.

Pools. The earliest effective form of capitalistic combination in this country was the pool. Pools for the most part were agreements by which the output of the business units in the pool was regulated, the marketing territory was divided, or the earnings of the business units in the pool were paid into a common treasury to be divided among them in accordance with some stipulated ratio. Under the first plan the market demand for a commodity was estimated, and according to the terms of the pool each of the members was allowed to manufacture a stipulated percentage of the

¹⁸ U.S. Commissioner of Corporations, *Report on the Petroleum Industry*, Part I (1907), p. 22. Facts immediately following in regard to the Standard Oil Company are in part also based on this report.

probable supply needed. Without any formal agreement as to prices, restriction of output tended to keep prices high. Under the second plan selling in specified territory was restricted to a company designated by the pool. According to the third plan companies operating in a given territory, such as the Burlington, Northwestern, and Rock Island railroads operating between Chicago and Omaha, pooled their earnings and divided them in accordance with the agreement reached. In this particular pool, which lasted from 1870 to 1884, it was stipulated that each road should retain 45 per cent of the earnings of its through passenger business and 50 per cent of its freight earnings; the rest was to be paid into the pool treasury and to be divided equally among the three railroads. Pools flourished in transportation, industry, trade and agriculture. They became common after the Civil War, and in spite of legal prohibitions of combinations in restraint of trade they are probably, in one form or another, more numerous today than ever before.

Pools were federations of business units. The member companies retained their independence except in so far as they delegated power to the pool. The facility with which pools could be organized, the flexibility in the scope of the agreement, and the power over trade conditions and prices which they afforded served to make pools popular among those seeking to establish capitalistic combinations. Moreover, pools furnished a convenient device for those wishing to combine temporarily, often secretly, and always without sacrifice of their independent status.

The chief disadvantage of the pool from the point of view of its member companies was its instability. Disputes frequently arose over the division of output and earnings, with the result that the pooling agreements were not renewed. In periods of depression, particularly, it was difficult to keep pooling agreements effective. The member companies were sorely tempted to get as much business for themselves as they could in order to curtail their losses. This usually necessitated lowering prices. Pools were temporary expedients, and as such they did not provide the stability essential to the development of great combinations.

A second important disadvantage of the pool for those seeking an effective form of combination lay in the fact that pooling agreements were non-enforceable in the courts. They were usually in violation of common-law principles concerning restraint of trade. Observance of pooling agreements accordingly depended entirely upon the honor of the contracting parties. This did not always suffice. Not only were pooling agreements non-enforceable under the common law, but they were directly prohibited in the field of railway transportation by the Interstate Commerce Act of 1887 and later in all economic fields, by the Sherman Anti-trust Act of 1890, whenever it could be shown that a pool was in restraint of trade. Even before the enactment of these statutory prohibitions, the spirit

of combination had found embodiment in what at first promised to prove a more stable form, the trust.

Trusts. As the term was originally used, a trust meant a combination of corporations in which the stock of the constituent corporations was assigned to a board of trustees in order to create unified business control over the constituent corporations. A trust was not a corporation; it was a combination of corporations. The trustees held the assigned stock in trust (hence the name) and in exchange for it issued trust certificates, upon the basis of which the profits of the trust were divided. The trustees, through the stock they held, had the power to elect the directors of the corporations in the trust and consequently to control the business policies of the combinations, regulating both volume of output and price. The Standard Oil Trust, organized in 1882, was the pioneer trust, but it was soon followed by trusts in sugar, whisky, and cotton-seed oil. The organization of trusts by use of the trustee device was abandoned soon after 1890 very largely as a result of an adverse court decision in the celebrated sugar trust case (*New York v. North River Sugar Refining Company*).

Trusts had certain obvious advantages over pools as a form of combination. While pools were unstable and temporary, trusts were intended to be permanent. While in the pool management was decentralized, in the trust it was highly centralized, which fact greatly increased the economic power of the trust. The great disadvantage of the trust, from the point of view of its proponents, was its uncertain status under the law and before the courts. The worst fears of those interested in the success of the trusts were confirmed by the court decision just mentioned. The State of New York had brought action under the common law against the North River Sugar Refining Company, a member of the sugar trust, contending that the company had exceeded the powers of its charter when it gave control over its stock to the sugar trust and demanding that its charter be forfeited. The court sustained the contention of the state that the company had exceeded its legal powers in helping create a trust which was in effect a partnership of corporations. This decision was followed by similar decisions and by much hostile anti-trust legislation, both federal and state, all of which resulted in the dissolution of trusts—and the reincarnation of the spirit of combination in still other forms.

While the trustee device of the trust form of combination has disappeared, the name "trust" has survived. Popularly, "trusts" today mean any form of business organization, whether holding companies or mergers, large enough substantially to control its field. "Trusts," in the popular mind, usually mean industrial monopolies.

Holding companies. One successor of the trust in the favor of men seeking to establish effective forms of combination was the holding com-

pany. A holding company is a corporation which owns a controlling share of the stock of the corporations in the combination. The constituent corporations are subsidiaries of the holding company. They have their own officers, but these are elected and their policies are controlled by the holding company. The subsidiary companies may compete in efficiency, but rarely in price. Some holding companies have been merely managing companies, such as the Northern Securities Company, organized in 1901 for the purpose of controlling the Northern Pacific and Great Northern Railroads, which together had already acquired control of the Burlington. More commonly, holding companies are also operating companies. When the Standard Oil Trust was dissolved in 1892, it was divided into twenty principal corporations, the majority of the stock of each being held by the same persons, the nine trustees of the former Standard Oil Trust. After a period of years, during which these corporations worked in perfect harmony through a "community of interests" arrangement, the decision was reached to reorganize the combination by use of the holding company principle. Accordingly, in 1899 one of the twenty corporations, the Standard Oil Company of New Jersey, increased its stock from \$10,000,000 to \$110,000,000 and exchanged its stock for the stock of the nineteen other corporations. The Standard Oil Company of New Jersey thus became primarily a holding company of the stock of the twenty corporations in the combination. This number had increased to thirty-eight by 1911, when the combination was again dissolved. The Standard Oil Company of New Jersey, while a holding company, also continued its operations in the refining and distributing of oil. The holding company form of combination has persisted from the late nineties of the last century to the present time.

The holding company appealed to its promoters for a variety of reasons. Like the trust and unlike the pool, it was a stable form of combination. Like the trust it offered the advantage of centralized control. What is more, it was an easy form of combination to establish. The promoters had only to buy the stock of the desired companies in the open market until they had acquired a controlling share. The chief business advantage of the holding company, however, lay in the concentration of control which it made possible. A company holding a little more than half of the stock of another company had control over it, and sometimes much less gave practical control. Since holding companies were often pyramided, it was possible for a relatively small amount of capital to control a much larger amount. The Van Sweringen brothers, for example, originally interested in the Nickel Plate railway and subsequently in the Chesapeake and Ohio, so interlocked their companies that an investment of less than twenty millions of dollars controlled railroads whose combined assets amounted to

over two billions.¹⁹ The H. M. Byllesby Company, through its control of a holding company known as the Standard Power and Light Company, with "an equity interest of \$3,000,000, or less than three-tenths of 1 per cent of the whole, was able to control \$1,200,000,000 of assets" of the Standard Gas and Electric Company system.²⁰

From the legal point of view the holding company was favored because it gave promise of proving invulnerable to such attacks as had been directed against the pool and the trust. Unlike the pool and the trust, the holding company was an independent corporation, rather than merely a combination of corporations. While under the common law it was beyond the powers (*ultra vires*) of a corporation to hold stock in other corporations (at least no court had sanctioned it and some courts had condemned it), some states enacted laws specifically authorizing the holding of the stock of one corporation by another. New Jersey took the lead in 1889 and 1893. Other states, notably Delaware, Maine, West Virginia, and New York, followed suit, partly in order to share with New Jersey the income to be derived from incorporation fees and corporation taxes.

Such general authorization of intercorporate stockholding proved a great impetus to the combination movement. The period of extraordinary prosperity that began in 1897 provided the natural setting for the development of a combination movement never equaled before or since. The holding company was the chief means for effecting these capitalistic combinations. In railway transportation, in the field of the telephone and telegraph, among the municipal public utilities, in mining, manufacturing, and trade, everywhere holding companies were organized and usually thrived. Great railway systems like the New York Central lines are held together by the holding company device. The American Telephone and Telegraph Company, the United States Steel Corporation, and the North American Company are conspicuous examples of combinations built up by means of holding companies.

Mergers. After the breaking-up of the trusts, a second line of development lay in the actual consolidation of the previously separate corporations into a single corporation. Sometimes this fusion took the form of a merger; at other times, of an amalgamation. A merger occurs when one corporation buys up all the stock of other corporations and thereupon dissolves the constituent corporations. It is a corporate union of several existing corporations. In the merger there are neither nominally independent corporations as in the trust, nor subsidiary corporations as in the holding company. There is only the single corporation that has completely

¹⁹ A. A. Berle, Jr., and G. C. Means, *The Modern Corporation and Private Property* (New York, The Macmillan Company, 1933), p. 73.

²⁰ James C. Bonbright and G. C. Means, *The Holding Company* (New York, McGraw-Hill Book Company, Inc., 1932), p. 116.

absorbed all the rest. An amalgamation takes place when a new corporation is formed for the specific purpose of completely absorbing certain constituent corporations. In the final result there is no difference between mergers and amalgamations, and consequently it is not surprising that the two terms are largely used interchangeably to designate consolidations in which there has been complete fusion of previously separate corporations. While the earlier mergers were brought about without resorting to the use of the holding company principle, in recent years it has frequently happened that the absorbing company has first gradually increased its stockholdings in the companies it desired to acquire, then become the holding company, and finally effected a complete fusion by dissolving its subsidiaries. Such was the procedure of the General Electric Company in some of its consolidations. The American Tobacco Company and the American Sugar Refining Company, incorporated in New Jersey in 1890 and 1891 respectively, and the International Harvester Company, organized in 1902, are other examples of mergers. From approximately 1890 to 1900 mergers were the most common form of combinations. From 1900 to 1904 holding companies were the more popular. In the latter year the Supreme Court's decision ordering the Northern Security Company dissolved cast some doubt upon the legality of the holding company principle. This decision gave renewed impetus to the complete merger movement, since it seemed improbable that mergers representing a complete fusion of properties could be as readily or successfully attacked in the courts. The elder J. P. Morgan is reported to have said that one cannot unscramble scrambled eggs. Since 1904 numerous decisions of the Supreme Court have shown that while neither the holding company nor the merger is illegal *per se*, neither is legal when organized to achieve some illegal object, such as the restraint of trade.²¹ Holding companies and mergers continue to survive. Indeed, some combinations are both mergers of previously separate corporations and at the same time holding companies in still other corporations.

The distinctive advantage which the merger has over the holding company is that it constitutes a single unified business, rather than a complex series of interlocking business units. In achieving this very advantage, however, it sacrifices the individuality of the constituent companies, the maintenance of which is often most desirable in order to retain local good-will and to meet various local conditions.

Informal agreements. Pools, trusts, holding companies, and mergers all represent formal combination agreements, in some of which the combining corporations retained their identity, and in at least one of which they lost it. Throughout the combination period, and increasing with the growing hostility of the public and the courts toward the combinations, there have

²¹ Cf. pp. 890-896.

been informal agreements, communities of interest, or gentlemen's agreements which have often proved very effective temporarily. Perhaps the most celebrated case of such "understandings" is furnished by the Gary dinners, as they came to be called, held intermittently from 1907 to 1911. Concerning the effectiveness of such "understandings" the Stanley Investigating Committee of the House of Representatives reported as follows:

We think the conclusion is irresistible that the Gary dinners were instituted as a means of conveying to the entire iron and steel industry information as to what the attitude of the United States Steel Corporation was upon the questions of output and prices and of impressing upon all engaged in the industry that it was the part of wisdom and prudence to govern themselves accordingly. We further believe that by this means prices were maintained, output restricted, competition stifled, and trade restrained, just as certainly, just as effectively, and just as unlawfully as had been done under the discarded pooling agreements of former years.²²

Purposes of combinations. In the preceding discussion of the combination movement and of the various forms which it has taken, something has already been said concerning its purposes. Some of these have been legal, while others have proved contrary to public policy. Some have been attained, and others have failed of realization.

More often doubtless than is commonly supposed, the basic purpose in effecting combinations has been psychological rather than economic. Ambitious and successful business and industrial leaders took pride and pleasure in becoming railway kings, monarchs of finance, builders of vast industrial empires. Such combinations gratified the race-old instinct of self-assertion and domination over others. To organize a great combination was at once to give eloquent testimony of one's creative genius and also to provide a means of satisfying one's desire for power.

Advantages of large-scale management. But, after all, the driving and sustaining forces in the combination movement have been economic rather than psychological. One of the most apparent purposes in the organization of combinations has been to procure the utmost advantages of large-scale management. Combination has usually been unnecessary to secure the advantages of large-scale production, for most combining units had long since achieved all of the advantages of large-scale enterprise. But combinations greatly extended the scope of men capable of efficient large-scale management. The linking-up of independent enterprises under strong, capable managements usually proved of advantage to the combining corporations, and by no means necessarily of disadvantage to the public. Combinations in the public utility field, for instance, have at times, though by no means always, improved the credit position of the companies and made possible

²² *Report of the Committee on Investigation of United States Steel Corporation, House Report No. 1127, 62d Congress, Second Session, 1911, Vol. VIII, p. 126.*

better service to the public. But the mere size of combinations has also at times proved a great handicap in actual business competition. Small units are more adaptable to changing economic conditions. What is more, those responsible for the management of large combinations have been obliged to depend upon subordinate officials for the execution of their policies and the establishment of personal contacts. This often proved ineffective, particularly when such subordinates, limited in their powers of action, found themselves in active competition with the responsible heads of independent enterprises.

Elimination of competition. Another economic purpose of combinations has been elimination of competition: sometimes elimination of the wastes of competition, but more especially elimination of competition itself. Some combinations have eliminated certain forms of competitive waste, such as cross freights and some kinds of advertising. Of much greater importance to combinations, however, has been the hope that any given combination would obtain so commanding a position in its field as to discourage competition and thus, at least temporarily, to reap the fruits of monopoly. While the presence of a large combination in any industrial field does not preclude the possibility of competition, it does as a matter of fact inhibit much potential competition.

Regulation of output and maintenance of prices. The ultimate objective of most combinations has been to regulate output and to maintain prices. Competition led to great price irregularities and, in periods of severe price-cutting, often resulted in the ruin of many businesses. Combination was in part an attempt to stabilize prices for the benefit of the combining units. In the early days of the combination movement, when combinations temporarily dominated their fields, they frequently raised prices above the previous competitive levels. This, however, except in the case of combinations based upon the existence of natural or legal monopoly, inevitably brought new competitors into the field, attracted by the hope of unusual profits. In the later stages of the movement, combinations were more content to stop short of actual monopoly and to enjoy the advantages that arose from holding a dominating position in the industry. A combination which controls so large a part of the output that the buying public is dependent upon it for a considerable part of its supply does not have to be a complete monopoly in order materially to affect the price of the commodity it has to sell. Its price policy is apt to guide its competitors. If the combination lowers prices, those outside the combination must follow suit; if it raises prices, they usually welcome the opportunity to do the same. A combination, therefore, strongly entrenched in any industrial field, can have a steady influence upon market prices.

Anticipated profits. Finally, it must be noted that the profits to be made in the successful establishment of large combinations were a powerful in-

centive in their creation. First of all, there were the anticipated profits of the promoters and financiers, who were actively concerned in bringing about combinations. In the organization of the United States Steel Corporation, for instance, the promoting syndicate is said to have reaped a profit of \$62,500,000, 20 per cent of which went to J. P. Morgan and Company, the managers of the syndicate.²³ Then, too, the business units entering the combination expected to make a handsome profit on the sale of their properties to the "trust." What the "trust" itself, once established, hoped for was the receipt of monopoly profits, even if the monopoly was bound to be partial rather than complete, and temporary rather than permanent. Since almost every large combination was greatly over-capitalized at the time of its organization, it is not surprising that the profits of many never went beyond the "paper profits" stage. On the other hand, some combinations like the United States Steel Corporation, by putting their surplus earnings back into the business, have gradually built up capital values strong enough to carry their outstanding capitalization and thus to realize the fondest dreams of their most ardent promoters.

APPENDIX: CORPORATION CHARTER FORM

The provisions of a corporation charter are illustrated by the following form:

KNOW ALL MEN By these presents, that the undersigned, adult residents of the State of _____ do hereby make, sign and agree to the following

ARTICLES OF ORGANIZATION

ARTICLE FIRST.—The undersigned have associated, and do hereby associate themselves together for the purpose of forming a corporation under Chapter _____ of the _____ Statutes and the acts amendatory thereof and supplementary thereto, the business and purpose of which corporation shall be _____ which said business is to be carried on within the State of _____ and especially within the County of _____, in said State.

[A corporation must confine itself to the business designated in its charter; the provisions of this article become a distinct limitation upon the corporation's activities.]

ARTICLE SECOND.—The name of said corporation shall be _____ and its location shall be in _____

ARTICLE THIRD.—The capital stock of said corporation shall be _____ and the same shall consist of _____ shares, each of which said

²³ Report of the U.S. Commissioner of Corporations on the Steel Industry, Part I (1911), p. 244.

shares shall be of the face or par value of dollars. [Details concerning the kinds of stock and whether or not it has any par value are inserted here.]

ARTICLE FOURTH.—The general officers of said corporation shall be a President, Vice-President, Secretary and Treasurer, and the Board of Directors shall consist of Stockholders.

ARTICLE FIFTH.—The principal duties of the President shall be

[Here follows a statement setting forth the duties, not only of the president, but of the various officers and of the board of directors.]

ARTICLE SIXTH.—Only persons holding stock according to the regulations of the corporation shall be members of it.

ARTICLE SEVENTH.—These articles may be amended by resolution setting forth such amendment or amendments, adopted at any meeting of the stockholders by a vote of at least two-thirds of all the stock of said corporation then outstanding.

ARTICLE EIGHTH.—The names and residences of the persons forming this corporation are:

..... residing at
..... residing at
..... residing at

In Witness Whereof, We have hereunto set our hands, this day of A.D. 19....

SIGNED IN PRESENCE OF

PROBLEMS

A

Comment on the following statements, explaining why they are true, false, or inadequate.

- 1. In case of the bankruptcy of a partnership, no one partner can be held liable for more than his proportionate share of the debts which are in excess of the assets of the business.
2. Under the corporate form of business organization the individual who has money to invest is able to invest it and get a return without assuming (a) as great a risk, or (b) as much managerial responsibility, as he would have to assume in other types of business organization.
3. Businesses such as steel mills and railroads, which need large amounts of capital equipment, usually assume the corporate form of organization.
4. Corporations obtain all of their capital by the sale of stock.
5. Since bondholders have a prior claim to earnings and assets over stockholders, they stand no chance of loss in case of liquidation of the company.

6. The corporate form of business organization has made available for business enterprise larger amounts of capital than could be obtained under other forms of business organization.
7. A person having only a small amount of money to invest would do well to buy common stock, since there is no such limitation upon the possible rate of return as there is in the case of bonds or preferred stock.
8. Even though a public utility may be allowed only a 7 per cent return on its fair capital value, it can in many cases pay a much higher dividend on its common stock.
9. A corporation which was clearly under-capitalized on January 1, 1940, might well have become over-capitalized by January 1, 1950, although its capitalization remained unchanged.
10. Watered stock is always evidence of over-capitalization.
11. Stock split-ups and stock dividends are practically identical.
12. Holding companies, consolidations, and mergers are essentially the same, since in each instance control is vested in a central authority.
13. The holding company device makes possible the control of many companies with the use of relatively little money.
14. Stockholders and bondholders are the principal beneficiaries of capitalistic combinations inasmuch as the chief purpose of such organizations is to eliminate competition and regulate output.
15. Business combinations are usually able to reduce the cost of producing and marketing goods, thus lowering prices to consumers.

B

1. The Alpha Corporation, organized in 1945, issued the following securities: \$400,000 of 5% mortgage bonds; 6,500 shares of cumulative 6% preferred stock of \$100 par value; 23,000 shares of common stock of \$50 par value. On December 31, 1950 the books of the company showed: plant and equipment, \$2,406,000 (cost price); inventories, \$260,000; surplus, \$842,000; United States Government bonds, \$750,000; accounts receivable, \$400,000; federal taxes due (from current year), \$200,000; notes payable, \$50,000; cash, \$469,000; notes receivable, \$110,000; stocks and bonds of other corporations, \$300,000; accounts payable, \$200,000; reserves for depreciation and depletion of plant and equipment, \$1,203,000. The net income for 1950 after taxes was \$400,000.
 - a. Prepare a balance sheet for this corporation as of December 31, 1950.
 - b. If all the earnings for the year 1950 had been distributed, how much would the common stock have received per share? (All dividends had been paid on the preferred stock inclusive of 1949.)
 - c. Assuming that the 1950 earnings are normal and that an 8 per cent rate is fair for this type of investment, is the corporation over- or under-capitalized?
 - d. If this corporation were a public utility, would a public utility commission allow an increase in rates, assuming 8 per cent as a fair rate of return on:
 - (1) Historical cost of \$3,000,000?
 - (2) Reproduction cost of \$4,000,000?
 - (3) Why could the commission not use earning capacity to determine, for rate-making purposes, the fair capital value of the company?

2. The Delta Manufacturing Company, Inc., began business in 1945 with the following capital structure: 5 per cent bonds \$6,000,000; 4 per cent cumulative preferred stock, \$3,000,000 (30,000 shares); common stock, \$12,000,000 (120,000 shares).
 - a. Net earnings of this company available for distribution were as follows: 1949, \$900,000; 1950, \$940,000. If all earnings were paid out, how much did each \$100 bond and each share of stock receive in 1949 and 1950? (All dividends had been paid on the preferred stock inclusive of 1948.)
 - b. A fair rate of return for this industry is estimated to be 6 per cent. On the basis of 1951 earnings of \$1,200,000, using the earning capacity method, is this company over- or under-capitalized? If either, by how much?
 - c. By 1951 the company had built up a \$2,000,000 surplus. What is the common stockholders' equity in the company? Compute the book value per share of common stock.
 - d. The company contemplates paying a stock dividend using \$1,200,000 of the surplus. How would this change the balance sheet? What would each share of common stock receive?
3.
 - a. A certain gas company, organized in 1910, in that year built a plant costing \$675,000. In order to finance this project, the company issued 5,000 shares of common stock (\$100 par value). It also sold bonds aggregating \$300,000 and bearing interest at 5 per cent. To what extent was this corporation over- or under-capitalized in 1911, if valued on the historical cost basis?
 - b. In 1938 this corporation earned a net income of \$63,000 available for interest and dividends. If no change has taken place in the capitalization, and money in such investments is assumed to be worth 7 per cent, what was the capital value of this concern to its owners when valued on the earning capacity basis? Is it over- or under-capitalized?
 - c. The records of this company show that between the years 1912 and 1948 additions and betterments had been made to the plant, costing the company: 1914—\$25,000; 1918—\$50,000; 1923—\$30,000; 1928—\$45,000; 1935—\$50,000; 1937—\$50,000; 1948—\$75,000.

These additions were paid out of the surplus funds accumulated from earnings. What was the capital value of this corporation in 1948 when valued on the historical cost basis? Is the company over- or under-capitalized?
 - d. In 1948, due to increased prices of building materials, and so forth, the cost of constructing such a plant (including additions and betterments) was estimated at \$2,000,000. If you assume the plant to be depreciated 40 per cent, what is the capital value on the cost of reproduction basis? Is the corporation over- or under-capitalized?
 - e. In 1948 this company earned \$75,000 available for interest and dividends but appealed to the State Public Utility Commission for permission to increase its rates, claiming that it was not making a fair return on the fair capital value of the concern. The commission fixes the maximum gas rates which the company may charge the public. These maximum rates are regulated so as to enable the

company to cover its operating costs plus a 7 per cent return on a fair capital value.

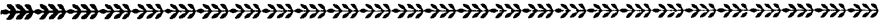
- (1) Is the company entitled to an increase in rates and earnings if the basis used by the commission is:
 - (a) historical cost? Why or why not?
 - (b) cost of reproduction? Why or why not?
- (2) Why could the commission not use earning capacity to determine, for rate-making purposes, the fair capital value of the company?

SUGGESTIONS FOR FURTHER READING

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- TAYLOR, W. BAYARD, *Financial Policies of Business Enterprise* (New York, Appleton-Century-Crofts, Inc., 1942).
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CHAPTER VI

Labor Organizations and Their Policies in Production



HISTORICAL BASIS OF UNIONISM

ORGANIZED CAPITAL in modern economic society is confronted by organized labor. Labor organizations, however, are of comparatively recent origin. They are contemporaneous with capitalism. When the journeyman of the guild system could no longer look forward to becoming a master workman, and when the artisan of the domestic system ceased to be an independent producer, the foundations for unionism were laid. It was during the period of the domestic system that the functions of the merchant capitalist who supplied the market, and of the artisan who created the goods, were first sharply separated. While at first the merchant capitalist merely marketed the finished products of the scattered artisans, he soon came to dominate the entire productive process. With the advent of the changes associated with the industrial revolution he became the owner of work place, equipment, and raw materials, as well as director of industrial operations and seller of finished goods. One-time independent artisans were now his employees and more or less permanent wage-earners. With workers daily massed in factories, and with no other future before them than working for wages, the conditions were ripe for the development of an organized labor movement. In the beginning its purpose was largely defensive, designed to overcome the enormous advantage which the employer had in bargaining. More recently, organized labor has taken a leaf from the book of military experience and has learned that the best defensive is often a vigorous offensive. Labor today knows what it wants and how to get what it wants even though the contest has often gone against it.

STRUCTURAL ORGANIZATION OF UNIONS

Types. Structurally, labor organizations are of three types: craft unions (trade unions), industrial unions, or labor unions. A craft or trade union consists of workers all engaged in a single craft, such as carpentry. It is the most homogeneous of the three types, because all its members have a com-

mon trade interest. An industrial union is composed of workers in a given industry, such as mining, without reference to the several crafts contained within the industry. Since industrial unions disregard craft lines, the basis of membership is broader than in craft unions. These two types, craft and industrial, are antagonistic and mutually exclusive. They represent rival plans for the effective organization of workingmen into unions. Labor unions (the third type), in the specific rather than generic meaning of the term, are relatively unimportant. They are heterogeneous organizations, including workers of different crafts and various industries who work in a given locality. The only reason for their existence is that there are not always sufficient workers to organize effective craft or industrial unions. As soon as numbers warrant it, this is done.¹

In recent years there has been widespread controversy as to which form of labor organization best serves the interests of labor. The craft union has the merit of associating skilled workers, who are employed in more or less clearly defined occupations, have a common interest in their craft, have the same social standing, and are apt to form a cohesive and strong organization. The strength of the craft union lies in its homogeneity and cohesiveness. The craft union, however, has not proved to be an effective means of organizing workers who have no clearly distinguishable crafts. Semi-skilled and unskilled workers find no place in a craft union. But with the growth of the mass-production industries and their increasing reliance upon machine processes, the number of semi-skilled and unskilled workers has very greatly increased. As a result a large percentage of workers remained unorganized as long as craft unions were the main reliance of organized labor. This was notably true in such basic American industries as the manufacture of steel, automobiles, and rubber products.

Advocates of the industrial union form of organization believe that in mass-production industries, particularly, workers can best be organized along industrial lines. Industrial unions by uniting all the workers in a given industry can bring together the mass of semi-skilled and unskilled workers as well as the skilled, and provide them all with a means for improving their bargaining power. Workers in mass-production industries are thus able to confront organized capital as a unit and command attention because of their power to tie up all plant operations. Industrial unions also tend to eliminate jurisdictional disputes by preventing one group of workers from being pitted against another in the same industry, which saps the strength of organized labor. Sometimes, moreover, conditions may dictate that the

¹ "Company unions" are not included here as a fourth type because the above discussion pertains to unions which are organized upon the initiative of workers, and are entirely independent of the employer. Company unions have usually been organized upon the initiative of employers and often controlled by them. They are restricted to the employees of a given enterprise. Cf. pp. 196-198 for a discussion of company unions.

industrial union pattern be followed, if there is to be any organization at all. This is notably true in isolated mining towns. There may not be enough skilled mechanics, such as electricians, to warrant organization by crafts. Unless workers in such communities are to remain unorganized, they must be brought together in an industrial union.

Incorporation. Labor organizations are usually unincorporated voluntary associations. A generation and more ago many labor leaders favored incorporation, but now such plans have been almost completely abandoned. Some unions have incorporated for special purposes, such as the holding of their buildings or the carrying of their insurance funds, but as bargaining organizations they have remained voluntary associations. Compulsory incorporation of labor organizations has sometimes been urged as the only effective means of increasing the responsibility of unions for their acts. Union labor has resisted such action because it would jeopardize union funds, which might be seized as damages for breach of contract, and consequently weaken unions as fighting organizations. Court decisions, however, have laid down the principle that the funds of even unincorporated associations may be taken in the settlement of damage suits. A British court in the famous Taff Vale Railway Company Case of 1901 imposed a fine upon an unincorporated union for damage done the railway in a labor dispute. It took a special act of the British Parliament in 1906, the so-called Trades Dispute Act, to overcome the effect of this decision and to establish certain limits within which union labor might be able to carry on the economic struggle without rendering itself legally liable. More recently the Supreme Court of the United States, in the Coronado Coal Company Case of 1922,² held that the defense of the union (in this case the United Mine Workers of America), alleging that it was not legally liable because it was an unincorporated association, was not valid. While the court held that the evidence did not show that the union was guilty of restraining interstate commerce, the court went out of its way to declare that, had the evidence sustained the charge, the union, though an unincorporated association, would have been liable and its funds could have been attached. The decision was apparently intended as a warning. On the whole the argument that labor unions should incorporate does not seem convincing. The corporate form of organization was authorized by the state to enable people to engage in business for profit under the rule of limited liability. Labor organizations exist for quite another purpose. While as individuals the members of labor organizations would be better protected under the limited liability of the corporate form than they now are as members of voluntary associations, the effectiveness of unions as bargaining associations might be seriously crippled. Those suffering actual damage as a result of illegal acts committed by members of unions have redress in the courts, and under the

² United Mine Workers v. Coronado Coal Company, 259 U.S. 344.

law as interpreted by the Supreme Court the funds of even unincorporated associations may be seized for such purposes.

Federation. Both craft and industrial unions are organized locally and, wherever possible, nationally. While historically local unions came first and were later built up into national organizations, today the characteristic movement is in the other direction. The national unions have paid organizers whose business it is to establish unions among unorganized workers. "The local thus organized," as Hoxie says, "is a product of the international³ or national, chartered by it, largely directed by it, bound to obey it in matters of policy and method or suffer revocation of charter, loss of counsel and financial support in time of trouble—all of which ordinarily means speedy dissolution."⁴ Local unions were once a sort of workingmen's club. They are today very largely the local representatives of national unions. While the local union retains a considerable degree of autonomy with reference to such matters as the negotiation of local agreements, the policies and strategy of organized labor are largely shaped by the national unions. Local unions are ordinarily designated as branches or chapters of the national organization, such as Local Union 314, United Brotherhood of Carpenters and Joiners of America.

Most of the national or international craft or industrial unions have been federated and have become the backbone of a number of important organized labor movements. In the United States the American Federation of Labor, organized in 1881, and the Congress of Industrial Organizations, which began as an offshoot of the former in 1936, dominate the field of organized labor.

THE AMERICAN FEDERATION OF LABOR

From the beginning the American Federation of Labor has been a rather loose federation of national unions built on the craft union plan. Under the compulsion of circumstances other structural types, such as industrial unions and labor unions, have been included. The powerful organization known as the United Mine Workers, for example, whose branches are all of the industrial union type, was long a member of the American Federation of Labor.

Individual membership in the Federation is indirect. As its name suggests, the American Federation of Labor is a federation of unions. The dues-paying members of the Federation are in reality members of local unions, directly or indirectly affiliated with the Federation. Dominating the

³ The term "international" as here applied to unions means unions having branches in the United States and Canada or Mexico.

⁴ R. F. Hoxie, *Trade Unionism in the United States* (New York, D. Appleton and Company, Inc., 1917), p. 120.

groups represented in the Federation are the national unions, which the local unions, wherever possible, are expected to join. Conspicuous among them are the influential national unions operating in the building trades, such as the United Brotherhood of Carpenters and Joiners of America. These national unions, however, retain complete autonomy over their own affairs. Ordinarily local unions are affiliated with the Federation only through their own national organization. If no such organization exists, however, they may hold membership in the Federation directly. Other groups holding direct membership in the Federation are city central labor bodies, and state federations of labor, which are composed of delegates representing the various organized labor units, respectively, in city and state.

At its annual convention in the fall of 1949, the American Federation of Labor announced that it represented a membership of 7,241,290.

The sovereign governing body of the Federation is the annual convention. This is a legislative gathering composed of delegates representing the affiliated labor groups just mentioned. The executive officers of the Federation consist of the president, eight vice-presidents, a secretary, and a treasurer, all of whom are annually elected by the convention. Together with seven other elected members, they constitute the executive council and direct the activities of the Federation.

The purpose of the founders of the Federation was the "formation of a thorough federation, embracing every trade and labor organization in America, organized under the trade union system."³ The Federation is the oldest organizing agency in the union labor field. It establishes new unions and federates those already in existence. It mediates inter-union jurisdictional disputes. It serves as a publicity bureau for organized labor, helping the labor press, seeking the support of public opinion, and stimulating the use of union label products. It functions as a legislative lobby, maintaining permanent headquarters at Washington. While the calling of strikes is outside the jurisdiction of the Federation, it renders what moral assistance it can in the successful prosecution of strikes regularly called by the unions.

One of the characteristics of the American Federation of Labor, to which much of its success has been due, is its flexibility. Although established as a federation of craft unions, it has for years made room for industrial unions as well, although it has not generally fostered such unions. The Federation has never had a hard and fast theoretical program to which it has been committed though the heavens fall. On the whole it has very successfully pursued an opportunistic course.

No matter how adaptable an organization may be, however, it can hardly hope for large success without effective leadership. It has also been the good fortune of the American Federation of Labor to have had able

³ Preamble to constitution of the American Federation of Labor.

leadership. Samuel Gompers, for every year except one from the reorganization of the Federation in 1886 to his death in 1924, served as the president of the Federation. William Green has served continuously since Gompers' death.

The success of the Federation, however, has not been unqualified, and since 1935 has been vigorously challenged. In spite of decades of steady effort, less than 20 per cent of the wage-earners of the country had been organized in 1920 (the year in which the Federation had what was then its peak membership of about 5,000,000), and not all of these were affiliated with the Federation.⁶ Some of the most capable and powerful organized workers, such as the members of the railway brotherhoods (the Brotherhoods of Railway Conductors, Engineers, Firemen, and Trainmen), have chosen to remain outside the Federation. After 1920 there was a falling-off in membership due to severe depressions beginning in 1920 and 1929. In the thirties the number of members grew again, largely as a result of favorable labor legislation and the sharp split in the ranks of organized labor. The fact remains, however, that the Federation has organized skilled manual workers much more fully than either the so-called "white collar" workers or the unskilled workers. The failure of the Federation to organize unskilled workers has been due to the fact that these workers cannot fit into the craft union form of organization. At the San Francisco convention, held in 1934, the Federation committed itself to aid in the organization of workers in the mass-production industries by granting charters for industrial unions where these would not conflict with existing craft organizations. The Federation, however, has not actively encouraged the formation of such unions. This has been one of the leading factors contributing to the attack upon the American Federation of Labor by the group first known as the Committee for Industrial Organization, now renamed the Congress of Industrial Organizations.

THE CONGRESS OF INDUSTRIAL ORGANIZATIONS

Advocates of industrial unionism were bitterly disappointed at the comparative inactivity of the American Federation of Labor in organizing the mass-production industries in spite of the favorable position taken at the San Francisco Convention of 1934. They believed that aggressive leadership was necessary if these basic industries were to be organized and that it was futile to think of organizing them along traditional craft lines. Only industrial unionism could hope to accomplish results. In 1935 the issue of craft versus industrial unionism came before the convention of the American Federation of Labor in inescapable form. Upon the adoption of

⁶ Leo Wolman, *The Growth of American Trade Unions, 1880-1923*, A Report of the National Bureau of Economic Research (New York, 1925), p. 86.

a report calling for the issuance of charters to industrial unions in the mass-production industries, unhampered by any jurisdictional claims on the part of craft unions, the advocates of unrestricted industrial unionism lost by a vote of 11,000 to 18,000. While the impressive size of this vote showed that the advocates of industrial unionism were making progress, it was equally plain that ultimate victory within the ranks of the American Federation of Labor was not yet assured.

In November, 1935, the leaders of eight unions, all affiliated with the Federation, took matters into their own hands. Under the chairmanship of John L. Lewis, long-time president of the United Mine Workers, they constituted themselves the Committee for Industrial Organization, whose declared purpose was "to encourage and promote the organization of the workers in the mass-production and unorganized industries of the nation, and (to encourage their) affiliation with the American Federation of Labor." The largest of the unions represented on the Committee by their leaders were the United Mine Workers (with 400,000 members at the time of affiliation), the International Ladies' Garment Workers (160,000 members), the Amalgamated Clothing Workers (100,000 members), and the United Textile Workers (100,000 members). Apparently the original plan was to stay within the ranks of the Federation, but to place the organization of industrial unions in basic industries that were still unorganized in the vigorous hands of sympathetic leaders.

Naturally this revolt against the leadership of the Federation brought a sharp protest from the latter, pointing out the consequences of the division and discord that would follow if there were dual leadership and organization of labor. During the ensuing years of controversy the insurgent unions, which grew to twelve, were suspended, and finally in October, 1937, expelled by vote of the annual convention of the Federation, which now more than ever was controlled by the craft union leaders.

In the meantime a feverish campaign of organizing workers and of increasing the membership of existing labor organizations was conducted. A number of swift successes were scored by the Committee for Industrial Organization which arrested the attention of the country. The steel industry had long resisted unionization. When on March 2, 1937, the Carnegie-Illinois Steel Corporation, the largest subsidiary of the United States Steel Corporation, signed an agreement with the Steel Workers' Organizing Committee to bargain collectively with the Amalgamated Association of Iron, Steel, and Tin Workers (the steel union), the announcement electrified the labor union world. The collective bargain which was negotiated provided not only for union recognition but for an increase in wages and for a forty-hour week. Other subsidiaries of the United States Steel Corporation followed suit, as well as some large competitors, such as the Jones and Laughlin Steel Corporation. Certain smaller independent companies,

collectively known as "Little Steel," under the leadership of the Republic Steel Corporation, successfully resisted efforts to unionize their plants. Triumphs similar to those won in the steel industry were scored by the United Automobile Workers in reaching agreements with the General Motors Corporation, the Chrysler Corporation, and finally with the Ford Motor Company. The United Rubber Workers, the United Electrical and Radio Workers of America, and the Transport Workers are other unions which made remarkable progress under the sponsorship of the Committee for Industrial Organization.

Three years after the formation of the Committee as a temporary body, and after fruitless negotiations with the leaders of the American Federation of Labor for the settlement of differences and the presentation of a united labor front, a permanent organization was set up in November, 1938. The name Committee for Industrial Organization was conveniently changed to Congress of Industrial Organizations, which made it possible to continue to use the well-known initials C.I.O. in referring to the organization. Its primary purpose as set forth in its constitution is "to bring about the effective organization of the working men and women of America . . . to extend the benefits of collective bargaining . . . and to establish peaceful relations with their employers." Like the American Federation of Labor, the Congress of Industrial Organizations is a federation, primarily of national and international unions. John L. Lewis was naturally elected the first president of the new body. At the convention launching the permanent organization a total membership of 4,037,877 was reported, though this included both dues-paying and non-dues-paying members. Based on the known membership of the constituent unions, an estimate of 6,000,000 members for the Congress of Industrial Organizations in 1950, is doubtless not far from the truth. At the convention of 1940 Lewis resigned and was succeeded in the presidency by Philip Murray, who has held the office since.

The extraordinarily rapid growth of industrial unionism during the thirties has been one of the spectacular developments in the century-old American labor movement. It has profoundly influenced the course of unionism as a whole. The amazing growth in numbers and the triumphs of the movement were largely due to a few outstanding factors. Prominent among them of course was favorable legislation with reference to the rights of labor to organize and to bargain collectively through its own chosen representatives. This furnished the proper climate for growth. Most of all, however, the plan of industrial unionism was both sound and timely for industries in which machine processes had done much to reduce the demand for highly specialized craftsmanship. There was something captivating about the vision of the irresistible power of workers organized *en masse*. Not only were the times propitious and the idea appealing, but

the leadership in the movement for industrial unionism was vigorous and militant. The leaders countenanced new fighting techniques. They broke with the non-partisan tradition of organized labor in America and sought to align their organizations in both local and national political campaigns.

What the outcome of this division in the ranks of organized labor will be it is impossible clearly to foresee. It would be a mistake to assume that the American Federation of Labor has been largely on the defensive in the face of the challenge of a rival organization. On the contrary, it has fought aggressively to establish new unions, to increase the membership of its existing unions, and to perpetuate policies which it believes to be in the best interests of organized labor. In spite of dissension, or perhaps because of it, more American workers are organized in unions than ever before. But the inescapable fact is that the American labor movement for the time being is badly divided in leadership, organization, philosophy, and procedures—and suffers from a self-imposed handicap in consequence.

OBJECTIVES OF ORGANIZED LABOR

Whatever specific form the labor movement may take at a given time and place, unionism is indispensable to labor. Unions are both bargaining and fighting organizations. Their primary function is peaceful bargaining with the employer concerning wages and other conditions of work, but they can, if the occasion demands, become fighting organizations and carry on a sustained strike or boycott for the realization of their ends. As bargaining associations, unions represent the most effective agency labor has been able to create to equalize its own bargaining powers with those of the employer. Whenever workers are unorganized and lack strong, capable leadership, they usually are at a decided disadvantage in negotiating terms with the employers. Wages, for example, though influenced by the productivity of labor, are not set automatically at a figure determined by what workers produce. There is often a considerable spread between what the employer can pay, if he must, and the wages that he actually pays. This margin can sometimes be appreciably narrowed through skilful bargaining. Indeed at times bargaining has been so effective as to advance wages at the expense of profits. As fighting organizations, unions through the contributions of their members provide the financial resources, the aggressive leadership, and the strategy for the conflict with employers.

But unions are more than associations for bargaining or fighting with employers. They are powerful agencies pressing for the enactment of legislation favorable to labor and directly or indirectly play an important rôle in politics. They often provide limited insurance benefits for their members. They sometimes operate employment agencies to facilitate finding jobs for members of the union. They support workers' education and the

training of future union leaders. They stimulate recreational activities; some have established vacation centers for their members. Directly and indirectly, they do everything possible to advance and preserve the standard of life of the groups they represent, knowing that in the long run the standard of life is the principal determinant of the future supply of labor and of the level of competition among workers.

Unionism is not without its costs to the individual workingman. Since the essence of unionism is the substitution of group action for individual action, the individual must learn to subordinate his own interests to the interests of his group and to forgo freedom of independent action.

That unionism seeks to create a monopoly of the labor supply and thereby to dictate wages is one of the most common criticisms directed against it. It is said that as a monopolistic movement it is opposed to the best interests of the consuming public and is no more defensible than any other form of monopoly. It must be admitted that the complete unionization of industrial workers in the hope and expectation that wages will be raised thereby is one of the most cherished ambitions of the organized labor movement. But the benefits of such monopolistic control, should it ever be achieved, would redound to all the workers, who together constitute a large percentage of the consuming public. As long as membership in the unions is open to all workers in the organized trades or industries, the monopolistic aspirations of unionism do not constitute a serious social problem.

Labor organizations exist for the purpose of protecting the rights and advancing the interests of wage workers. The status of the worker in industry, particularly with reference to such important questions as the hours he shall work and the wages he shall receive, is a matter of contractual agreement with the employer. Bargaining alone, the industrial worker is often overwhelmed by conditions beyond his control or beaten by powers greater than his own. Bargaining collectively, he usually at least can get a hearing, and he has the chance of driving a better bargain. Although wages are determined by all the forces of the market which affect the demand for and the supply of the services of labor, it is true that wages do not set themselves. Labor organizations are among the human agencies that help to set the exact level of wages within the broad limits determined by the market. During the century or more of labor union history certain policies have been developed designed to promote the best interests of labor. Some of these have gradually commended themselves to employers and the public generally; others are still distinctly matters of controversy.

THE POLICY OF COLLECTIVE BARGAINING

Easily the most important and inclusive of the policies of organized labor is the policy of collective bargaining. Indeed, the primary purpose in effecting labor organizations is to enable workmen to bargain collectively. Collective bargaining exists in an industry when its organized employees through their own selected agents make an agreement with the employer which is binding upon both parties. It was reported in January, 1945, that more than 14 million workers in the United States were employed under collective bargaining agreements, which is nearly one half of all wage-earners. Such trade agreements ordinarily include stipulations concerning wages, hours, and conditions of work. The following extracts from a trade agreement between the Chicago Newspaper Publishers' Association and Chicago Typographical Union No. 16 illustrate some of the more important provisions of a representative trade agreement.

Section 1. The association hereby recognizes the Union as the exclusive bargaining representative of all employes covered by this Agreement.

Section 3. No individual agreement or contract of any character shall be made between Chicago Typographical Union No. 16 and any member of Chicago Newspaper Publishers' Association or such other publishers of daily newspapers as may hereafter become members of Chicago Newspaper Publishers' Association during the life of this Agreement, unless said member shall have first withdrawn from membership in said Chicago Newspaper Publishers' Association.

Section 4. If any terms affecting wages, hours or working conditions, better or different than those set forth in this Agreement, or any concessions whatever are allowed by the Union to any Chicago daily newspaper during the life of this Agreement, said better or different terms or concessions shall, unless corrected by the Union after due notice of such conditions has been served on the Union by the Association, or in accordance with the provisions of Section 22 through 28, be allowed to any member of the Association.

Section 6. This agreement shall continue in full force and effect for the period beginning with the date of execution thereof and continuing until July 15, 1951; provided, however, that either party to this contract shall have the right to reopen on July 15, 1950, the question of the hourly wage rates, as stated in Section 40, upon written notice to the other party not less than sixty (60) days prior to July 15, 1950. Any such notice shall be accompanied by a copy of the proposed change in hourly wage rates.

Three months in advance of the expiration of this Agreement, either party may give the other party notice in writing of its intention to open negotiations for a new contract.

Section 7. The language and spirit of this Agreement guarantee the prompt and faithful performance by the Union and the Office of all obligations imposed by the terms of this Agreement, all without waiting for the consideration or adjustment of any differences of opinion respecting the rights of either party. Both parties agree that whenever any differences of opinion as to the rights of either under the Agreement shall arise, or whenever any dispute as to the construction of the Agreement or any of its provisions takes place, such

difference or dispute shall be promptly resolved in the manner provided in this Agreement without strike, lockout, diminution, or interruption of any kind, to the end that fruitless controversies shall be avoided, good feeling and harmonious relations be maintained, and the prosecution of the business in which the parties have a community of interest shall be assured.

Section 16. The proportion of apprentices to regular journeymen shall be as follows: For ten journeymen or less, one apprentice; for every additional ten or fractional part thereof, one apprentice—the average number of men employed to be the basis.

Section 24. When it becomes evident there is disagreement as to interpretation or enforcement of the terms of this Agreement, the President of the aggrieved party shall address the President of the other party in writing, clearly setting forth the matters in question. An issue is then raised.

Section 29 (a). Five days of $7\frac{1}{4}$ hours each (exclusive of time for lunch) shall constitute a day situation; five nights of $7\frac{1}{4}$ hours each (exclusive of time for lunch) shall constitute a night situation.

Section 40.

WAGE SCALE AND HOURS

Journeymen

DAY WORK—\$2.63448 per hour; \$19.10 for a shift of $7\frac{1}{4}$ hours; \$95.50 for a work-week of five shifts.

NIGHT WORK—\$2.7862 per hour; \$20.20 for a shift of $7\frac{1}{4}$ hours; \$101.00 for a work-week of five shifts.

Invariably in such agreements there are stipulations concerning the minimum wages to be paid, and frequently there are provisions for the settlement of disputes between employers and employees.

In the beginning the very right of labor to bargain collectively was challenged; today it is generally conceded, even though some do not like the results. While the interests of labor and capital are in some respects identical, it is equally true that in other respects they are antagonistic. They are identical in so far as the creation of a value-product is concerned; but they are often antagonistic in the distribution of that product. Collective bargaining is labor's means of protecting its interests in dealing with capital in the division of the product which is the result of their coöperative effort.

Weakness of individual bargaining. The individual workingman is usually at a decided disadvantage in driving a bargain with his employer. In the first place, he generally has few, and sometimes no real, options. He may be jobless. If he has "peddled" his services from gate to gate, he is neither mentally nor economically predisposed to discriminate very carefully as to the conditions of his employment. The particular job may be a matter of supreme importance to him, while the procuring of a given man is often of no importance to a prospective employer. To the laborer the job may mean bread; to the employer the procuring or loss of a given man may mean only a little more or less profit. In individual bargaining

employer and laborer stand on different levels; the employer usually has many options, the laborer few if any. Second, the individual workingman is usually not in a position to take full advantage of the best market opportunities to dispose of his services. He is often ignorant of the very existence of superior opportunities, and even when he knows about them, quite as likely as not, is unable to act upon such information, for the mobility of labor is not comparable to the mobility of capital. Third, the individual workingman is a poor bargainer because he has a perishable product to sell. If he fails to dispose of services today that he is able and willing to render, he loses the value of those potential services altogether. Consequently, the hard-pressed laborer bargaining individually is often forced to accept the terms offered him by the man who controls the job, rather than to run the risk of being without a job. Fourth, the individual laborer usually has no reserve funds which enable him temporarily to withhold his services from the market. He must work or suffer privation. He has no waiting power.

Strength of collective bargaining. Collective bargaining is designed to overcome these weaknesses in the individual's bargaining powers. Where the one may be weak, the many may be strong. While collective bargaining can neither create alternative opportunities for work nor preserve perishable services, there are certain very advantageous things that it can do for labor. First, it can overcome the employer's indifference as to obtaining or retaining the services of men. An employer may remain indifferent over the prospect of dispensing with the services of a single workman, but he cannot afford to remain indifferent when it comes to the matter of retaining the services of a thousand or ten thousand men trained to do the work that he controls. Collective bargaining implies the power both to give and to withhold. Union labor can temporarily withhold its services (the period of suspension has sometimes run into months) because the unions make a practice of creating reserve funds with which to finance themselves during a bargaining struggle that involves suspension of work. Second, collective bargaining can substitute knowledge of the labor market for ignorance. Expert business agents, skilled in the art of negotiating agreements, can be employed by the unions to represent them in the wholesale selling of their services. Such procedure brings decidedly better results from their point of view than "peddling" their services from door to door.

Effects of collective bargaining. The chief effect of a system of collective bargaining, from labor's point of view, is the establishment of a standard rate of wages. Such standard rate is intended as a minimum, and not a maximum. This is the unionist's answer to the charge that collective bargaining levels wages, wiping out all differences in rewards for variations in efficiency. In practice, however, as far as wages on the hour-basis are

concerned, employers find it difficult to establish classes according to competency, for labor leaders are very apt to regard such a measure as a menace to the solidarity of labor and a preliminary step to the reduction of the standard rate. For these reasons the standard or minimum rate often does become the maximum rate for all.

On the other hand, while the tendency of collective bargaining is to level wages per hour to the stipulated minimum, it is also true that this minimum under a system of collective bargaining is commonly substantially higher than the average wage that can be obtained under a system of individual bargaining.

Those who object to any system of collective bargaining point out that its effect is to reduce all workers to a "dead level of mediocrity," and thus actually to promote inefficiency. It is contended that when the most efficient receives little, if any, more than is paid the least efficient workmen of a given group, the chief incentive for superior workmanship is destroyed. Inefficiency under such a system, it is said, becomes most evident during periods of prosperity when the chances for unemployment are most remote. Organized labor answers the charge by saying that collective bargaining permits gradations of workers with payments of wages beyond the minimum, and that the employer is under no obligation to hire inefficient workers who cannot earn the minimum fixed in the collective wages bargain.

The legal right of collective bargaining. The right to bargain collectively is the essence of unionism. Labor has fought for this right through its organizations and has also turned to legislation for a clarification of its rights. In the United States within the past score of years, a number of legislative acts have affected the character and scope of collective bargaining, although, to be sure, the legal right of labor to organize and to bargain collectively long antedated these measures. These were the National Industrial Recovery Act of 1933, the Wagner-Connery National Labor Relations Act of 1935, the National War Labor Board first created in 1942, and the Taft-Hartley Act of 1947.

The National Industrial Recovery Act of 1933. The status of collective bargaining under the National Industrial Recovery Act was set forth in the highly controversial section of the act labeled 7a, which reads:

(1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; (2) that no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing.

Although the provision that "employees shall have the right to organize and bargain collectively through representatives of their own choosing" did not really confer any new rights upon labor, the formal recognition and sanction of the principle enormously enhanced the prestige of unions with the unorganized workers and increased their power in dealing with employers. Section 7a was not statute law; it became effective only when written into codes of fair competition, drawn up by industry itself, which when approved by the President had the force of law (Section 3).

The National Industrial Recovery Act met with reversal when the Supreme Court in a unanimous decision in the *Schechter Poultry Corporation* case declared the vital Section 3 of the act unconstitutional (May 28, 1935). This section sought to give privately drawn codes of fair competition, approved by the President, the sanction of law. The Court held the code provisions invalid because "the code making authority thus conferred is an unconstitutional delegation of legislative power" by Congress and because "the attempted regulation of intrastate transactions which affect interstate commerce only indirectly" is outside the powers of the federal government. The collective bargaining section (7a) of the act was not directly involved in the decision, but since it had to be written into the codes to be effective, and the code-making authority was unconstitutionally conferred, Section 7a of the National Industrial Recovery Act lost practical significance as a legal foundation for the policy of collective bargaining.

The National Labor Relations Act of 1935. The whole principle of collective bargaining, however, was reaffirmed with added emphasis in the National Labor Relations Act. Curiously, it is again Section 7 of the act which restates the rights of labor in this respect.

Sec. 7. Employees shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in concerted activities, for the purpose of collective bargaining or other mutual aid or protection.

The act hopes to eliminate some of the major causes of industrial conflict by defining the rights of labor and by branding certain labor practices of the employer as unfair. Employees "shall have the right to self-organization" and "to bargain collectively through representatives of their own choosing." Majority rule shall prevail: those chosen by a majority of the employees shall represent all employees in collective bargaining. Employers may not "interfere with, restrain, or coerce employees" in the exercise of these rights; may not "dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it"; may not, by discriminating concerning conditions of employment, "encourage or discourage membership in any labor organiza-

tion"; and may not "refuse to bargain collectively with the representatives of their employees."

The act creates a new National Labor Relations Board (there had been two predecessor boards), composed of three members and set up as an independent agency within the executive branch of the government. It functions as a quasi-judicial body. It acts in cases of disagreement concerning the appropriate collective bargaining agency and may take a secret ballot or use any other suitable method for ascertaining the representatives of labor's own choosing. Violations of the unfair practices section of the act are within the jurisdiction of the board. It may issue "cease and desist orders" to employers guilty of unfair practices and may go to the federal circuit courts for orders to or injunctions against such employers. Violation of court orders is of course punishable as contempt of court.

The Supreme Court of the United States in a series of five decisions, announced April 12, 1937, upheld the constitutionality of the National Labor Relations Act. The authority of the Congress to legislate on the subjects covered by the act had been challenged on the ground that the act is "an attempt to regulate all industry, thus invading the reserved powers of the States over their local concerns." The Court held that the act was a proper exercise of the powers which the Constitution confers upon Congress to regulate interstate commerce. In the case of the *National Labor Relations Board v. Jones and Laughlin Steel Corporation*⁷ the Court held:

We think it clear that the National Labor Relations Act may be construed so as to operate within the sphere of constitutional authority. . . . It is a familiar principle that acts which directly burden or obstruct interstate or foreign commerce, or its free flow, are within the reach of the congressional power. Acts having that effect are not rendered immune because they grow out of labor disputes. . . . Although activities may be intrastate in character when separately considered, if they have such a close and substantial relation to interstate commerce that their control is essential or appropriate to protect that commerce from burdens and obstructions, Congress cannot be denied the power to exercise that control.

National War Labor Board. A governmental agency affecting collective bargaining for the period of the Second World War was the National War Labor Board. Appointed by the President in January, 1942, it was a tripartite organization with members appointed to represent labor, employers, and the public at large. To help meet the war-time need for uninterrupted production, the War Labor Board began by reviewing disputes which labor and management could not settle in collective bargaining negotiations and which might consequently curtail production. Later the

⁷ *National Labor Relations Board v. Jones and Laughlin Steel Corporation*, 301 U.S. 1 (1937).

board exercised great power over wage changes, even when labor and management agreed upon them. Advances could not be made without the approval of the War Labor Board, and this was sparingly given in order to help curb the rise in the cost of living.

Labor-Management Relations Act (Taft-Hartley Act of 1947). A highly controversial legislative act affecting collective bargaining and other policies of organized labor was the Taft-Hartley Act of 1947. Although the act was bitterly assailed by union labor it has so far not even been amended by Congress.

Unions under the act are required to bargain collectively with employers. They cannot legally decline to do so.

Unions cannot compel employers to hire only union members. They may, however, enter into agreements with employers providing that all employees must join the union as a condition of their continued employment. Thirty days may be allowed for non-union employees to join the union. The closed shop with the closed union, meaning a shop in which only persons already members of a union can be employed, is outlawed. The closed shop with the open union, meaning a shop in which non-union persons may be employed but must join the union as a condition of continued employment, is permitted.

Unions may not bargain for foremen and supervisors but these may join labor organizations of their own if they choose, and employers can make contracts with them on a voluntary basis.

Unions may not require employers to deduct union dues from the pay envelopes unless authorized by the individual unionists themselves. Such a restricted "check-off system" is permitted.

Unions must publish financial statements.

Unions may be sued by employers for breach of contract, and for damages sustained in various forms of industrial conflict. This was legislative re-affirmation of a principle previously laid down by a Supreme Court decision. At the same time individual members are specifically exempted from any payment of damages attributable to union activities.

Certain activities of unions are branded as "unfair practices" and labor is forbidden to engage in them. Among them are the following: first, the coercion of other employees in their rights of collective bargaining; second, discrimination among men under union shop contracts for reasons other than failure to pay dues; third, refusal to bargain collectively; fourth, engaging in certain types of strikes (jurisdictional) and boycotts (secondary); fifth, establishing either excessive or discriminatory membership fees and dues under union shop agreements; sixth, forcing an employer to pay for work not actually performed (popularly called "feather-bedding").

Unions lose their rights under the National Labor Relations Act if any

of their officers fails to sign an affidavit asserting that he is not a member or active supporter of the Communist Party.

THE POLICY OF THE CLOSED SHOP

There is doubtless no policy of organized labor about which there are more sharply divergent views than the policy of maintaining the closed shop. To the labor unionist it seems the logical culmination of the labor movement and indispensable to its fullest success. To the employer it is apt to appear a vicious form of labor monopoly, intolerable in a competitive society.

Nature of open and closed shop. Organized labor favors the closed shop. Many employers insist upon the open shop. Strictly defined, an open shop is a shop in which no discrimination is made, as far as employment is concerned, between union and non-union labor. The employer is free to hire anyone he chooses. In practice, however, the open shop frequently becomes an anti-union shop; it is closed to union labor by the employer. In speaking about the closed shop, what is usually meant is a shop that is closed through the initiative of organized labor rather than through that of the employer. At least two important kinds of closed shop must be distinguished: the closed shop with the open union (often called the union shop) and the closed shop with the closed union. In the former, non-union men may find employment, but as a condition of their continued employment they must join the union. In the latter, only persons already members of a union can be employed. It is at once apparent that the closed shop with the closed union represents the highest degree of control organized labor has been able to attain. Its enemies call it monopoly control.

Grounds of justification of the closed shop policy. Labor contends that the closed shop is essential to make collective bargaining really effective. Without the solidarity of labor that the closed shop represents, collective bargaining is lamed, if not paralyzed, in procuring fair wages, in regulating hours, and in promoting security of the job. If the employer is free to hire and to keep on the pay-roll non-union men, at wages lower than the standard union scale, the strength of the union will soon be sapped and the shop be de-unionized. Organized labor feels that in self-protection the union must control the working personnel of any given plant. The closed shop is the only effective means of doing this.

Another ground on which labor justifies the closed shop is that of benefits received. It is argued that wage advances, shorter hours, and better working conditions are all primarily due to union effort. These benefits, however, have not been obtained without cost to the unionists. They who share the benefits should also share the costs. The non-union laborer, who enjoys the fruits of union efforts and who none the less refuses to join

the union, is looked upon as a "slacker" by the unionist. Sometimes, indeed, he is treated as a traitor to the cause of labor.

Still another ground on which labor defends the closed shop is its alleged advantage to the employer, who is furnished with a more homogeneous and efficient supply of labor. No shop, it is pointed out, can hope to operate very efficiently by employing both union and non-union men. The two represent distinctly opposite points of view in the matter of the relations between management and labor, and consequently the development of any real *esprit de corps* is impossible. The employers who insist that they will have harmony by employing only non-union men are virtually denying labor the right to organize. The unions, on the other hand, purport to promote harmony and efficiency by requiring all workers to hold union membership.

Objections to the closed shop policy. While most employers concede the right of labor to organize and to bargain collectively, there is no such general assent to the principle of the closed shop. One of the most emphatic objections of employers to the closed shop is that it means meddlesome interference by outside labor leaders with the relations between employer and employee in a given establishment. This objection was clearly voiced by the employers represented on President Wilson's First Industrial Conference of 1919 in the following statement:

No employer should be required to deal with men or groups of men who are not his employees or chosen by and from among them. Under the organization of the open shop there is not the same opportunity for outside interference on the part of other interests to prevent close and harmonious relations between employer and employee. Their efforts to continue or secure such harmonious relationship are not complicated to the same extent by intervention of an outside interest which may have aspirations and plans of its own to promote, which are not necessarily consistent with good relations in the shop.

It is this opposition to outside interference that has prompted some employers to favor company unions, that is, unions composed strictly of their own employees.

A second objection urged by the employer against the closed shop is that it is un-American, because it denies men who are able and willing to work the opportunity to do so, except upon the condition of union membership. It restrains the employer from hiring such willing workers. It is a denial of that equality of opportunity which has always been one of the most cherished of American ideals. It substitutes monopoly for freedom. Employers opposed to the closed shop cleverly speak about the "American Plan" (for "American" is a word to conjure with), which means an open shop in which it is said union and non-union men may work side by side without discrimination.

A third count against the closed shop brought by the employer is its inefficiency, a point on which he clashes directly with the labor-union champion of the closed shop. It is alleged that the closed shop tends to repress individual initiative; that strikes are more apt to occur in closed shops than in others; and that the closed shop offers the necessary opportunity for output restriction which raises the prices to be paid by the consuming public.

THE POLICY OF RESTRICTING OUTPUT

No practice of organized labor has been more severely criticized than that, sometimes resorted to, of restricting output. Its most scathing critics often overlook the fact that the policy is by no means peculiar to labor. Other producers have been known to curtail production in order to enhance the price of the commodity they offer for sale. Labor leaders are generally loath to admit that output restriction exists and usually are quick to deny it. Sometimes the habit of working slowly has become so firmly fixed that it is accepted as a matter of course and fails to be recognized as output restriction. The practice of restricting output is commonly known as "killing time" or "soldiering on the job." Its forms are many. Examples are furnished by certain union rules which prohibit the employer from using apparatus or machinery that would reduce the time required for a job and so decrease the amount paid for it; by the rule of a painters' union limiting the size of the brush its members can use; by a bricklayers' regulation limiting the quota of bricks to be laid per day. Union rules often specify minutely just what each member may do, with the result that a relatively simple job, which could be handled by a single skilled mechanic and his assistant, requires the cooperation of several skilled workmen together with unskilled helpers.

Labor's justification of output restriction. Whenever labor has deliberately resorted to output restriction, the policy has been defended on one of two grounds: the necessity of making the job last in order to prevent unemployment, or the need of protecting the health of the worker. The first is commonly known as the "lump-of-work" argument. Those who advance it contend that in any given industry, through the period of a year, there is only a relatively fixed amount of work to be done. The more one can restrict the daily output of work, the more days of work there will be. When looked at from the point of view of the individual workingman, the practice is by no means as short-sighted and stupid as it is often represented to be. From the social point of view the practice is indefensible, because it means higher costs to society. From the long-time point of view it is fallacious, because such higher costs are bound to decrease the demand, which means less work and perhaps unemployment for the worker. But the individual workingman, in an economic world in which

men are expected to look out for themselves, is not apt to think first of either the social or long-run consequences of his practice. What he sees is that by "nursing" a given job along he may realize a larger or steadier income for himself before any social consequences in the long run can appear. The policy is both selfish and short-sighted, but from the individual point of view it is not always stupid.

The only strong and socially valid argument that labor can offer in defense of the policy of restricting output pertains to the necessity of protecting the health of the worker. Employers have frequently, particularly in industries in which wages are reckoned as so much per piece rather than per hour, introduced pacemakers to speed up production. Sometimes workers themselves, eager "to make more money," have been excessively stimulated under such a piecework system and have produced results far beyond those attained by the average worker. The employer has then used, or been tempted to use, this demonstration of the possibility of larger output as an excuse for decreasing the piece rate of wages. The result has been that labor received the same or lower daily wages for more daily work. The pace set, labor contends, is often a killing pace, and it is better to "kill time" than to "kill the worker." If work is speeded up beyond a certain point, it will lower the efficiency of the worker in the long run. Greater output today is purchased at the cost of smaller output tomorrow. When the purpose of organized labor in restricting output is to safeguard the health of the worker, so as to make him a more efficient producer and a more useful member of society, the policy is socially desirable.

POLICY OF REGULATING HOURS

The regulation of hours of work became necessary with the development of modern industrialism. It has always been one of the chief objectives of organized labor. So urgent has been the need for such regulation that it has had to be met not only by private action but also by legislation.

Protecting health and efficiency of worker, as a basis for restriction of hours. Modern machine industry, and all that it implies, has subjected human beings to new elements of strain which have greatly intensified fatigue. It is often said that not work, but worry, kills. Worry certainly kills, but so does overwork. Overwork involves an outlay of energy that is not adequately restored. The resulting fatigue is due to the over-consumption of energy-yielding tissues and to the accumulation of fatigue poisons in the system. An overtired person is both rundown and poisoned. Ordinarily the poisons created by work are eliminated from the body during rest, or are neutralized. If proper periods of rest follow periods of activity, the human organism gets a chance to recuperate, and an amount of bodily vigor results that is equal to or greater than that which the person

possessed prior to the exertion. But when improper allowance is made for such periods of rest, the poisons of fatigue accumulate and tissues that should be restored are not given the necessary chance. Among the chief sources of intensified fatigue in modern industry are overtime, speed and monotony of work, domination of mechanical rhythm over the natural rhythm of the organism, and the noise of machinery.

Overtime. When machine industry was first established, the owners of industrial establishments thought it necessary to run their machines just as long each day as working conditions permitted. The machines represented a large capital outlay, and when not in operation it seemed to their owners that they constituted a dead investment. Consequently, twelve- to fourteen-hour working days were common, and even sixteen-hour working days were not unknown. Men, women, and children worked from sunrise until sunset, which in England often meant that in the spring and summer months they began work at five or six o'clock in the morning and worked until seven, eight, or nine o'clock at night, with only a brief intermission for dinner. The fatigue which such long hours of machine labor involved can readily be imagined; fortunately the great masses of workers no longer need experience it.

Speed and monotony of work. While excessively long hours, such as those that characterized the textile industry in the early days of the industrial revolution, are now almost unknown, the speed at which modern machines are driven, and the monotony resulting from high specialization, are other sources of intensified fatigue. The modern workman is a specialist, driven at high speed by the machines he operates. Such speeding-up makes large production possible, but it also intensifies fatigue. Is it any wonder, with the endless repetition of the same simple operation performed at high speed, that human spirits should sometimes rebel against the dull monotony of their daily grind? The fact that the masses of workers do not rebel, because they become habituated to their tasks and incapable of anything else, does not change the physically and mentally enervating effects of their work.

Domination of the machine over man's natural rhythm. Fatigue in industry has been further intensified because the machine has come to dominate the natural rhythm of the human organism. It is not always appreciated that men, as well as machines, work rhythmically. Our common rhythmic heritage is seen in man's fondness for singing and dancing; in the chanting of sailors as they haul; in the rhythmic swing of marching soldiers; in the beat of the cobbler's hammer and the blacksmith's sledge; in the rhythmic swing of the housemaid's broom. Indeed, even the boot-black who shines our shoes works better when he works rhythmically.

"The reason why rhythm makes work easier as well as more enjoyable," says Josephine Goldmark, "is that in any given tempo, each effort

is followed by a corresponding rest. There is perfect balance of swing and recovery, rise and fall, exertion and repose. . . . If such a balance could be permanently established in work, fatigue could never occur. Such a condition exists in the physiological rhythm of the heart and respiratory muscles, which function unceasingly through life, alternating work and rest. . . . Thus we are physiologically attuned to rhythm."⁸

The danger of highly speeded machine work lies in the fact that man's own natural swing or rhythmic tendency is made completely subordinate to the speed of the machine. The machine sets the pace. Whatever man's natural tempo, he must struggle to keep up. Fatigue is the inevitable result. Men and women are everywhere early consigned to the industrial scrap-heap. Hours of labor in many non-industrial employments are longer than the hours in factories, and yet the persons concerned may not become as fatigued as the factory workers. The difference lies in the fact that the non-industrial worker sets his own pace and works in accord with his own natural rhythm.

The noise of machinery. A further source of intensified fatigue is found in the noise of machinery. Machines of different construction and operated at different speeds produce a great variety of vibrations resulting in the production of much noise. What we call the roar of machinery has a fatiguing effect. To dismiss the subject with the remark that the workers get used to it is not to deny the fatiguing effects of the noise. Noise is always distracting. An outsider stepping into many a modern factory finds it difficult to understand how any work can be done under such conditions. Work is done, as a matter of fact, because the workers have learned to concentrate, but this concentration or voluntary application to the job hastens the fatigue of the organism.

Results of fatigue. Excessively long hours under modern industrial conditions are the chief source of fatigue of the worker. Many careful studies have established the fact that fatigue is prejudicial to efficiency, to health, to morals, and to the future generation.⁹ The surest and most direct measurement of the worker's fatigue is his changing output. Fatigue lowers the efficiency of the workers as to both quantity and quality of output; it increases the amount of "spoiled work" and the number of accidents.¹⁰

⁸ *Fatigue and Efficiency*, 3d ed., (New York, Russell Sage Foundation, 1912), p. 81.

⁹ Cf. *Final Report of the British Health of Munition Workers' Committee* (Reprinted by the United States Bureau of Labor Statistics as Bulletin 249, February, 1919); and *The Case for the Shorter Work Day* cited below.

¹⁰ Statistics gathered by the Wisconsin Industrial Commission show that the number of accidents rises during successive hours of work after any period of rest, except during the closing hour of any "run," when counteracting forces are at work. Cf. Industrial Commission of Wisconsin, *Report on Industrial Accidents* (1915), p. 16. Cf. also United States Bureau of Labor Statistics, *Causes and Prevention of Accidents in Iron and Steel Industry, 1910-1919*, Bulletin 298, p. 190; *Accidents and Accident Prevention*, Bulletin 256 (Nov., 1919).

Fatigue predisposes workers, as well as everyone else, to disease, because it lowers the individual's powers of resistance. Tired workers are not only susceptible to the peculiar disease hazards of their own industry, but also to such general diseases as pneumonia and tuberculosis. Daily congregated in large numbers in our factories, overtired workers are a constant disease danger to one another and to the general public. Fatigue is also detrimental to good morals. "The dangers attendant upon excessive hours are shown by the moral degeneration which results from over-fatigue. Laxity of moral fiber follows physical debility. After excessive labor, the overtaxed worker is left stupefied or responds most readily to coarse pleasures and excitements."¹¹ Tired people often crave some extraordinary stimulus (not infrequently a stimulant) as a welcome relief to jaded nerves. In the case of working women, fatigue may prove decidedly injurious to the future generation, for the children of over-worked mothers cannot be expected to get as good a start in life as they might if their mothers were not working under such conditions of excessive strain.

Need of leisure, as a basis for restriction of hours. The need for restricting working hours, however, is based not merely upon the intensification of the fatigue of the human organism under modern working conditions, but also upon the worker's right to leisure. Man is something more than an intelligent machine for the most efficient production of wealth. Not merely his physical, but also his mental and moral, welfare is a matter of supreme importance both to him and to society. Long hours not merely sap physical vitality, they also prevent further education, limit the possibilities for recreation, interfere with family life, and render it next to impossible for the workingman to participate in community affairs. The intelligent use of leisure time is a *sine qua non* for the attainment of these ends; man needs leisure to develop and to enjoy life in its non-acquisitive aspects. Excessively long hours mortgage so large a part of the time and energy of people for working together that not enough of a margin remains for really living together.

Spreading work, as a basis for the restriction of hours. During the great depression of the thirties a third idea for the legislative restriction of hours gained prominence, namely, restricting hours so as to distribute work among those regularly employed in order to provide jobs for the largest numbers of persons. Organized labor urged employers to shorten hours and put more persons on payrolls. As long as industry found it difficult to produce enough to meet the demands of the world for its products, the emphasis of labor unions in their policy of controlling hours was upon the physical conservation of the worker and the psychological necessity of providing some leisure for him to enjoy life. But when technologi-

¹¹ Felix Frankfurter and Josephine Goldmark, *The Case for the Shorter Work Day* (1915), Vol. I, p. 404.

cal progress enormously increased the productivity of some industries, so that the markets found it difficult to absorb their output, the emphasis shifted to the desirability of protecting the job of the worker. To meet such new conditions spokesmen for organized labor consistently urged the adoption of the shorter working day as the most constructive step that could be taken to guard against the calamity of total unemployment for millions of wage-earners. Not only the five-day week but also the six-hour day were urged as emergency measures during the depression of the early thirties. But for normal times as well, the five-day week with six to eight hours per day is urged as a means of providing the most steady employment.

The economic possibility of a shorter working day. In considering the restriction of hours, whether through collective bargaining or legislation, the important question remains: Is it possible to decrease the hours of work without reducing output and lowering wages? To answer this question intelligently, it is necessary first of all to draw a sharp line of distinction between industries in which alertness and skill of the worker are a prime requisite and those in which the pace is set by the machine. Restriction of hours has different effects in the two situations.

Throughout the history of the movement for the shorter work day, the favorite argument of those opposed to it has been that it would mean reduced output, higher prices, and lower wages. For the most part, however, these gloomy prophecies have not been justified. The most noteworthy report on this whole subject is that of the British Health of Munition Workers' Committee, appointed in 1915 "to consider and advise on questions of industrial fatigue, hours of labor, and other matters affecting the personal health and physical efficiency of workers in munition factories and workshops." Its conclusions are still valid. During the early part of the First World War period the previous peace-time restrictions on hours of employment were not observed. So urgent was the need for munitions and other war supplies that it seemed necessary to discard them. Daily hours of work were long, and Sunday and night labor became common. The report states: "The employment of men for 70 to 90 hours a week was common, for over 90 hours was not infrequent, and there were even cases of hours in excess of 100."¹² The evidence gathered by the committee showed among other things that such long hours "imposed too severe a strain on the workers"; that "the extra hours produced proportionally little or no additional output"; that the quality of the output might be "adversely affected during the whole period of work, and not only during the hours of overtime"; and that a large part of the longer hours

¹² *Industrial Health and Efficiency*, Report of the British Health of Munition Workers' Committee (U.S. Department of Labor, Bureau of Labor Statistics, Bulletin 249, 1919), p. 66.

was lost again by broken time due to exhaustion and sickness.¹³ The conclusion of the committee was that for the industries investigated "a reduction in the weekly hours of actual work, varying from 7 to 20 hours per week, in no case resulted in more than an insignificant diminution of total output, while on the average it produced a substantial increase."¹⁴

The effect of any material shortening of hours may be very different in industries in which the pace is set by the machine rather than by the workingman. Where the machine is the dominant factor, and runs almost automatically, a decrease in hours means a decrease in output unless offset by other conditions.

It is impossible to reach any definite conclusion as to what constitutes the *optimum* working day. Men who think of work as an end rather than a means will insist upon work during just as many of the twenty-four hours as the human organism will stand. Those who think of work as a means to an end will reduce hours just as much as they possibly can. There is no single schedule of hours equally well adapted to all industries. Many factors must be taken into consideration. According to the above mentioned report these factors include:

- (1) The strain involved in the work, its character (heavy or light, continuous or intermittent), the mental demand which it makes upon the worker, and the length of process.
- (2) The extent to which the pace of the work is governed by the machine.
- (3) The factory environment—temperature, ventilation, etc.
- (4) The individual physical capacity of the workers, and their age, sex, and experience.
- (5) The organization of the factory (including welfare supervision).
- (6) The sufficiency and suitability of the workers' food, canteen accommodation, etc.
- (7) The arrangements of the hours of work (spells, breaks, and pauses).
- (8) Conditions outside the factory—e.g., housing and transit.¹⁵

Increased efficiency resulting in larger output is what has made possible the shortening of the working day without decreasing wages. Indeed, in the long run increased efficiency has usually made even higher weekly wages possible, thus lending support to the slogan of the Eight Hour League, which was particularly active in the United States from 1865 to 1873:

Whether you work by the piece or the day,
Decreasing the hours increases the pay.

In the United States the demand for a shorter working day found expression for a long time in the "eight-hour movement," which aimed to

¹³ *Ibid.*, p. 66.

¹⁴ *Ibid.*, p. 79.

¹⁵ *Industrial Health and Efficiency*, p. 82.

procure a working day actually limited to eight hours. For a comparatively small number of workers a seven-hour day was established. It is interesting to note that Lord Leverhulme, the British soap manufacturer, seriously proposed a six-hour day on the theory that two shifts of workers each working six hours could by avoiding fatigue increase their efficiency at least one third and thus accomplish as much in six hours as they formerly did in eight. For a half century the eight-hour day was one of the principal objectives of the American Federation of Labor. Prior to the First World War, however, relatively few American workers, outside the building trades, had won the eight-hour day. Since that time rapid progress has been made, though some of the ground gained was lost again during the business depressions of the period.

Legislative restrictions on hours. Collective bargaining with reference to hours in the United States has been supplemented by legislation and in recent years powerfully reinforced by it. As early as 1863 the International Union of Machinists and Blacksmiths, under the aggressive sponsorship of the Boston Machinist, Ira Steward, adopted a resolution containing the words, "Resolved, that from east to west, from north to south, the most important change to us as workingmen, to which all else is subordinate, is a permanent reduction to eight of the hours exacted for each day's work." With this achievement, Steward at once launched a public movement for the establishment by law of a universal eight-hour working day. In his agitation he had "to convince workingmen that wages would not suffer with the reduction of hours; and to show employers that the higher standard of living would create an increased demand for all commodities, and hence would not injure the employer's interests."¹⁶ Steward assumed that the eight-hour day would result in increased production, out of which the higher wages could be paid.

Steward's panacea for the improvement of the lot of the workingman failed of adoption. It is true that both the federal government and some states actually passed eight-hour laws. But the federal eight-hour law of 1868, which provided that "eight hours shall constitute a day's work for all laborers, workmen, and mechanics who may be employed by or on behalf of the Government of the United States," actually neither reduced the hours of any large number of government employees (the act did not prohibit overtime agreements) nor led to the general adoption of the eight-hour day in private employments, as had been the hope of its sponsors. The early state laws that were passed proved non-enforceable. Gradually the workers' faith in the legislative method of procuring the eight-hour day was undermined, and they turned to the labor-union method of collective bargaining. Until the First World War period, progress by this

¹⁶ J. R. Commons and J. B. Andrews, *Documentary History of American Industrial Society* (Cleveland, 1910), Vol. IX, pp. 277-278.

method also was slow and halting; since that time it has been greatly accelerated.

Some measure of control by law over the length of the working day has been steadily maintained, and ever since the launching of the movement by Steward more than sixty years ago substantial progress has been made. Legal control has been extended over the hours of work, first of children and women and then of men, because there has been a growing recognition of the fact that such control served a public purpose. By 1940, practically all states had placed some restriction upon either the hours per day or per week that a woman might be permitted to work for wages.

In the case of men the courts have been much slower in granting the constitutionality of legislation restricting their working hours. The obvious health danger of long hours to working mothers and prospective mothers led the courts, after some reverses, to sanction the exercise of the police power of the states on behalf of women. The exercise of similar powers on behalf of men was neither undertaken as early nor sanctioned as readily, because the public benefits of such legislation seemed more indirect and remote. The general public, as well as legislatures and courts, was slow in awakening to the need of such control.

As was to be expected, the first limitation placed upon the working hours of men was in connection with public work, where the right of the government to control conditions was undisputed. Not only the federal government but a majority of the states, as well as numerous cities, have established eight-hour working days for employees.

In railroad transportation where overtired workers run great risks and are such an obvious menace to the public safety, the federal government and more than half the states have passed laws limiting the hours of work. The nature of the railway industry precludes a uniform working day. The celebrated Adamson Law, enacted by Congress in 1916 to forestall an extensive strike, was designed to establish an eight-hour day for such railway operatives as were engaged in interstate traffic, but the law has been used more to fix a basic eight-hour day for which a full day's wages are to be paid than actually to limit hours of work to eight.

A third field in which the government has successfully undertaken to regulate the hours of men has been in mining and in similar exceptionally hazardous industries. Here the purpose was not safeguarding the general public, but rather protecting the safety and health of the workers. In the case of *Holden v. Hardy*, already cited, the Supreme Court of the United States unequivocally took the position that a state legislature may lawfully exercise its police power in limiting the hours that men may work in underground mines. The court said:

While the general experience of mankind may justify us in believing that men may engage in ordinary employments more than eight hours per day with-

out injury to their health, it does not follow that labor for the same length of time is innocuous when carried on beneath the surface of the earth, where the operative is deprived of fresh air and sunlight, and is frequently subjected to foul atmosphere and a very high temperature, or to the influence of noxious gases generated by the processes of refining or smelting.¹⁷

As a result of this decision of the court sustaining the constitutionality of Utah's eight-hour law, virtually every state in which mining is an important industry eventually passed a law restricting the hours that a miner may work to eight per day.

A more comprehensive attempt to regulate the maximum hours of work in the United States took place under the codes of the National Industrial Recovery Act from its enactment on June 16, 1933, to May 28, 1935, when the code-authorizing section of the act was declared unconstitutional. Since one of the principal objectives of the act was to provide employment for the largest number of persons by spreading available work, hours of work were restricted. Thirty-five to forty-hour working weeks became the general rule.

The latest and most extensive legislation by the United States to regulate hours of labor is incorporated in the Fair Labor Standards Act of 1938. In its opening declaration of policy the act states that "the existence of labor conditions detrimental to the maintenance of the minimum standards of living necessary for health, efficiency, and general well-being of workers burdens commerce, constitutes an unfair method of competition, leads to labor disputes burdening the free flow of goods in interstate commerce, and interferes with the orderly marketing of goods." Under the power of Congress to regulate interstate commerce the act makes provision particularly for maximum hours of work and minimum rates of pay. As described by President Roosevelt it puts a "ceiling" over hours and a "floor" under wages. The section of the act covering maximum hours of work provides that no employer, who is engaged in commerce or in production for commerce, shall at the regular rates of pay cause his employees to work longer than forty-four hours per week during the first year of the operation of the act, forty-two during the second, and forty thereafter. The act became effective October 24, 1938. The forty-hour week, accordingly, has been in effect since October 24, 1940. Longer hours are not prohibited by the act but the excess hours must be paid for at one and one half times the regular rate. Special provisions are made for seasonal workers, whose occupations compel them to work longer daily hours but for relatively short periods of time. During the Second World War when the usual work-week was longer than forty hours, the act helped to increase the weekly earnings of labor.

¹⁷ 169 U.S. 396 (1898).

POLICY OF CONTROLLING THE INTRODUCTION OF MACHINERY

In the early days of the industrial era, long before the existence of labor unions, when a factory owner tried to install labor-saving machinery he was usually met by the bitter and sometimes violent opposition of the workers affected by the change. As long as the workers were unorganized, such opposition proved sporadic and sooner or later spent itself. When unions arose, however, and adopted a policy of opposition to the introduction of machinery, the hostility proved more formidable. Some unions at first refused to allow their members to operate the machines.

“Short-time” versus “long-time” effects of the introduction of machinery. What the workers saw in the new machine was a competitor for their jobs; a rival, indeed, that might make obsolete all the skill that they had acquired through years of expert craftsmanship. Skill, that had often been jealously guarded as a trade secret, was now embodied in a mysterious device of iron and steel. And an unskilled worker could be taught in a relatively short time how to operate the machine. Little wonder was it that workers who saw themselves displaced, and their very livelihood imperiled, should bitterly oppose the introduction of such new methods.

It was of little use, moreover, to show that the introduction of labor-saving machinery was of benefit to society in the long run; that it greatly increased productivity and lowered cost to the consumer, thereby eventually increasing demand and creating more jobs than it had previously destroyed. The laborer was more directly concerned with income from his job here and now than with what was for the good of society in the long run. He not incorrectly argued that for him as an individual there might be no “long run.”

Gradually the attitude of labor toward the use of machinery has changed. It proved futile to oppose the introduction of labor-saving and cost-cheapening devices. To have done so successfully would have meant to block economic progress. Desperate as the situation of the workers thrown out of employment often was, it is true that with lower production costs the demand has ultimately increased so much that more opportunities for employment existed after than before the introduction of the new inventions. Henry Ford states this proposition very effectively in the following words:

For when were men ever really put out of work by the bettering of industrial processes? The stage-coach drivers lost their jobs with the coming of the railways. Should we have prohibited the railways and kept the stage-coach drivers? Were there more men working with the stage-coaches than are working on the railways? Should we have prevented the taxicab because its coming took the bread out of the mouths of the horse-cab drivers? How does the number of taxicabs compare with the number of horse-cabs when

the latter were in their prime? The coming of shoe machinery closed most of the shops of those who made shoes by hand. When shoes were made by hand, only the very well-to-do could own more than a single pair of shoes, and most working people went barefooted in summer. Now, hardly anyone has only one pair of shoes, and shoemaking is a great industry. No, every time you can so arrange that one man will do the work of two, you so add to the wealth of the country that there will be a new and better job for the man who is displaced. If whole industries changed overnight then disposing of the surplus men would be a problem, but these changes do not occur as rapidly as that. They come gradually. In our own experience a new place always opens for a man as soon as better processes have taken his old job. And what happens in my shops happens everywhere in industry. There are many times more men today employed in the steel industries than there were in the days when every operation was by hand. It has to be so. It always is so, and always will be so. And if any man cannot see it, it is because he will not look beyond his own nose.¹⁸

The process of readjustment following the introduction of new labor-saving machinery was often painful for skilled workers. The net gain to society, however, is very great. Unions have come to recognize this fact and today are doing what they can to prevent the cost of necessary social progress from crushing individual workers who must make way for new methods. They no longer oppose the introduction of machines but seek to control their use. By insisting that only union members shall operate the machines, by trying to help displaced workers find other jobs, and by demanding that the scale of wages for machine work shall be as high, if not higher, than that for hand work, organized labor has tried to protect itself in the period of readjustment to new industrial methods.

To the labor unionist the policies just considered—the right to bargain collectively, the recognition of the principle of the closed shop, output restriction when necessary to protect either worker or job, the regulation of hours, and control over the introduction of machinery when it threatens to displace workers—are necessary and desirable if labor is to carry on the economic struggle with management on anything like equal terms and is to win for itself the right to live as well as to work.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Workers join unions solely for the economic benefits they expect to receive.
2. If workers' income and the cost of living both could be stabilized, trade unions would have no reason to exist.

¹⁸ Henry Ford, in collaboration with Samuel Crowther, *My Life and Work* (New York, Doubleday, Page and Company, 1922), pp. 153-154.

3. In mass-production industries, industrial unionism is preferable to craft unionism from the worker's point of view.
4. Labor unions are socially undesirable because they frequently lead to violent strikes and may make whole communities suffer.
5. It is desirable from a social point of view that each laborer bargain individually with his employer, since collective bargaining interferes with the operation of the forces of demand and supply.
6. The closed shop is an unwarranted interference with the freedom of contract of the individual non-union worker and the employer.
7. Vertical trade unions (industrial unions) are monopolistic in the same sense that vertical capitalistic combinations (holding companies) are monopolistic.
8. A true open shop is really impossible in the long run, since it tends to become either a closed non-union shop or a closed union shop.
9. "Make-work" rules of trade unions are socially desirable because such rules help to maintain the workers' income so that they are able to purchase the products of industry and agriculture.
10. Since the introduction of machinery may mean the loss of their jobs, it is to the interest of workmen to combat the mechanization of industry.
11. Craft unions tend to create a monopoly in the supply of skilled labor, and are therefore socially indefensible.
12. Union regulations restricting the number of apprentices in a trade are needed as much to protect the public from inferior workmanship as to protect the union members from an over-supply of skilled workers in their trade.
13. Collective bargaining by workers and their employers is an essential feature of a free enterprise economic system.
14. The efforts of unions to obtain a shorter work-week are unsound from a purely economic point of view.
15. If some firms in an industry are unionized, all other firms in the industry must be unionized in order to protect the unionized firms from the competition of the non-unionized firms.

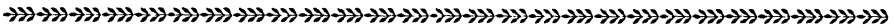
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CHAPTER VII

Conflict and Peace Within the Production System



MODERN INDUSTRY is witnessing incessant conflict between the managers of organized capital and the leaders of organized labor. It is not surprising that managements, which are motivated by the desire for profits, should often clash with labor organizations, which are actuated by the desire to raise wages and to advance other interests of the workingman. We have not yet succeeded in creating so perfect an industrial order that the pursuit of maximum profits is always consistent with the payment of high wages, the establishment of short hours, and the provision of abundant leisure for the men who work. There assuredly is economy in paying high wages. Mass production itself is economically profitable only when sustained by the buying power of the masses. There must be leisure in which to enjoy the things that are bought, or else only the more necessitous goods will be bought in quantity. But in spite of these admitted facts, the industrial millennium is not yet here. On the contrary, there is continual strife in industry, which often assumes formidable proportions when labor is thoroughly organized and the employer is securely entrenched.

SOURCES OF INDUSTRIAL CONFLICT

Dissatisfaction with the job. While there are many causes of this group conflict in industry, three sources of dissension in particular arrest attention. In the first place, there is much dissatisfaction with the job itself. The modern industrialized job is apt to be *monotonous*, *impersonal*, and *insecure*. Its *monotony* is largely attributable to the machine process, which has created jobs involving the endless repetition of simple, unvarying motions. A girl tending a machine that cuts the tops of tin cans may operate a foot lever 20,000 to 30,000 times a day. A workman engaged in a shoe factory may spend his day in working on one one-hundredth part of a finished shoe. The factory worker's job has lost the individuality that the master workman's job once possessed. The job has become standardized. The laborer is no longer a master craftsman; typically he is a cog in a great industrial machine. While the modern industrial job is more productive

than v as the job of the medieval handicraftsman, it is usually more productive of wealth than it is of joy in work. Spontaneous interest in work is largely gone.

The industrial job is not only monotonous, it is also *impersonal*. The personal contacts that at one time existed in industry are today largely gone. There was a time when the laboring man and the employer worked side by side. They lived under the same roof and often ate at the same table. The apprentice, as the laboring man was then called, could look forward to becoming a master workman and the director of the activities of others. Modern capitalism, as represented in the corporation, has changed all this. For the personal bond in industry there has been substituted the money bond. Relatively few workingmen can today look forward to becoming either managers or the capitalistic employers of others. Employers and laborers live in different worlds of thought and consequently often fail to understand each other.

Worse than either its monotony or impersonal character is the *insecurity* of the modern job. It is estimated that in the United States alone there are normally from 1,000,000 to 2,000,000 persons out of work. During the great depression of the thirties, however, more than 15,000,000 persons found themselves without regular jobs. This insecurity of the job, shutting off the indispensable income upon which the workingman depends, foments a great deal of industrial unrest.

Dissatisfaction with the rewards of the job. A second source of antagonism between these interdependent groups in industry is found in dissatisfaction with the rewards of the job. Labor feels that wages are inadequate. What labor sees is the accumulation of some large fortunes in industry, alongside the payment of wages that require the closest economy to meet the ordinary needs of life and that fall far short for most of the emergencies of life. The existence of striking economic inequalities in the status of interdependent groups aggravates group conflict. Of the alleged causes for strikes, disputes concerning wages have, since the gathering of strike statistics, held the premier position.

While the trend of annual real wages, measured in the commodities and services which money wages will buy, has been upward during the last fifty years, the level reached in the United States is not so high as to warrant complacent satisfaction on the part of the richest nation the world has ever known. The real issue in all wage controversies is the adequacy or inadequacy, when judged by prevailing standards, of the total annual earnings of a worker measured by what such earnings will buy. The National Resources Committee appointed by the President of the United States has issued the most authoritative and comprehensive report ever made on the distribution of income among the American people. As far as the wage-earning occupational group is concerned, for which all fami-

lies receiving relief were excluded, the report shows that for the twelve-month period from July, 1935, through June, 1936, the number of such families constituted 37.9 per cent of the total number of families. The arithmetic mean income per family was \$1,289; the median income—the income of the middle family in the entire number of wage-earning families—was \$1,175. Due to a war-time shortage of labor and an extraordinary demand for goods, wages rose to much higher levels during the period of the Second World War and continued at higher levels during the post-war period. It is evident, however, that as long as the income levels at which the masses must live are not higher than they are, and as long as glaring differences in the distribution of wealth and income persist, so long will disputes concerning wages and other income continue.

The payment of inadequate wages is much aggravated by the fact that faithful and efficient service in the ordinary industrial job is usually devoid of that more subtle human recognition which supplements the financial reward of many workers in the professions. Every person, no matter how lowly his position or menial his task, desires at least a modicum of recognition for what he is and for what he does. So impersonal is the typical industrial job of today, however, that the only recognition most workers ever get comes in the pay envelope. The psychic recognition of discriminating praise or spontaneous appreciation is almost wholly lacking.

Dissatisfaction with the efficiency of labor and management. A third basic cause contributing to conflict in industry is dissatisfaction with the efficiency of both labor and management. The demand of organized labor for an advance in wages, or its resistance to a proposed reduction in wages, is often met by the employer with the statement that the efficiency of labor does not warrant the payment of the higher level of wages. The employer often alleges that labor either deliberately restricts output or fails to exert itself to anything like its real productive capacity. In consequence, he says, the productivity of labor does not sustain the demand for high wages and make possible their payment. Labor is apt to retort by saying that lack of productivity is quite as much attributable to inefficient management as it is to any shortcoming on the part of labor. Whatever the truth in these accusations and counter-accusations may be, it is evident that charges of labor inefficiency and managerial incompetence are a frequent source of friction and open conflict in industry.

LABOR'S MEANS OF WAGING INDUSTRIAL CONFLICT

In seeking to gain its end in industrial conflict, organized labor makes use of the strike, of picketing, of the boycott, and occasionally of sabotage.

The strike. The strike has been labor's strongest and most effective weapon. Accordingly, it is not surprising that it is labor's favorite mode

of attack. Strikes are intended to inflict sufficient injury upon the employer's business so that he will find it more profitable to accede to the demands of the strikers than to hold out against them. Important strikes are carefully planned, effectively organized, and usually timed so as to catch the employer at a season when he can least afford to face a shut-down of his plant. A strike is something more than quitting work; more even than the collective quitting of work. A strike is a preconcerted cessation of work on the part of employees for the purpose of enforcing certain demands concerning the terms of their continued employment. The strikers have no intention of quitting work permanently. They have every intention of holding on to their jobs while fighting to obtain more favorable terms under which work shall be resumed. The strikers may be on the defensive, struggling to maintain the status quo of wages, hours, or conditions of work; or they may be on the offensive, fighting to win some betterment in their economic condition.

Strikes may be classified as *direct*, *sympathetic*, and *general*. The simplest form of strike is the direct strike. A strike may be said to be direct when the strikers have a grievance of their own against their employers. Such a strike may be local or widespread. If a local union, like a painters' union, or a national union, such as the Brotherhood of Locomotive Engineers, carries on a strike against its employers for the removal of certain grievances or the granting of certain conditions concerning continued employment, the strike is direct.

Sympathetic strikes are more indirect. If workers with no direct grievance against their own employers nevertheless go on a strike in order to support the strike of some allied union, the former may properly be described as a sympathetic strike. Sympathetic strikes have been common in, and perhaps even characteristic of, the building trades. If the plumbers of a given city, for example, are striking for an increase in wages, and the steam-fitters, sheet-metal workers, and other building trade craftsmen with no grievance of their own join the strike in order to help the plumbers, the strike of the plumbers is direct, but the strike of the rest is sympathetic.

Even more sweeping than the sympathetic strike is the general strike. The concept of the general strike is rather indefinite, but in its very vagueness lies some of its appeal to labor. It has sometimes been used to mean the cessation of work in all industries everywhere. As such it represents the ideal of movements like Syndicalism and the Industrial Workers of the World. It is an elusive ideal, doubtless incapable of realization, but none the less earnestly proclaimed on that account. If a simultaneous general strike in all industries seems a bit visionary, the advocates of this form of industrial conflict contend that a general strike in certain strategic industries, such as transportation and mining, would accomplish the purpose almost as effectively. If the members of the railroad brotherhoods and

the other employees of the railroads, aggregating over 1,400,000 men, had carried out their threatened strike for higher wages in December, 1943, or in August, 1950, such a strike would have paralyzed the economic life of the country seriously. It would have been a general strike in a strategic industry. Again, the term "general strike" is used less ambitiously to designate cessation of work in a given geographic area. The area may be national and only strategic industries of the nation be affected. In this sense the great British strike of 1926, which involved the miners and transport workers, was a general strike. On the other hand, the area may be restricted to a local community. The strikes in Seattle and Winnipeg, both of which occurred in 1919, and the San Francisco strike of 1934 were sufficiently widespread to warrant being called general strikes. The joint demonstration in 1946 of A. F. of L. and C.I.O. unions in Rochester, New York, as a protest against the attitude of municipal authorities in discouraging the organization of municipal employees and in threatening to refuse to bargain with such union, became a general strike. The demonstration included work stoppages of many sorts throughout the city and effective mass picketing. The obvious purpose of a general strike is to throttle the economic life of the community so effectively as to compel speedy recognition of the demands of the strikers.

The customary mode of conducting a strike is to "walk out" of the places of employment, and to refuse to return for work until the strike is either won or lost. In the late thirties, and particularly in 1937, however, the United States witnessed a style new to this country, which came to be known as the "sit-down" strike. In the "sit-down" strike workers not only refuse to work but they also refuse to leave their customary places of work. By taking possession of the plant they effectively prevent others from taking their jobs and the employer from operating his business. Sit-down strikers have one problem in common with an invading army: both must make sure that their food-supplies will not be cut off. If access to food supplies is blocked, the strikers can quickly be starved into submission. But if the strikers and their sympathizers can solve the problem of supplies, the sit-down strike can often be successfully used in a swift campaign against the employer. Since it involves trespassing on the property of the employer, the courts have outlawed the sit-down strike.¹

The object of a strike may be to retain some gains previously made or to win some new advantage for labor. In general, this is the distinction between a defensive and an offensive strike. In analyzing the causes of strikes, it should be noted that the avowed objects of strikes are not always the real causes. The objects alleged are formulated so as to win the support of public opinion; the real causes may or may not be the same. Fairly trustworthy strike statistics for the United States are not available for the

¹ Cf. pp. 175-176.

period prior to 1881. Examination of the data available beginning with 1881 shows that the leading issues at stake in strikes pertain to wages, union recognition, and hours of work; during the latter half of this period their importance is in the order named.

The conduct of strikes does not necessarily mean the use of violence to gain the desired ends. Strikes can be orderly and peaceful, a form of passive resistance to the employer's policies. But strikes are ordinarily waged in a highly charged atmosphere. Emotions are apt to run high. The demands of the workers have been denied, and the market outlets of the employer have been blocked. Under such conditions it is not surprising that men whose wishes and plans have been thwarted should sometimes revert to primal instincts. The strike gets "out of hand." Men become irrepresible. Idle men congregating in large numbers are highly susceptible to suggestion. Personal encounters and attacks upon the property of the employer are easily incited. The violence of strikes can be readily explained, even if not defended, by the psychology of the total strike situation. The chief cause exciting violence in strikes, however, is the presence of strike-breakers. Striking workers regard strike-breakers, whom they contemptuously call "scabs," as traitors to the cause of organized labor and as a dangerous menace to the workers' chance of winning their strike and to their ability to recover their jobs when the strike is settled. The employer, on the other hand, sees in the strike-breaker at least a temporary ally in the attempt to win the struggle with his striking employees. It is over the attempt of strike-breakers to take the jobs of the strikers that physical clashes almost invariably develop. Violence is sometimes deliberately aggravated by the importation of trouble-makers for the purpose of discrediting the strike in the eyes of the public. Which side to a strike controversy is the more responsible for violence it is often impossible to say. The use of violence, however, is almost sure to antagonize the public and to invite the intervention of the courts.

Whether or not a strike is effective depends upon the ability of the strikers to injure the employer's business. The real battle-ground of strikes is the market-place. If the strikers can interfere with the employer's marketing of his product, perhaps rendering it impossible for him to make deliveries as agreed upon and forcing him to lose future contracts to his competitors, they are in a highly strategic position to compel him to yield to their demands. Besides, idle plants yield no return on the investment and frequently "eat up" new capital to meet the carrying charges. This is a form of pressure to which the employer is very susceptible. The effectiveness of strikes very largely depends upon their timeliness. The most opportune time for a strike is when business is good and the employer is straining his resources to meet the demands of the market. Somewhat less timely, but still opportune, is the period of recovery from a business depression.

Strikes are symptomatic of periods of health or convalescence of business. It is futile to strike when business is poor, or going from bad to worse, because at such times the employer has little to lose by the enforced shut-down of his plants. Indeed a strike at such a time may be very welcome to him, for it absolves him from the unpleasant task of "laying off" some of his men.

Picketing. The efficacy of a strike very largely depends upon the inability of the employer to get equally competent men to take the place of the strikers. If he could, the injury to his business might be very temporary. To prevent him from doing so, organized labor in conducting a successful strike must picket the plants of the employer. Picketing is an attempt on the part of the strikers to protect their jobs. Pickets, as the representatives of the strikers are called, station themselves at the workers' entrance to the plants involved in the strike. They seek to persuade any regular employees who have remained at work to join the strikers and at the same time to dissuade any new employees from taking the jobs of the strikers. If picketing involved nothing more than friendly discussion and peaceful persuasion, there could be no serious objection to it as a mode of industrial conflict. But in practice picketing is not usually restricted to friendly discussion. Persistent picketing, with repeated futile attempts at persuasion, is apt to assume an intimidating tone and to become coercive in character. The job of the strikers is at stake; while they are fighting to improve it, they naturally want at all costs to retain it. If the job can be protected by peaceful persuasion, labor will try peaceful persuasion; but if coercion is necessary to prevent the influx of new men, labor will not shrink from this. The strikers doing picket duty usually do not have to resort to actual physical violence, though this is frequent enough. If they gather in impressive numbers, the men seeking to work in the picketed plant are apt to be intimidated by this show of strength. It is not the use of physical violence so much as it is the fear of such violence that intimidates the competitors for the jobs of the strikers.

The boycott. The strike and picketing are intended to bring the productive activities of the business concerned to a standstill by withdrawing the labor force. The boycott seeks to make it unprofitable for a business to go on producing goods by closing as much as possible the markets for these goods. Strikes interfere with the making of goods; boycotts, with the marketing of goods. In general the boycott, as a form of industrial conflict, means the collective refusal of a group of workmen and those whom by persuasion or coercion they can prevail upon to join them, directly or indirectly, to patronize an employer against whom they have a grievance. The grievance usually arises out of an employer's refusal to accede to some demand of labor, and the boycott is intended either to force him to yield or to punish him for his failure to do so. The present

name of this practice goes back to 1880. An English landlord, Lord Erne, was having some difficulty with his tenants. He sent an agent, Captain Boycott, into Connemara, Ireland, the region of disaffection, to take charge of the situation. The tenants opposed him so bitterly that before long Captain Boycott and his family found themselves completely isolated from intercourse with the people of the community. To this nonintercourse practice originally resulting in the ostracism merely of a representative of the English landlord class, the name "boycott" was given, and it has persisted ever since to describe a well-known mode of group conflict.

Boycotting has developed a variety of forms which have grown out of the number of parties involved and the presence or absence of the element of coercion. Since almost every effective boycott today involves third parties, rather than merely the boycotted employer and the boycotting employees, a classification based upon the number of parties concerned is gratuitous. A more significant classification rests upon the persuasion or coercion used in the boycott. If the labor group conducting the boycott merely refrains from dealing with the boycotted employer and also uses only peaceful means of persuasion to induce prospective customers to refrain from dealing with him, the boycott may be said to be a primary boycott. But if the labor group conducting the boycott brings coercive pressure to bear upon such prospective customers, threatening them with damage to themselves, in order to compel them to withhold their patronage from the boycotted employer, the boycott may be classified as a secondary boycott.² The secondary boycott is now commonly understood to be a boycott by labor of a firm against which it has no specific grievance. In the nature of things, virtually every important boycott must involve third parties, and almost always the effective cooperation of third parties is only secured through some degree of coercive pressure, open or secret. Organized labor, therefore, is primarily interested in the possible use of the secondary boycott.

The effective use of the boycott in industrial conflict turns on a number of conditions. Labor must be strongly organized; without large and cohesive numbers the boycott will not make much of an impression, for the loss of patronage will be negligible. Strength of organization is essential in order to secure the necessary wide publicity. If news of the boycott cannot be spread by word of mouth, letters, circulars, and other means, the chances of success are not very great. Much depends upon the character of the market for the boycotted good. If the boycotted good is a commodity of wide and constant use, easily distinguishable from competing substitutes, a boycott can be very effective provided the boycotting organization can through the necessary publicity secure the cooperation of potential

² This is the distinction drawn by the United States Supreme Court in the case of *Duplex Printing Press Company v. Deering*, 254 U.S. 443 (1921).

buyers. But strength of the boycotting organization, extent of publicity, and character of the market for the boycotted commodity are of no avail unless together they succeed in bringing sufficient influence, persuasive or coercive, to bear upon prospective buyers to cause them to withhold their patronage. Organized labor has increasingly been obliged to resort to coercion to make boycotts really effective.

Sabotage. A very different sort of industrial fighting technique from that of strikes, picketing, and boycotts is presented by sabotage. Strikes and picketing aim to effect cessation of production; boycotts strive to remove the market for goods; sabotage seeks to interfere with production to such an extent as to make it unprofitable. Sabotage is a form of output restriction designed to secure concessions from the employer to the demands of the workers. The term is less frequently used today, however, to refer to the slowing-up of the worker than it is to describe actual interference with the physical machinery of production. Speaking of the means of carrying on clandestine sabotage, Spargo says: "A little dust in the bearings, especially emery dust, would do much. Soap in boilers would retard the development of steam. Judiciously planned 'accidents' might easily create confusion for which no one could be blamed. A few 'mistakes' in handling cargoes might easily cost the employers far more than a small increase of wages would." The intention in such practice is plain: to cause sufficient loss through the slowing-up of physical production as to make it more profitable for the employer to accede to the demands of his employees than not to do so. It has been suggested that the term "sabotage" is derived from the French expression *travailler à coups de sabots*, which means "to work as one wearing wooden shoes" i. e., to work slowly and inefficiently.

Sabotage is the most insidious form of industrial conflict. It is stealthy in its approach and certain in its aim. It strikes terror to the heart of the employer, for it is bound to inflict loss upon him. It lends itself to the use of a resentful individual or to the members of a union operating collectively. When once it breaks out in a plant it keeps the employer in a constant state of nervous apprehension as to what loss he will suffer next. It reveals a spirit of desperate determination on the part of his men. Sabotage is to industrial conflict what poison gas is to warfare.

The chief factor limiting the use of sabotage is the intense resentment it arouses among employers. It creates suspicions as to the perpetrators, which sometimes are directed against innocent persons. If responsibility for sabotage which results in property damage can be fixed, the courts will allow damages. But arrest and conviction are almost impossible in the type of industrial conflict that sabotage represents. If the employer cannot elimi-

³ John Spargo, *Syndicalism, Industrial Unionism and Socialism* (New York, The Viking Press, Inc., 1913), p. 154.

nate it and will not accede to its implied suggestions, his only alternative is to shut down his plant and lock out his men.

EMPLOYERS' MEANS OF WAGING INDUSTRIAL CONFLICT

For each of labor's distinctive modes of attack in industrial conflict, employers have developed comparable methods of fighting. While labor most frequently takes the initiative, since the unions are constantly struggling for an improvement in the economic status of the worker, the employer not infrequently forces the issue and the fighting. The strike finds its counterpart in the lockout. The employer meets picketing by an attempt at strike-breaking through the hiring of new men, whom organized labor has branded as traitors and "scabs." The black-list is the employer's reply to the laborer's boycott; it is the employer's boycott of labor's services.

The lockout. A lockout occurs when an employer, in a controversy with his employees, shuts down his plant and closes the doors against them. By so doing he hopes to compel them to accept his terms. The external pictures presented by strikes and lockouts are very similar: idle plants and idle men. The chief difference lies in the initiation of the action resulting in cessation of work. Strikes represent labor's initiative; lockouts, the initiative of the employer. Lockouts are sometimes declared on the principle of military strategy that the best defensive is often a vigorous offensive. When a strike is impending, the employer may regard it as good strategy to take the initiative and lock out his employees. Such strategy sometimes serves to becloud the issue at controversy as it appears to the public. What threatened to become a strike over wages, for instance, may be made to appear a lockout over union recognition and the maintenance of the open shop. The economic results of strikes and lockouts are the same: loss of wages, loss of profits, and inconvenience or even hardship to the public. If the employer happens to be facing a business depression, neither a strike nor a lockout may be wholly unwelcome. Since the controversies leading to both strikes and lockouts are much more apt to arise during periods when the prospects for profits are good, the employer's financial interests will restrain him from resorting to the lockout except in the face of a grave emergency.

Strike-breaking by non-union labor. Strikers seek to protect their jobs by the establishment of picket lines. Employers try to protect their business by hiring non-union workers to take the place of the strikers. Pickets and strike-breakers represent two antagonistic forces moving in opposite directions, with clashes between them almost inevitable. The striker justifies his own course of action by the thought that he is fighting for a warranted improvement in his own lot and that of his fellow workingmen. The

strike-breaker defends himself—though more frequently the employer does it for him—by asserting his sacred right to work. If the strikers wish to quit their jobs, that is their right and privilege; in this country no one can be compelled to work against his will, for that is involuntary servitude. But why should not the man who is jobless and anxious to work, or the man who is eager to step from a poorer job to a better one, be permitted to take the jobs of the strikers? If one group of men has the right to quit work, can we fairly deny to another group of men the right to begin work? The employer who is determined to defeat a strike is apt to be very much more concerned with the right to work of the strike-breakers than he is with the human rights of the strikers as to fair wages, reasonable hours, and decent conditions of work.

While employers have won many strikes through the employment of non-union labor, it is a form of industrial strategy beset with many dangers. To employ strike-breakers, particularly those supplied by commercialized strike-breaking agencies, and to do so at wages in excess of those paid the striking regular employees, arouses intense resentment on the part of labor. The advent of such strike-breakers is the almost invariable signal for physical encounters, and often the occasion for much property damage. The use of labor spies, such as the industrial espionage service furnished by some commercial detective agencies, the use of private police, and the use of industrial munitions merely add fuel to the rising flames of hatred and violence. If the employer wins the strike through such methods he is confronted with the necessity of developing a labor force at least equal in efficiency to the men he has lost. If he loses and the strikers return to their posts, they may harbor a feeling of resentment toward the employer that will cause new difficulties to arise in the future.

The black-list. The black-list is the boycott applied by the employer to the services of labor. A black-list is simply a list of the names of employees, or former employees, whom the employer regards as objectionable. The ground of objection is almost invariably some form of labor union activity, such as striking or an attempt at the unionization of the plant, which proves offensive to the employer. Workers who are blacklisted will not be employed by any members of the employers' association and may even experience difficulty in finding a job elsewhere. The clearance card, which purports to convey an honorable dismissal, may carry a secret symbol which labels its holder as an undesirable employee. On account of laws against blacklisting, the employer adopting the practice has had to disguise his technique, but in these days of easy communications this is readily accomplished.

The injunction. While there is no reason why organized labor as well as the employer should not on occasion ask for the intercession of the courts in industrial conflict, as a matter of practice injunctions are rarely

asked for by labor. The employer, on the other hand, has frequently applied for court injunctions to restrain labor from engaging in specified activities. The most common occasion is the outbreak of violence in industrial disputes. An injunction is an order of a court usually commanding the enjoined persons to refrain from performing certain specified acts, on the ground that obedience to the court order is essential to prevent irreparable injury to the property of the party seeking the injunction. An injury is considered irreparable when the subsequent award of damages cannot adequately compensate for it. Almost all labor injunctions are restraining orders, which require labor to desist from certain specified practices, rather than mandatory orders, which compel labor to perform certain acts. Violation of a court injunction is punishable as contempt of court, and the court may impose a fine or imprisonment upon the persons guilty of it without any trial by jury. In a few state courts, and in all the federal courts, persons charged with contempt of court may now ask for trial by jury if the acts leading to an injunction and subsequent contempt of court are indictable as crimes.

The use of injunctions by the employer to restrain industrial disputes has tended to embitter labor. Labor regards injunctions as part of the employers' strategy to alienate public opinion from the support of labor, since injunctions are apt to convey the impression that those enjoined have transgressed the law. Labor also resents injunctions because frequently they serve to undermine the morale of the fighting union by diverting the energy of its leaders from the conduct of strikes and boycotts to the conduct of court proceedings. Injunctions are properly regarded as emergency measures designed to protect person and property and to prevent irreparable damage. The courts, however, have interpreted the right to do business as a property right and have often sought to protect the employer's right of access to both the commodity and the labor markets. In practice, labor contends, the granting of injunctions has been much abused. Sometimes, instead of granting an injunction against specified acts on the part of labor, a "blanket" injunction has been granted, the obvious purpose of which is to hamper labor in the conduct of industrial conflict. Such cases have given rise to a feeling, which has often grown into a deep-rooted conviction, that the courts are biased in favor of the employer, which has weakened the prestige of the courts. Says E. E. Witte:

Added to this is the fact that with the frequency of their use injunctions have lost their sting. It is not uncommon for labor leaders to boast of the number of injunctions which have been served upon them. Among the members of trade unions the feeling is general that the courts are against them; and they are not particularly surprised or alarmed when an injunction is issued. Even jail sentences for violation of injunctions are regarded not as a disgrace, but as proof of wholehearted devotion to the cause of labor. Simi-

larly, the public has come to look upon injunctions in labor disputes with suspicion.⁴

If an injunction be used to prevent the performance of an act which irreparably violates a property right, whether of the employer or of the workingman, its use can be easily justified. But when an injunction is used to prohibit acts which are not usually regarded as unlawful, such as strikes to improve the economic status of the worker, it represents a highly questionable means of industrial conflict. Injudicious use of injunctions breeds contempt for the law. Employers today are inclined to apply for them more sparingly. They have not proved as useful to employers as is commonly supposed; at the same time they have aroused a rankling bitterness among organized workers and vigorous criticism among responsible leaders of the general public.

Since the First World War both the federal government and many states have passed laws whose purpose is to limit the use of injunctions in labor disputes. The important federal statute on the subject is the Norris-LaGuardia Act of 1932, which aims to make it possible for organized labor to carry on an industrial dispute peacefully without being subjected to injunctions issued by the federal courts. If injunctions are issued at all, they must respect the rights of workers in peacefully participating in labor disputes. Twenty-four states had by 1950 also enacted laws restricting the issuance of injunctions in labor disputes. The Wisconsin law, the first such statute to come before the United States Supreme Court, was upheld in 1937.⁵

Yellow-dog contracts. Second only to injunctions in the opprobrium of labor are so-called "yellow-dog contracts," which until they were outlawed the employer sometimes used in the attempt to get the better of labor in possible future industrial conflict. While "yellow-dog" contracts assumed a variety of forms, they were most distinctively contracts in which workingmen pledged themselves as a condition of employment not to join an outside labor organization.⁶ The use of such contracts did not become either important or widespread until after the First World War. The decision of the United States Supreme Court in the *Hitchman Coal and Coke Company* case⁷ in 1917 gave impetus to the movement. In this case the Court upheld an injunction which had been granted the company restraining the United Mine Workers from seeking to organize its employees, because as a condition of their employment they had agreed not

⁴ "Value of Injunctions in Labor Disputes," *Journal of Political Economy*, Vol. 32, (1924), p. 345.

⁵ *Senn v. Tile Layers Protective Union*, 57 Sup. Ct. 857 (1937).

⁶ The name "yellow-dog contract," suggesting absolute domination by the employer and cringing servility on the part of labor, prejudices liberty-loving individuals against it. The name was enough to condemn the thing itself with many persons.

⁷ *Hitchman Coal and Coke Co. v. Mitchell*, 245 U.S. 229.

to join a union. The real menace to unionism in "yellow-dog" contracts lay in the restrictions which the Supreme Court decision in the Hitchman case imposed upon labor-union organizers: the Court held that it was illegal for any third party to try to persuade employees working under "yellow-dog" contracts to violate such contracts. When labor organizers sought to do so, employers promptly asked for injunctions of their activities.

Congress within the limits of its jurisdiction has sought to outlaw "yellow-dog" contracts in a number of measures. In the Norris-LaGuardia Act of 1932 Congress affirmed the freedom of association and action of workers and declared "yellow-dog" contracts contrary to public policy and non-enforceable in any federal court. Section 7a of the National Industrial Recovery Act of 1933 again outlawed the "yellow-dog" contract for all workers employed under the codes authorized by the act. After this act had been declared unconstitutional, on other grounds, prohibition of "yellow-dog" contracts was reincorporated in the Wagner-Connery National Labor Relations Act of 1935, which brands it an unfair labor practice for the employer to "discourage membership in any labor organization by discrimination with regard to employment or tenure."

THE ATTITUDE OF THE PUBLIC TOWARD INDUSTRIAL CONFLICT

The progress and outcome of industrial conflict are rarely a matter of interest solely to the contending parties. There is a "party of the third part" deeply concerned in every major industrial conflict, usually greatly inconvenienced, often sorely punished, and frequently holding the balance of power. It is the consuming public, whom neither side wants openly to antagonize and whose active support both sides earnestly covet. It is doubtful whether any important industrial struggle can be won in the face of the open opposition of the public.

If the underlying reason be sought for the deep concern of the public over industrial conflict, it may readily be found in the economic interdependence of our time. Industrial disturbance in the operation of the railroads, a prolonged strike in the coal-mining industry, or the cessation of productive activities in such a basic industry as steel manufacturing is of the utmost concern to the public. Such large-scale struggles are apt to throw the entire productive mechanism out of gear and to affect the lives of millions of people. Consequently, the public is no longer a disinterested spectator content to keep "hands off" and to see the contestants fight it out by themselves. The public looks to the courts for the equitable protection of the interests of all parties, including its own. At the same time, too, the public is much concerned with the development of agencies for

the settlement of industrial disputes that have broken out into open conflict, and for the prevention of as many serious industrial struggles as possible.

THE RESTRAINT OF INDUSTRIAL CONFLICT BY THE COURTS

The conduct of industrial conflict, particularly as far as labor is concerned, has been materially affected by decisions of the courts. The rights of workers to strike, to picket the plants of their employers, and to boycott the employers' goods have had a rather uncertain status under the law and in the courts of the land. Because the courts have been inclined to recognize the right to do business as a property right, they have sought to protect the employer in his access to materials and men and also in the marketing of his finished products. Strikes, picketing, and boycotts interfere with his right to do business; consequently, the courts have frequently granted him injunctions to protect his property rights.

In carrying on industrial conflict, organized labor has felt the powerful restraining influence of two legal doctrines: the doctrine of conspiracy and the doctrine of restraint of trade. Both developed in the common law; both have been translated into statute law.

Judges in applying the common-law doctrine of conspiracy to cases involving certain questionable practices of combinations, have commonly defined a conspiracy in substantially the following language: "A conspiracy is a combination of two or more persons, designed by concerted action to accomplish some criminal or unlawful purpose, or to accomplish some purpose not in itself criminal or unlawful, by criminal or unlawful means."⁸ Both purpose and means, or either alone, may be used to differentiate a lawful combination from an illegal conspiracy. Under the doctrine of conspiracy, acts which are perfectly legal when they are the actions of one person may be wholly illegal when performed by several persons acting through preconcerted agreement. A man may quit his job for any reason or with no reason at all. He may refuse to patronize a dealer with or without cause. But if he enlists the cooperation of others in doing the same thing and organizes a strike or boycott, the legal quality of his acts may be judged very differently. The many are presumed under the law of conspiracy to have a capacity for inflicting injury which the one does not have.

Whether a particular combination is or is not a conspiracy under the common law has often proved a knotty problem to decide. The courts have set up a number of criteria by which to test whether a given combination is a conspiracy. One of these is furnished by the motives of the

⁸ For substantially this definition cf. *Commonwealth v. Hunt*, 4 Metcalf (Mass.) 111 (1842).

persons in the combination. If the motive can be shown to be dominantly the motive of self-help, the combination will usually be declared legal. But if it can be shown that the combination has a malicious intent, the chief purpose being to inflict an injury upon someone else, the combination will usually be declared a conspiracy and consequently held to be illegal. In concrete cases, it is obviously often very difficult to determine what the controlling motive really is. Strikes, picketing, and boycotts are motivated both by the desire to help the workingman and by the desire to injure the employer. The latter is usually a form of pressure to achieve the former. Is the intent to injure merely incidental to the motive of self-help? Do workingmen have just cause for combining to interfere with the employer's making and marketing of goods? Are the rights of workingmen to improve their status at least equal to the employer's right to do an uninterrupted business? These are questions for the courts to decide. One jurist will see self-help as dominant and consequently discover only a lawful combination; another will see injury to the employer as the controlling motive and consequently pronounce the combination an illegal conspiracy. A second criterion established by the courts for testing the conspiracy-character of a combination is the presence or absence of illegal means, such as coercion and intimidation. If the court holds that the persons in the combination are guilty of acts of coercion and intimidation against others, the combination is almost sure to be pronounced an illegal conspiracy. It is apparent that the judicial determination of motive, and of the use of intimidation, offers plenty of latitude for the expression of the particular predilections of the judge.

Not only the doctrine of conspiracy but also the doctrine of restraint of trade has served to hinder organized labor in the conduct of industrial conflict. This doctrine presents, as the criterion of the legality of labor's conduct in such conflict, not the injury done to the employer but the injury inflicted upon the public. In the United States, the restraint-of-trade doctrine, which is of common-law extraction, has been embodied in the Sherman Anti-trust Act of 1890 and in comparable statutes in the several commonwealths. While most of the cases against labor have been decided upon the doctrine of conspiracy, some have been based upon the statute-law doctrine of restraint of trade. The first section of the Sherman Act of 1890, which declares every contract, combination in the form of trust or otherwise, or conspiracy in restraint of trade or commerce among the several states to be illegal, has been held to apply to labor organizations in the conduct of industrial conflict. The doctrines of conspiracy and of restraint of trade furnish the warp of judicial decisions in cases arising out of violation of property rights in industrial disputes. The trend of court decisions has strongly influenced the technique of the opposing forces in industrial conflict.

Legal restraint of the strike. These abstract doctrines of the law and of the courts have had to be applied to concrete types and cases of industrial controversy. The legal status of strikes has been shrouded in much uncertainty. Since men cannot be compelled to work involuntarily without reducing them to slavery, the courts have frequently held that the strike, if it means only the collective cessation of work, is legal. If the strikers have broken a contract to work, they may be sued for damages for such breach of contract, but any such action does not interfere with their right to strike. The strike, however, always means something more than the collective cessation of work. It is quitting work for a purpose: the purpose of enforcing certain conditions concerning continued employment. The legality of the strike as a weapon in industrial conflict has frequently been challenged by the employer and at times denied by the courts. The legal question at issue almost always resolves itself into this: What is the purpose of the strikers? If it can be shown that their purpose is primarily to benefit themselves through achieving some such end as higher wages or shorter hours, the legality of the strike will be upheld. But if, on the contrary, it becomes evident that the intent to injure either the employer or non-union workers is the dominant motive, the strike is almost sure to be held illegal. To be sure, almost every strike injures the business of the employer, but if the injury is merely incidental to the attainment of better working conditions and terms, the courts are apt to overlook it. But strikes to secure the closed shop, or sympathetic strikes, which involve injury to the employer or to third parties, do not easily win judicial sanction. The reason is that the courts regard such strikes as malicious and as unwarranted infringements upon the rights of others.

The conduct of strikes, as well as of some other forms of industrial conflict, is materially affected by the decision of the United States Supreme Court in the case of the United Mine Workers of America v. Coronado Coal Company.⁹ The decision establishes the financial liability of labor unions, even though they are unincorporated associations, for offenses against the laws of the United States. The case arose out of a struggle for the closed shop. The Coronado Coal Company in 1914 attempted to run a non-union mine in Arkansas not far from the Oklahoma State line, and in the midst of union labor territory. In doing so the company violated a contract with the United Mine Workers, which still had three months to run. The evidence in the case showed that the district officers of the United Mine Workers with headquarters at McAlester, Oklahoma, had planned and directed an armed attack upon the Arkansas mine of the Coronado Coal Company. In the course of this industrial warfare the mine buildings were dynamited and burned and two non-union employees of the Coronado Coal Company were murdered while in the custody of a

⁹ 259 U.S. 344 (1922).

constable. The company brought suit against the United Mine Workers, as well as the district and local unions concerned, charging the existence of a conspiracy, in restraint of interstate commerce and asking for the triple damages provided by the Sherman Act for such offenses. The lower court found for the company and rendered a verdict of \$200,000 against the union, which under the treble-damages section of the Sherman Act, together with expenses of litigation, made the total liability of the miners amount to \$800,000. The union appealed the case to the Supreme Court of the United States. It sought to defend itself first, by denying that there was a conspiracy to restrain interstate commerce; and secondly, by saying that even if there were restraint of interstate trade, the union was not liable for any resulting damages, because it was an unincorporated association. The Supreme Court accepted the first line of defense because the evidence did not clearly establish the existence of a conspiracy to restrain interstate commerce. The real significance of the decision, however, lies in the opinion of the Court with reference to the second proposed line of defense. The Court held that, had the evidence sustained the charge against the union of restraining interstate commerce, the union would have been liable for damages, whether incorporated or not. Under the common law, it is true, voluntary unincorporated associations, like labor unions, could neither sue nor be sued in the name of the association; legal liability had to be enforced by or against the individual members. The Court held that this was impractical and inequitable under existing conditions, and construed the penalty provisions of the Sherman Act broadly enough to apply to labor unions, whether incorporated or unincorporated. Mr. Chief Justice Taft in rendering the decision of the Court said:

It would be unfortunate if an organization with as great power as this international union has in the raising of large funds and in directing the conduct of 400,000 members in carrying on, in a wide territory, industrial controversies and strikes, out of which so much unlawful injury to private rights is possible, could assemble its assets to be used therein free from liability for injuries by torts committed in course of such strikes. To remand persons injured to a suit against each of the 400,000 members to recover damages and to levy on his share of the strike fund would be to leave them remediless.

The decision in no way restricts the *right* of organized labor to strike. What it does say, however, is that a union, simply because it is an unincorporated association, cannot escape financial liability for any damages caused by offenses against the laws. The Supreme Court laid down a new rule for labor unions to observe in the future conduct of strikes, with the warning that failure to observe it might lead to an attachment of union funds.

If labor in its controversy with management resorts to the use of the sit-down strike, it is fighting with an outlawed weapon. In the first case

testing the legality of the sit-down strike that came before the United States Supreme Court, the Court held: "The employees had the right to strike but they had no license to commit acts of violence or to seize their employer's plant. . . . To justify such conduct because of the existence of a labor dispute or of an unfair labor practice would be to put a premium on resort to force instead of legal remedies and to subvert the principles of law and order which lie at the foundations of society."¹⁰

During the period of the Second World War the Congress of the United States supplemented the no-strike pledge of organized labor by passing the Smith-Connally bill designed to outlaw strikes, lockouts, and other stoppages of production.

Legal restraint of picketing. Court decisions have also materially modified the scope and conduct of lawful picketing. In general, the courts have held that picketing by peaceful persuasion is legal, but that the use of coercion or violence is illegal. In practice, however, it is often exceedingly difficult to tell just where persuasion leaves off and intimidation begins. Consequently, it is not surprising that, with substantially the same set of picketing facts before them, some judges have seen only violation of the law and others have pronounced the picketing legal. That picketing always amounts to intimidation was the opinion of some judges. Judge McPherson of the federal courts, for example, expressed himself in no uncertain terms when he said:

There is and can be no such thing as peaceful picketing, any more than there can be chaste vulgarity, or peaceful mobbing, or lawful lynching. When men want to converse or persuade, they do not organize a picket line. . . . The argument seems to be that anything short of physical violence is lawful. . . . But the peaceful, law-abiding man can be and is intimidated by gesticulations, by menaces, by being called harsh names, and being followed, or compelled to pass by men, known to be unfriendly. . . . The frail man, or the man who shuns disturbances, or the timid man, must be protected, and the company has the right to employ such.¹¹

That picketing does not necessarily imply intimidation was the equally positive, if less forcibly expressed, opinion of other courts. While peaceful picketing was more often upheld than denounced by the courts, the concrete question that always arose to perplex the judges was: When is picketing peaceful? In the absence of positive standards to apply, the personal bias of the jurists proved the deciding consideration.

Two decisions of the Supreme Court of the United States in 1921¹² made the tests somewhat more definite. In the *American Steel Foundries*

¹⁰ *National Labor Relations Board v. Fansteel Metallurgical Corporation*, 306 U.S. 240 (1939).

¹¹ *Atchison, Topeka and Santa Fe Railway v. Gee*, 139 Fed. 582 (1905).

¹² *American Steel Foundries Company v. Tri-City Trades Council*, 257 U.S. 184, *Truax v. Corrigan*, 257 U.S. 312.

Company case the Supreme Court apparently declared all mass picketing unlawful, but expressly sanctioned a single picket at each plant entrance. In the case of *Truax v. Corrigan* the Supreme Court held unconstitutional an Arizona statute which sought to legalize mass picketing. While the doctrine of these decisions was not new, it did set a standard for the courts to follow in the future, which both the federal and state courts have very generally done. The net result of these decisions has not been to prohibit all picketing but strictly to limit the number of pickets that may be used and to prescribe what they can legally do. Mass picketing, the use of violence by pickets, intimidation, and even long-continued peaceful persuasion by pickets are declared unlawful. But peaceful persuasion by a strictly limited number of pickets, whose conduct is not such as to arouse fear in the workers they seek to persuade, is now usually declared lawful.

Legal restraint of the boycott. Not only the conduct of strikes and picketing, but also the nature and effectiveness of boycotts have been greatly restricted by the courts. Supreme Court decisions have established two principles: first, the legal liability of labor-union members for damages caused by boycotts, which was the outcome of the *Danbury Hatters'* case;¹³ and secondly, the illegality of any boycott involving pressure upon third parties, which was the point in the *Duplex Printing Press Company* decision.¹⁴

The *Danbury Hatters'* case first came before the courts in 1903 and was finally settled by the Supreme Court of the United States in 1915. The case arose out of a boycott conducted by the United Hatters of North America in their struggle for a closed shop. The union, in spite of much opposition, had succeeded in establishing the closed shop in a considerable number of important plants. When the unionists, however, proposed the closed shop plan to the D. E. Loewe Company of Danbury, Connecticut, they encountered some particularly determined opposition. A strike and a boycott followed. The labor unionists ascertained the destination of shipments from the Loewe plant, communicated with fellow-unionists in the places concerned, and through personal solicitation and advertising conducted a vigorous boycott against the firm. The company claimed that it suffered a direct net loss during the period of the boycott, and attributable to it, amounting to \$88,000. The D. E. Loewe Company in consequence brought suit against the labor unionists as individuals, charging them with conducting a combination in restraint of trade, which is directly prohibited by the Sherman Anti-trust Act. After years of tedious litigation, the United States Supreme Court announced the final decision on January 5, 1915: it held 186 Danbury members of the United Hatters guilty of restraining interstate trade and awarded the Loewe Company \$252,130 in

¹³ *Lawlor v. Loewe*, 235 U.S. 522 (1915).

¹⁴ *Duplex Printing Press Company v. Deering*, 254 U.S. 443 (1921).

damages, the triple damages provided for in the Sherman Anti-trust Act for violation of this law. The Court held that the individual members of the Danbury Hatters' Union could be held liable because so much publicity had been given to the boycott that they could reasonably be presumed to have knowledge of the unlawful acts of their officers and to have given their approval. The homes and bank accounts of the Danbury hatters were attached to satisfy the judgment. The judgment was paid in 1917, largely by voluntary contributions of labor unionists throughout the country, the American Federation of Labor raising \$216,000. Settlement was made for \$234,000 in spite of the fact that the judgment with interest amounted to \$310,000, because in the meantime the D. E. Loewe Company had become bankrupt, and it was thought that the property attached in satisfaction of the judgment was not worth more than \$234,000. The Danbury hatters, most of whom had had no closer connection with the boycott than that implied by membership in the boycotting union, lost their savings accounts, but their homes were restored to them as a result of the financial aid of their sympathizers. The real significance of the decision lies in the fact that the Supreme Court held that a boycott conducted by a labor union against a firm doing an interstate business was a combination in restraint of trade and the individual members of the union were legally liable. (Thirty-two years later Congress in the Taft-Hartley Act of 1947 declared that labor organizations are suable as legal entities, if anyone has cause for action against them, but that any money damages awarded are enforceable only against the assets of the union, and not against the assets of the individual members of such union.) The decision of the Supreme Court in the case against the Danbury Hatters proved to be a staggering blow to labor unionism, and greatly restricted the use of the boycott as a means of industrial conflict.

Organized labor, however, saw a ray of hope in an amendment to the Sherman Anti-trust Act which had been passed by Congress a few months before the Supreme Court decision in the Danbury Hatters' case—the Clayton Anti-trust Act of 1914. Samuel Gompers, president of the American Federation of Labor, and other labor leaders asserted that if the Clayton Act had been on the statute books when the Danbury hatters were brought to trial, the Supreme Court would have rendered a different decision. They based their hopeful statements upon a section of the Clayton Act which states:

The labor of a human being is not a commodity or article of commerce. Nothing contained in the anti-trust laws shall be construed to forbid the existence and operation of labor . . . organizations, instituted for the purposes of mutual help, and not having capital stock or conducted for profit, or to forbid or restrain individual members of such organizations from lawfully carrying out the legitimate objects thereof; nor shall such organizations, or the

members thereof, be held or construed to be illegal combinations or conspiracies in restraint of trade, under the anti-trust laws.¹⁵

Mr. Gompers declared the opening sentence of this section to be "the industrial Magna Charta upon which the working people will rear their structure of industrial freedom." The test case, as far as the boycott is concerned, did not come until 1921, when the United States Supreme Court decided the case of the Duplex Printing Press Company v. Deering.¹⁶

The Duplex Printing Press Company of Battle Creek, Michigan, was one of four companies engaged in the manufacture of printing-presses. The International Association of Machinists sought to establish the closed shop in these factories. Three of them acceded to the demands of the Machinists' Union but the Duplex company refused, and continued to employ both union and non-union men. Since the industry was highly competitive, and because the Duplex company did not operate on the union wage scale, two of the other companies served notice upon the union that they would be obliged to return to the "open shop" plan, unless the Duplex company also accepted the closed shop and thus made competitive conditions uniform throughout the industry. An ineffective strike and then a vigorous boycott against the Duplex company was declared.

Since the principal market for Duplex printing-presses was in and about New York City, the International Association of Machinists concentrated its boycotting activities there. Among the acts of the union in its attempt to enforce the boycott were the following:

... Warning customers that it would be better for them not to purchase, or having purchased not to install, presses made by the Duplex company, and threatening them with loss should they do so; threatening customers with sympathetic strikes in other trades; notifying a trucking company usually employed by customers to haul the presses not to do so, and threatening it with trouble if it should; inciting employees of the trucking company, and other men employed by customers of the Duplex company to strike against their respective employers in order to interfere with the hauling and installation of presses, and thus bring pressure to bear upon the customers; notifying repair shops not to do repair work on Duplex presses; coercing union men by threatening them with loss of union cards and with being blacklisted as "scabs" if they assisted in installing the presses; threatening an exposition company with a strike if it permitted Duplex presses to be exhibited; and resorting to a variety of other modes of preventing the sale of presses of Duplex manufacture in or about New York City, and delivery of them in interstate commerce. In some cases the threats were undisguised, in other cases, polite in form but none the less sinister in purpose and effect.¹⁷

¹⁵ Clayton Anti-trust Act, Section 6.

¹⁶ 254 U.S. 443 (1921).

¹⁷ From the opinion of the court as delivered by Mr. Justice Pitney, 254 U.S. 443 (1921).

The company asked for an injunction to restrain the boycotting acts of the union. The United States District Court dismissed the bill for an injunction, and later the United States Circuit Court of Appeals sustained the lower court, on the ground that the Clayton Act declared legal the existence of labor unions and that such organizations were not to be prevented from lawfully carrying out their legitimate objects. The Court recognized that what the union had done was subject to injunction under the Sherman Act, but held that the law against conspiracies and combinations in restraint of trade had been modified in favor of organized labor by the Clayton Act amending the Sherman Act. Since the lower federal courts declined to grant an injunction, the Duplex company appealed the case to the Supreme Court of the United States.

The issue of the case as it came before the Supreme Court pertained to the legality of the secondary boycott under the Clayton Act. The International Association of Machinists had sought to restrain the interstate trade of the Duplex Printing Press Company by the use of the secondary boycott, which the Court defined as consisting in bringing coercive pressure to bear upon third parties to compel them, directly or indirectly, to withhold their patronage from the boycotted employer. As far as the boycott is concerned, the Supreme Court construed the Clayton Act's exemption of labor organizations and the limitation of the use of injunctions in labor disputes to apply only to disputes involving parties standing in the actual relationship of employer and employees. The Court held that it was impossible to justify the conduct of an association of 60,000 machinists, none of whom were employees of the Duplex company "past, present, or prospective," in instigating sympathetic strikes and in conducting a secondary boycott against parties who had no other relation to the Duplex company than that of customers. The effect of this judicial interpretation of the Clayton Act is once more to restrict the use of the boycott to parties who stand in the actual relation of employer and employee, and to prohibit the use of pressure upon third parties.¹⁸ (In the Taft-Hartley Act of 1947 Congress outlawed the secondary boycott. Both strikes and boycotts are unlawful when directed against a business concern, not itself directly involved in the dispute, for the purpose of compelling it to cease doing business with another company, against which the striking or boycotting union does have a grievance.)

In spite of the decisions of the Supreme Court in the Danbury Hatters' and the Duplex Printing Press Company cases, and of federal and state

¹⁸ A dissenting opinion, signed by Justices Brandeis, Holmes, and Clarke, held that the actual relationship of employer and employee was not essential to exemption under the Clayton Act, that there was a community of interest among all the machinists, which brought them all within the meaning of the Clayton Act; that Congress in enacting this law was legislating to equalize conditions between workmen and employers as groups rather than between them as individuals.

courts in other cases, the exact legal status of boycotts is still in doubt. Certain it is, however, that the courts do not condemn every form of boycotting. Labor has the legal right to withhold its patronage from anyone against whom it has a just grievance. Less certain, but generally granted, is the right of labor to persuade others to do the same. Usually, the printed as well as the spoken word may be used, provided no false statements are made. Any conduct in a boycott, however, which involves coercion or intimidation, the use of violence, or interference with the coming and going of prospective customers is illegal. In particular, pressure upon third parties puts the boycott outside the pale of the law.

Legal status of the lockout. Although the workingman's right to strike, to picket, and to boycott has been very much circumscribed by the courts, no such restrictions have been placed upon the employer's right to lock out his men. To be sure, the right to lock out his employees is not a right of major importance to the employer. What the employer is usually interested in is the uninterrupted conduct of his business. Only rarely does he have occasion to resort to the industrial strategy of a lockout. But if he does, his legal right to do so is unquestioned. If he sees fit to withhold his property from use rather than to use it in the ordinary course of his business, that is his right and privilege. If in discharging his employees individually or locking them out collectively, he violates a time contract for their services, they have cause for legal action against him and may recover damages. But relatively few workingmen hold long-term contracts for services, and in such cases the employer would not be apt to risk declaring a lockout any more than the men would risk calling a strike.

Legal status of strike-breaking. If a strike is in progress, the employer has the unquestioned legal right to keep his plant and business going if he can. To this end he may freely employ strike-breakers, hiring them locally or importing them from other places. The courts have held that he is entitled to adequate police protection in the attempt to operate his plant with the aid of those willing to work; he may even employ guards to protect the strike-breakers. About the only legal restriction upon the employer's strike-breaking activities is legislation in a number of states which makes it mandatory upon the employer under such circumstances in recruiting new workers to state the fact that a strike is in progress against his plant.

Legal restraint of the black-list. To the extent that a black-list is effective, it denies men who are able and willing to work the opportunity to do so. Most of the states have sought to prohibit the practice of blacklisting, but it has proved impossible to enforce the laws that have been passed. The employer is legally and ethically entitled to know whatever he can learn about the previous record of any man he employs or is considering as an applicant for a job. No law denies him this. If he procures information

which in his judgment is unfavorable to the workingman and in consequence either discharges him or fails to hire him, the workingman has no redress. Such information is privileged, and no court will question the employer's reasons for either discharging or refusing to hire a particular workingman. Moreover, in these days of easy communication it is simple enough for any interested person to use the telephone, code messages, secret marks on dismissal cards, and the like to convey information which will result in the blacklisting of a man who for some reason is considered undesirable. The workingman's difficulty, in such a case, is to procure the evidence that someone furnished information designed to blacklist him, and that he failed to hold or to secure his job because of the submission of such information. The law clearly prohibits blacklisting, but in practice it is almost impossible to eliminate it.

It is evident from the preceding discussion of the legal status of strikes, picketing, boycotts, lockouts, and black-lists, that legislative bodies and the courts have sought to restrain industrial conflict by laying down and enforcing certain rules of procedure. Statutory provisions and judicial decisions are today powerful influences in determining both the level and the limits of industrial conflict.

AGENCIES FOR SETTLING INDUSTRIAL DISPUTES

To help adjust the differences between employers and employees, to restore industrial peace so that normal production may be resumed, and to protect the interests of the consuming public various agencies have been created for the settlement of industrial disputes. When an industrial dispute has reached the stage of open conflict, with loss of wages to the workingman, with loss of earnings to the employer, and frequently also with loss of service to the public, the immediate problem is to settle the dispute. The more fundamental problem is how to prevent disputes, or at least how to minimize the likelihood of their breaking out into serious conflict.

Existing agencies for the settlement of industrial disputes differ greatly in the degree of compulsion which they involve. This varies all the way from none at all in conciliation and mediation to complete compulsion in the case of compulsory arbitration.

Conciliation. When an open break has occurred in the normal relations between an employer and his organized employees, an attempt is usually made to settle the dispute in an amicable way by conciliation. Conciliation is a mode of settling industrial disputes which involves the coming-together of the parties for peaceful discussion without the intervention or aid of any outsider. An employer may treat directly with the spokesmen of his employees. If a number of employers in some industry, such as the building trades, are involved, a committee of employers may be appointed to

carry on negotiations with a committee of the employees. An attempt is made to reconcile the differences between employers and employees concerning the terms of continued employment. If the negotiations fail, the dispute usually soon assumes more serious proportions. Settlement by conciliation keeps the conduct of the negotiations entirely within the control of the disputants. Success for either organized labor or the employer depends very largely upon skill in negotiation and also upon the willingness of the other party to the dispute to yield some of its demands. The term "conciliation" has acquired a double meaning and is currently used to describe the settling of disputes, either without or with the aid of an outsider. But the latter method is more commonly, and properly, called "mediation."

Mediation. Mediation is a method of settling industrial disputes which involves the presence of a third party, whose function it is to help the disputants reach an understanding. The mediator serves as a "go-between." It is not so much his purpose to pass judgment upon the issues at stake and to try to bring about a settlement in accordance with his findings as it is to create a more tranquil atmosphere, which will enable the parties to the dispute themselves to reach an agreement. Mediation calls for discriminating understanding and rare tact in the conduct of delicate negotiations. The prestige of the mediator, no less than his diplomatic skill, is often most helpful in establishing a conciliatory attitude.

The chief occasion in industrial life prompting the offer of friendly mediation is the expiration of a trade agreement and the inability of the employer and his organized employees to agree upon new working terms. The workmen may be making demands which represent something more than the minimum they would really accept. The employer may be insisting upon terms which are really lower than the maximum he would be willing to grant. To recede from positions taken publicly may prove embarrassing and may be interpreted as a confession of weakness. At times neither side cares to admit that it will consider something different from the announced terms. Under such conditions the mediator has a golden opportunity. If he handles the situation with tact, and if he enjoys sufficient prestige in the community to make it easy for labor and the employer to accede to his suggestions, he can induce the disputants to reach a new working agreement.

The friendly offices of a mediator are usually tendered by some prominent individual favorably known to both employers and employees or by some governmental agency constituted for the purpose. Both the Prime Minister of England and the President of the United States have offered their services in national industrial emergencies. The great prestige of such a mediator enables him to secure concessions which the disputants would not grant directly to each other. If not directly invited to mediate, the occasion that usually prompts the intervention of a high governmental execu-

tive is the inconvenience which industrial conflict occasions the public or the menace which it presents to law and order. In order that the friendly offices of a mediator may be readily available "when, as, and if" they are wanted, many governments provide some public agency for the mediation of industrial disputes. Usually the State Industrial Commission, as in Wisconsin, or the Ministry of Labour, as in England, is commissioned to offer its services as a mediator in important industrial disputes. The Mediation and Conciliation Service of the United States Government is the most important mediating agency in the United States for industries other than the railways. It acts purely in a mediating capacity, usually upon the invitation of one of the parties to the dispute or of some state authority. Its representatives appear upon the scene of almost every major industrial dispute. Without any mandatory powers, it has been remarkably successful in mediating disputes.

Mediation is the weakest in authority conveyed of all the agencies for settling industrial disputes. It calls for the intervention of an outsider, who is limited to the exercise of whatever influence he has with the disputants; he is not clothed with any authority to effect a settlement.

Voluntary arbitration. Voluntary arbitration often grows out of unsuccessful attempts at conciliation or mediation. It is the usual practice for conciliators or mediators to suggest voluntary arbitration if their own attempts to settle the dispute prove to be futile. The consent of both parties to arbitrate must be secured. Voluntary arbitration is a method of settling industrial disputes in which both parties agree to submit the case to an impartial third party by whose decision they agree to abide. Neither side is compelled by law or force to accept the award. The only compelling force in voluntary arbitration is the moral obligation incumbent upon both parties to abide by the decision. Such moral sanction, however, is rarely defied by either the employer or labor, for the repudiation of a voluntary arbitration award made in good faith would alienate public support.

Voluntary arbitration, like mediation, may be either by a private or by a public agency. The usual procedure, if the arbitration is entirely private, is for each side to the controversy to nominate an arbitrator and for the two so selected to agree upon a third, who serves as the chairman of the arbitration board. Such procedure is apt to throw the responsibility for making the decision upon the impartial chairman, but the other members of the board of arbitration serve a most useful purpose in presenting and reviewing the facts in controversy and in facilitating the adoption of the award. Trade agreements in highly organized industries, such as the clothing industry and the building trades, very generally provide for the settlement of possible disputes during the life of the agreement by means of voluntary arbitration. The trade agreements between the Amalgamated Clothing Workers of America and Hart, Schaffner and Marx are excellent

examples in this country of trade agreements which set up a highly successful voluntary arbitration agency for the pacific settlement of disputes. Indeed, most of the disputes arising under these agreements since the first trade agreement was concluded in 1911, have been settled by conciliation and never reached the state of voluntary arbitration at all. The Hart, Schaffner and Marx plan, in which the Amalgamated Clothing Workers of America have coöperated most effectively, has been successfully copied in other clothing centers, though its most brilliant success has been achieved in the original Chicago area.

Public agencies for the voluntary arbitration of industrial disputes have been provided by most governments of industrialized nations or states. Certain officials or boards, either as their main duty or as an incidental function, are designated to act as arbitrators upon the request of the disputants. These public officials, however, may also take the initiative in offering their services, but the offer must be voluntarily accepted before arbitration can begin. Wherever a system of public mediation has been developed, there a system of public arbitration has usually also been devised. It is customary to provide that the public officials designated to offer their services in the peaceful settlement of an industrial dispute shall try to induce the parties to agree to voluntary arbitration if mediation fails.

Voluntary arbitration is a useful agency for the settlement of industrial disputes, even though its use is limited. Wherever labor unions are fully recognized in industry, voluntary arbitration is a thoroughly accepted mode of settling disputes. Voluntary arbitration is particularly useful in the solution of problems growing out of varying interpretations of a trade agreement. If such disputes cannot be settled by conciliation, arbitration is usually acceptable to both parties. A fair-minded arbitrator can generally settle the controversy. But if the issue at stake involves something of basic importance to either the employer or his workingmen, such as the rate of wages or the hours of work, the arbitrator has his difficulties. Both sides are loath to submit such questions to arbitration; they prefer to fight them out or to effect a settlement between themselves. When such questions are submitted to arbitration, there is no commonly accepted general principle which the arbitrator can apply, nor any body of industrial law, comparable to the common law, to which he can appeal as a precedent. The result is that most arbitral awards represent compromises, which the arbitrators think will prove acceptable to the disputants and commend themselves to the public. Voluntary arbitration is at its best in the interpretation of an existing trade agreement rather than in the settlement of a controversy leading to the conclusion of a new one. An arbitrator can usually hope to function more successfully as interpreter of the old than as legislator of the new.

Compulsory investigation. The three agencies for settling industrial

disputes already described—conciliation, mediation, and arbitration—have this in common: they are all purely voluntary agencies. The next two agencies to be considered introduce an element of compulsion. Of these much the less sweeping in the amount of public coercion which it involves is compulsory investigation. Under such a system an investigation must be made by a board created by the state before the parties to a dispute can legally break their usual industrial relations. The compulsion lies in the submission of the case to impartial investigation.

Canadian Industrial Disputes Investigation Act. The system of compulsory investigation of industrial disputes has had its most thorough trial and notable success in Canada. In 1907 the Canadian Parliament passed the Industrial Disputes Investigation Act, the purpose of which as stated in its title is “to aid in the prevention and settlement of strikes and lockouts in mines and industries connected with public utilities.” While intended primarily to apply to mines and public utilities, the act may be applied to disputes in other industries if the disputants agree in asking that this be done. Procedure under the act in general is as follows: If a controversy has reached such a stage that a strike or lockout seems unavoidable, the dispute must first be submitted to investigation. The decision to declare a strike or lockout comes first, however. Employees about to strike or an employer about to declare a lockout must serve notice upon the government that such is the intention, and a copy of the notice must be sent to the other party to the dispute. The act provides for the appointment of a special board of mediation and investigation. The Minister of Labor calls upon each party to the dispute to name one member of the board, and the two thus chosen are given an opportunity to agree upon a chairman. If they are unable to agree, the Minister of Labor himself appoints the chairman. While investigating the issues in controversy, the board proceeds like a court, but at the same time it functions as a board of mediation in effecting settlement of the dispute. During the period of investigation a strike or lockout is illegal. When the investigating board has finished its work, its report is given to the public. This report sets forth what the issues in controversy really are and what the board thinks ought to be done about them in order to prevent a strike or lockout. Acceptance of the judgment of the board is not compulsory. A strike or lockout is legal after the publication of the findings of the investigating board. Procedure under the act is based upon the assumption that if the public is to suffer the inconvenience and possible hardship of a strike or lockout, it is entitled to know the facts and to have the judgment of an impartial body as to what ought to be done about them. In its appeal to the sanction of an informed public opinion, compulsory investigation is to the settlement of industrial disputes what fresh air and sunlight are to the cure of tuberculosis.

Compulsory investigation has commended itself to many as a desirable

means of settling industrial disputes in which the public interest is large. In such disputes the public, as a "party of the third part," is deeply concerned in knowing the facts. When these have been established and recommendations for settling the dispute have been made, the force of public opinion on the side of the party willing to accept such recommendations is usually sufficient to overcome the opposition of the other party. The principal weakness of this method of settling industrial disputes lies in the opposition of organized labor, not to compulsory investigation but to the prohibition of aggressive tactics during the period of investigation. The success of strikes and boycotts, for example, depends in large part upon their timeliness. Compulsory investigation deprives them of their opportuneness and frequently gives the employer a chance to strengthen his fighting position.

Railway Labor Disputes Act. Each of the preceding methods of dealing with industrial disputes—conciliation, mediation, voluntary arbitration, and compulsory investigation—has been incorporated at one time or another in the governmental system provided by Congress for adjusting railway labor disputes in the United States. Since such disputes are apt to impair the entire life of the communities which the railways serve, more elaborate and sustained efforts have been made to adjust labor disputes in the railway industry than in any other. The Erdman Act of 1898, the Newlands Act of 1913, the Transportation Act of 1920 creating the Railroad Labor Board, the Watson-Parker Act of 1926, and the Railway Labor Disputes Act of 1934 all bear witness to the determination of the United States Government to deal with railway labor disputes. The Railway Labor Disputes Act of 1934, which has superseded earlier statutes on this subject, suggests a succession of steps to be taken in the settlement of labor disputes in the railway industry. The act naturally suggests *conciliation* as a first step. Employers and employees are expected to try to reach a mutual agreement. A National Railroad Adjustment Board of thirty-six members, half selected by the carriers and half by labor organizations of the employees, has been established to help them compose their differences. This large board operates through subdivisions having jurisdiction over disputes of designated groups of railway employees. Regional adjustment boards may also be created. If any adjustment board having jurisdiction reaches an agreement, such decision is morally binding upon both parties. If conciliation fails to effect a settlement, *mediation* is to be tried next. The act provides for the appointment by the President of a full-time board of three mediators, known as the National Mediation Board, affiliated with neither the railways nor with railway labor. Either party to a dispute can ask for the intervention of this board, or the board can intervene on its own initiative. If mediation also fails, it is the duty of the board of mediation to try to induce the disputants to submit their case to *voluntary arbi-*

tration. If the parties consent, a special board of arbitration is chosen, and the award of such a board is morally binding on both parties. Finally, if the dispute is not settled by any of these means, and if its continuance threatens seriously to interfere with railway service to the public, the President is authorized to appoint an impartial *emergency board of investigation* to report its findings to him within thirty days. The act is distinguished by its lack of legal compulsion to settle the dispute; it sets forth the duties of railway employers and employees in reaching a settlement of their differences, and it suggests the means of achieving this end. But it does not by law compel them to settle their differences. Its main reliance, if the disputants fail to reach an agreement, is upon the pressure of an informed public opinion. This, it is expected, will turn against the party holding out against a peaceful settlement of the dispute. If the dispute still fails of settlement, special action by Congress or by the President (if emergency powers have been given him by Congress) is the only alternative to continued strife. The agencies for industrial peace created by the Watson-Parker Act of 1926 and the Railway Labor Disputes Act of 1934 have worked remarkably well—the best in our railway history.

But these agencies have been put to severe tests in recent years. In 1938, for example, the railways proposed to reduce the wages of approximately 1,000,000 employees by 15 per cent. The railway unions voted to call a nation-wide strike if the proposed reduction were made. All other methods for settling the dispute having either failed or been rejected, the President, as authorized by the act, appointed an emergency board of investigation. This fact-finding board concluded "that the proposal of the carriers for a reduction of the wages of railway labor should not be pressed," and recommended that the carriers cancel the notices which would put such reductions into effect. The railroads acquiesced in the recommendation of the board and the nation-wide railroad strike was averted. In 1941, 1943, 1946, and 1950 the disputes centered around the demands of the railway unions for substantial increases in wages. The 1941 dispute was finally settled by an emergency fact-finding board appointed by the President, who recommended a 14 per cent increase in the annual railway wage bill. The 1943 conflict led to the first break-down in these agencies for the settlement of railway labor disputes, and resulted in the temporary (even if only nominal) operation of the railways by the government, under war-time powers conferred upon it. The government was in charge of railway operations from December 27, 1943, to January 18, 1944. This made the regular railway employees the employees of the government. After a wage increase had been agreed upon, the government operation of twenty-two days was terminated. In 1946 the unions after threatening a nation-wide strike capitulated and accepted the wage increase of 18½ cents per hour suggested by the President of the United States in lieu of any change in

working rules. The strike itself lasted only forty-eight hours. In 1950 the long-drawn out controversy between the unions and the railway managements again (as in 1943) resulted in the nominal operation of the railways by the government until a settlement could be effected.

*The National Labor Relations Act.*¹⁹ The most comprehensive statute with reference to labor relations ever enacted by the Congress is the National Labor Relations Act of 1935. It defines certain rights of employees and prohibits specified unfair labor practices by the employer. The National Labor Relations Board, the administrative agency created by the act, constantly investigates industrial disputes in order to carry out the purposes of the act. Although the jurisdiction of the board is restricted to industries affecting interstate commerce, the latter has been given a very broad connotation in the decisions of the United States Supreme Court upholding the constitutionality of the act. To pass upon charges that certain practices of employers are unfair, and to settle disputes concerning the appropriate bargaining agency of labor, investigation is necessary. Hearings may be held, testimony taken, complaints dismissed, or cease and desist orders issued to employers guilty of unfair labor practices. Throughout the investigation the board is a fact-finding body. Although the board was originally designed largely as a quasi-judicial agency, its investigative functions have led to the settlement of thousands of disputes.

Under the Labor-Management Relations Act of 1947 (Taft-Hartley Act), which in form is an amendment of the National Labor Relations Act, the Government is given even more comprehensive powers with reference to the investigation and settlement of disputes involving the public health and safety. Some strikes or lockouts may constitute a national emergency. The Act in Section 208 provides:

Whenever in the opinion of the President of the United States, a threatened or actual strike or lockout affecting an entire industry or a substantial part thereof engaged in trade, commerce, transportation, transmission, or communication among the several States or with foreign nations, or engaged in the production of goods for commerce, will, if permitted to occur or to continue, imperil the national health or safety, he may appoint a board of inquiry to inquire into the issues involved in the dispute and to make a written report to him within such time as he shall prescribe. Such report shall include a statement of the facts with respect to the dispute, including each party's statement of its position but shall not contain any recommendations. The President shall file a copy of such report with the Service [the Federal Mediation and Conciliation Service] and shall make its contents available to the public.

In disputes constituting a national emergency, the President, after receiving the report of his specially appointed board of inquiry, may direct

¹⁹ For the main provisions of the act pertaining to collective bargaining, see pp. 139-142.

the Attorney-General to ask the courts for an injunction against the strike or lockout. The injunction may be in force for a maximum of eighty days, during all of which time investigation and mediation continue. Sixty days are allowed for the investigation and filing of its report by the board of inquiry, fifteen days more for a poll of employees by the National Labor Relations Board to determine whether they will accept the employer's final offer, and an additional five days for the certification of the results of the poll to the Attorney-General. If by this time the dispute is still unsettled, the Attorney-General must ask for a dissolution of the injunction, and the President reports and recommends action to Congress. Drastic action by Congress is the implied threat and ultimate recourse.

Compulsory arbitration. Government has occasionally taken a very much more compelling position with reference to the settlement of disputes involving the public interest. Arbitration has sometimes been made compulsory. Under a system of compulsory arbitration, the parties to a dispute are required by law to submit their case to an impartial third party for decision and to abide by the decision rendered. There is compulsion with reference to both submission of the case and acceptance of the award. Failure to do either renders the offending party liable to a penalty.

Compulsory arbitration has had its longest and most successful experience in Australasia. After a maritime strike which paralyzed the vital shipping industry of the island, New Zealand established a system of compulsory arbitration in 1894. The Commonwealth of Australia and the majority of the Australian states followed her example, some as early as 1901 and the last in 1912. Although differing in details, the main provisions of all these Australasian compulsory arbitration plans are similar. All provide for permanent arbitration courts, to which specified classes of cases must be submitted and whose decisions must be accepted. To lighten the work of the arbitration courts, supplementary boards of conciliation have very generally been established, which can act more informally than the courts and with more direct and immediate knowledge of the situation in each industry. If direct negotiations between employers and employees fail to conciliate their differences, the controversies must be taken to the courts of arbitration.

In spite of much dissatisfaction, public opinion in Australasia still supports the principle of compulsory arbitration after fifty years of experience with it. On the whole, the system has tended to strengthen unionism, because only registered unions can bring disputes before the courts of arbitration. But compulsory arbitration has not succeeded in preventing strikes. It is true that during the first dozen years after the enactment of the New Zealand law not a single strike occurred and New Zealand came to be known as the "land without strikes." But the reputation did not last.

Since 1906 New Zealand has had many strikes as bitterly fought as they are fought anywhere else. Australia has never had any immunity from strikes in spite of her compulsory arbitration laws. While all of these strikes have been illegal, in practice it has been found impossible to enforce the penalties of fines and imprisonment in such a way as to prevent the strikes. Organized labor was satisfied with the early awards because they resulted in higher wages, shorter hours, and better working conditions—all the gains which might have been scored through the alternative plan of collective bargaining. This improved status of labor was made possible because of the rapid material progress of Australasia. When this rate of progress slowed up, however, and the demands of the workers often had to be denied, dissatisfaction soon became widespread. Indeed, the more radical among them openly repudiated the whole system of compulsory arbitration. But public opinion as a whole has continued to support it, in spite of its inability to prevent strikes, because it has curbed much industrial rancor and has shortened the periods of industrial strife.

In the United States the only state to experiment with such a system has been Kansas, which passed a compulsory arbitration law in 1920. The Kansas Act applied compulsory arbitration not merely to transportation and other public utilities, as might be expected, but also to mining and to the industries devoted to the manufacture or preparation of food products and the manufacture of clothing. Since bitter and protracted strife in these industries might imperil the public safety and impair the public health, Kansas declared that the rights of the public were paramount to the private rights of either capital or labor. Strikes, picketing, and boycotts were prohibited in these industries. A Court of Industrial Relations was created which could intervene in any dispute within its broad jurisdiction either upon its own initiative, upon appeal of one of the parties, or upon petition of a group of interested citizens. It was authorized to fix wages, hours, and other conditions of work. Its decisions were binding upon all concerned. While individual workmen could give up their jobs, and individual employers could go out of business, if they chose not to accept the conditions fixed by the court, neither strikes nor lockouts could be initiated legally.

The Kansas Industrial Relations Court actually functioned for about three years. Throughout this period it was the object of the stormy opposition of organized labor. Labor had opposed the creation of the court; after it was established, many Kansas unionists ignored its existence by joining their fellow-members in other states in conducting nationally called strikes. The court did not succeed in stopping the practice. The court also failed to receive the uniform and vigorous support of employers. When the Wolff Packing Company refused to abide by a decision of the court establishing a temporary minimum wage and regulating hours

and working conditions in the packing industry, the Court of Industrial Relations sought an injunction to compel obedience to its orders. The case finally came before the Supreme Court of the United States, which in two successive decisions held the compulsory arbitration law unconstitutional, first because it gave the court power to fix wages in a competitive industry, and secondly, because compulsory arbitration could not be applied to industries which were not distinctly public utilities.²⁰ While the inference might logically be drawn that compulsory arbitration is constitutional as far as the public utilities are concerned, the Kansas Court of Industrial Relations ceased to function after 1923.

Confronted by a week-old general strike on its railways in the summer of 1950, the Canadian Parliament, in emergency session, enacted a compulsory arbitration law for the settlement of such railway disputes.

Champions of compulsory arbitration, as an agency for the settlement of industrial disputes, rest their case very largely upon the injury and inconvenience which industrial conflict occasions an innocent public that is dependent upon the industry. Whatever limited success compulsory arbitration may have had in some parts of the world, its inherent weakness as an agency for settling the industrial disputes of a capitalistic society lies in the fact that it is a departure from the fundamental principles upon which capitalism is based. It introduces compulsion in the settlement of matters that are normally settled by free competition and negotiation. The use of compulsion in the settlement of industrial controversies, such as those pertaining to wages, is very apt to result in the injection of non-economic considerations. The fairness of a proposed wage increase or decrease may be judged by arbitrators on ethical grounds and measured in terms of its political effects. But arbitrariness in the determination of one share of the social income is bound similarly to affect the size of other shares. To determine fair wages ultimately means to pass judgment upon the fairness of returns to other agents in production and of prices to the consumer. The use of compulsion in the settlement of economic controversies logically leads to the substitution, partial or complete, of a system based upon authority for a system based upon competition. Organized labor usually dislikes compulsory arbitration because it deprives unions of the right to strike and is apt to substitute reliance upon some external authority for reliance upon the union as the protector of the interests of labor. On the whole, in this country no more satisfactory methods for settling industrial disputes have been developed than those voluntary, cooperative agencies which have been set up by industry itself. The influence or control of the government has been most wisely exerted when it has been used to facilitate the operation of these voluntary agencies.

²⁰ *Wolff Packing Co. v. Court of Industrial Relations*, 262 U.S. 522 (1923), 267 U.S. 522 (1925).

In the United States during the years of the Second World War industrial peace was promoted by the effective coöperation of labor, management, and the government. Both the American Federation of Labor and the Congress of Industrial Organizations gave no-strike pledges for the duration of the war. While the pledge of organized labor did not eliminate strikes, it greatly restricted their number. Labor and management coöperated with the government in the work of the National War Labor Board, which by order of the President on January 12, 1942, was given power to "finally determine" disputes in order to maintain uninterrupted war-time production. Non-compliance with the directives of the Board in a few instances led to the temporary seizure and operation of the plants by the government.

PLANS FOR IMPROVING INDUSTRIAL RELATIONS AND PREVENTING INDUSTRIAL CONFLICT

But more important for the cause of industrial peace than the settlement of disputes that have already broken into open conflict is such an improvement in industrial relations as will reduce, if not prevent, future industrial conflict. Is there any hope that human relations within industry can be more satisfactorily adjusted than they have been? Too often for the good of both the employer and the worker this human situation has either been ignored or deliberately brushed aside. Men have often done nothing more than to exercise a Micawber-like faith that "something will turn up." Frank recognition of the economic interdependence of labor and capital, however, leads to sincere attempts to improve relations between these interdependent groups in industry. Certain helpful policies are commending themselves to industrial leaders today, no matter how much they may have been ignored or opposed in the past. These are designed to overcome much of labor's dissatisfaction with the job and its rewards which is so prolific a source of industrial conflict.²¹

The monotony of the job can at least be counteracted by the establishment of the shorter working day. Whether the eight-hour day and the five-day week can ever become general industrial practice will depend very largely on whether labor can produce as much during the shorter working period as during the longer hours. Shorter hours are not desired by labor at the price of a permanent loss of wages and a resulting reduction in the standard of living.

The job can be made more personal. Labor management and industrial relations departments, directed by men and women who understand the human factor in industry as others understand materials and machines, are greatly improving the morale of many industrial establishments.

²¹ Cf. discussion of sources of industrial conflict, pp. 158-160.

The job can and must be made more secure. Insecurity of the job together with uncertain and inadequate income, constitutes the greatest threat and challenge to the capitalistic system. Today this challenge is not falling upon deaf ears, for it is doubtful whether ever before in the modern industrial era so much thought has been given to the problem of providing more permanent jobs for the wage-earners of the world. The hope of economists and business leaders is that, by a more intelligent and unselfish adjustment of productive capacity to consumers' needs than we have had in the past, we shall in the future be able to stabilize business so as to provide much more steady jobs. Stabilized business and steady jobs are incomparably superior to any form of relief for the worker.

Efficiency on the job can be more adequately rewarded both in wages and also in the more intangible forms of human recognition. In times of depression the determination of wages presents a peculiarly difficult problem both because wages are the largest element in cost of production (not far from 80 per cent of the total) and at the same time because they represent a large part of the purchasing power of the people which is needed to sustain production. Sharp differences of opinion as to what constitutes the soundest wage policy during a period of depression not unnaturally develop. If during hard times decreases in wage rates prove inevitable in order to restore prosperity, it is to be hoped that they will not be made until all possible economies have been effected in management, productive organization, and marketing. If a reduction in wage rates can help to restore prosperity by lowering prices and stimulating demand, so that annual wage earnings will be greater after the reduction than before on account of more steady employment, it is justifiable. But even if the fall in the cost of living and the ultimate revival of prosperity should give the workman the same annual real wages as in normal times, his income is still very moderate. Those who believe in capitalism rather than in communism, as an economic system that better promotes the general welfare, should not relax efforts to increase wages and make possible still higher standards of living. More than anything else, steady annual earnings, large enough to permit the maintenance of decent standards of living when judged by prevailing American conditions, will promote friendly coöperation between labor and capital and help make capitalism an agency for the greatest possible economic and social progress.

Welfare work. Modern industry abounds with plans for the betterment of industrial relations. Through them all runs the hope of so perfecting industrial government as to minimize the likelihood of serious internal friction. Many employers have sought to humanize industry, to emphasize their treatment of labor as human beings rather than as a commodity of commerce, by establishing welfare work departments. Among the more important welfare activities of representative industrial establishments are

provisions for health, such as physical examinations, emergency aid, medical and dental dispensaries, and visiting nurses; provisions for recreation, such as competitive sports, playgrounds and parks, and motion-pictures; provisions for education, including reading rooms and organized instruction; provisions for attractive housing together with thrift plans to encourage home ownership. Welfare work stresses the whole physical and psychological environment of the job rather than what is in the pay envelope. Under the guidance and direction of its wisest proponents, it is intended as an addition to and not a partial substitute for the regular wages of the worker.

Hardly any kind of work calls for deeper understanding of human nature and greater skill, born of the union of talent and experience, in handling human beings. Because such leadership is rare, welfare work has often proved a disappointment to its sponsors. Its chances of success turn almost wholly upon the spirit in which it is done. Since most human beings are best pleased by things they do for themselves, it is wisest to place as much as possible of the actual direction of the welfare work in the hands of representative workers. Labor, particularly where organized into unions, has been skeptical of the purpose of welfare work. It has often looked upon these activities of the employer as the expression of a benevolent but paternalistic feudalism, the effects of which might be to weaken unionism and to increase industrial serfdom. Workingmen are very apt to think that elaborate forms of welfare work must be at the expense of higher wages (a conviction which the frequently quick discontinuance of such work during depressions reinforces) and to resent any invasion of their rights to spend their wages and leisure time as they see fit.

Scientific management and personnel administration. While the plan of "scientific management" of industry—largely the work of Frederick W. Taylor (1856-1915), a mechanical engineer—was developed as a means of eliminating waste from industry, it was also offered in the hope that it would ultimately improve the relations of management and workingmen. Taylor devoted his industrial life to the task of applying science rather than trial-and-error methods to industrial operations; his purpose was to lower unit costs by creating a product with the least amount of waste and friction. Scientific management seeks to find the best way of doing a job. In the long run this will also prove to be the most profitable way for all concerned in production.

The technique of scientific management includes the following principles and procedures.²² First there must be "the development of a science for each element of a man's work, thereby replacing old rule of thumb methods." Motion studies to determine what is a reasonable length of time

²² F. W. Taylor, *Principles of Scientific Management* (New York, Harper & Brothers, 1919), p. 13.

for any given task are not intended to drive workers at "top speed," but honestly to determine the least amount of effort by both men and machines to which a given job can be reduced. Such studies have greatly increased the productiveness of industry. Second, scientific management contemplates the selection and training of the best worker for each job rather than the haphazard methods which have resulted in so much industrial inefficiency and dissatisfaction. Third, it includes standardizing and grouping together all similar tasks, so as to eliminate the wasteful shifting-about of workers to unrelated activities. Fourth, it emphasizes the use of the most efficient tools, and their constant use, so that the worker may get the best results in production. Fifth, it means the establishment of a wage system which allows satisfactory wages to the workman performing a task in the standardized time and at the same time pays a bonus to the workman who does better than the standard. Sixth, it divides responsibility between workers and management in accordance with their respective functions instead of placing both work and responsibility for results so largely on the men.

Taylor's plan for the scientific management of industry met with the bitter opposition of organized labor. Although Taylor fought the unions, his hope and ambition were to help the workingman by showing him how to do his work better and thereby to earn higher wages. But the unions were suspicious that scientific management was largely an "efficiency program" which would inevitably lead to the discharge of some workers and the unemployment of many. The plan of scientific management also aroused the active opposition of many executives, managers, and foremen who disliked the implication that their own ignorance or incompetence had failed to achieve the greater productivity which scientific management makes possible. But in more recent years the opinion of both management and unions has grown more favorable as to the soundness of the basic ideas in scientific management. Scientific management promises to survive as a better way of doing things and of coöperation between labor and management in doing them. The failure of its founder and many of its sponsors to understand and allow for the psychology of the workingman has limited its adoption and usefulness.

One logical application and development of the principles of scientific management has been the creation of personnel departments for the administration of human relations in industry. Under the direction of skilful administrators it is the task of such departments carefully to select the personnel in accordance with job specifications, to promote and transfer workers, to make the physical and social environment of the job as attractive as possible, and in these and other ways to develop and maintain a high morale in the establishment.

Company unions. Company unions are an outgrowth of plans for em-

ployee representation, which though antedating the First World War, received their greatest impetus from the industrial experiences of this period. They were urged very strongly in post-war days as a means of conserving the spirit of coöperation between labor and capital, which war-time patriotism had created. Hundreds of business enterprises in the United States developed some form or another of employee representation. Among them were some of the largest concerns in this country such as the Standard Oil Companies, the Pennsylvania Railroad, and the Bethlehem Steel Corporation.

Employee representation sought to do in the economic field what the representative government of democracies has done in the political field. Just as political government has outgrown the town meeting, so industrial government has outgrown the direct personal contacts between employer and employee which at one time did so much to promote common understanding and good-will. Since it was impracticable in any very large way to restore the old direct personal contacts between employer and employee, a substitute had to be found. This substitute, many employers thought, they had found in some form of employee representation in the government of industry. Employee representation meant the joint participation of workers and management in controlling the conditions under which work should be done. It was devised to help settle industrial grievances, to reduce industrial conflict to a minimum, and to promote coöperation between men and management in solving the problems of production. While the interests of labor and capital are not identical, there is sufficient harmony of interests to warrant organized efforts to restrict their conflict to issues, such as wages, on which their interests naturally diverge. Employee representation plans sought to provide "home rule" or local government for industry. They found their greatest usefulness in settling local grievances, which only those best informed concerning local conditions can do most effectively, and in promoting coöperation between labor and management in all the problems of production.

Members of the regular independent labor unions called these employee representation organizations, "company unions," and such they have largely become. Company unions are restricted in membership to the employees of a given plant or business corporation and, in contrast to the ordinary trade-unions, are characteristically unaffiliated with any larger outside organization. Initiative in their organization is usually taken, directly or indirectly, by the employer. Many employers take the position that they will negotiate with their own employees concerning wages and all other pertinent matters, but they will have nothing to do with outside professional labor leaders who serve as the expert negotiators of employees belonging to the ordinary unions. Company unions, inspired and usually controlled by management, have been the result of this attitude. Company

unions attained their greatest development in the United States during the years following the First World War.

The purpose of employers in encouraging and supporting company unions has been to keep negotiations concerning industrial obligations entirely "within the family." By cooperating freely with unions of their own employees, employers have hoped to help develop a fine industrial morale. The high morale of the working force of any plant or business corporation is a most valuable asset. The trade union movement, however, has been hostile to the plan of organizing company unions. Only very rarely are members of the company unions also members of the ordinary trade-unions. The glaring weakness of company unions from the standpoint of the workers is that they deny labor full freedom of choice in selecting its own business agents to conduct the negotiations of collective bargaining. If workingmen have the right to bargain collectively, they should also have the right to select their own spokesmen. The fact that the representatives of company unions are on the pay-roll of the company handicaps them in urging the claims of their fellow-employees in the strongest possible terms for fear of giving offense to the management and losing their own jobs. If management is disposed to do so, the representatives of company unions can be much more easily influenced or controlled than can the business agents of national trade-unions. What is more, company unions cannot effectively resort to strikes and other forms of industrial strategy to gain their ends. They lack the necessary financial resources, if nothing more. While company unions have proved acceptable to both employers and workingmen in some instances, they cannot be regarded as general solutions of the problem of improving human relations in industry.

Under the National Labor Relations Act of 1935 not the company union necessarily but the company-*dominated* union is illegal—unless the Supreme Court in the future decides otherwise. After the enactment of the law with its reaffirmation of the right of employees "to bargain collectively through representatives of their own choosing," and its warning to employers that they may not "dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it," more company unions were organized. The hope of some employers was that these company unions, rather than unions affiliated with either the A. F. of L. or the C.I.O., would be chosen by workers as their bargaining agency. But in the main such hopes were doomed to disappointment in spite of some notable election victories by the company unions.

Profit-sharing and stock ownership. Profit-sharing is a plan for labor's participation in the net earnings of industry. It has been practiced for a century. Under a system of profit-sharing the employees of a business re-

ceive, in addition to their regular wages, as determined by prevailing conditions, a share, fixed in advance, of the profits of the business. Profit-sharing is not a substitute for regular wages, but a supplement to them. Almost without exception profit-sharing plans have been installed upon the initiative of the employer. They are based upon his conviction that the greatest cause of industrial unrest is dissension over the distribution of the joint product of labor and capital and that the best corrective is to give labor a share in the larger profits that are apt to accrue when labor and capital cooperate efficiently.

Not all plans commonly considered forms of profit-sharing represent true sharing of profits. Some of them are pseudo-forms, such as Christmas gratuities to employees and the payment of arbitrary cash bonuses at the end of the year. The principal types of true profit-sharing include the payment of cash at the end of the business year, the distribution of debenture bonds or shares of stock in the enterprise, and the setting-aside of an annually increasing fund for the benefit of employees from which old age pensions or family annuities can be paid. Employers are naturally partial to plans of payment which tend to give their employees a growing financial stake in the business, because this will stimulate their future productive efforts and develop their loyalties. While the share of profits, agreed upon as accruing to labor, varies in the different plans of profit-sharing, it is usual to pay labor's share to the individual employees approximately in proportion to their regular compensation.

Although some employers regard profit-sharing as the plan *par excellence* for the improvement of industrial relations, it is doubtful that profit-sharing will ever become very general or that it can contribute very much to the promotion of industrial peace. The most that can be said for it is that profit-sharing has proved neither a complete success nor a complete failure. Its primary objective is obviously to stimulate such productive efficiency as will increase the profits to be distributed, to which end the promotion of industrial peace is a necessary but subordinate purpose. Its greatest appeal has been to employees occupying executive or managerial or sales promotion positions; in general it has succeeded wherever it has been possible distinctly to correlate results with individual effort. The success of profit-sharing also largely depends upon the compactness of the group with which it is tried. The solidarity of a working group is essential to prevent those wastes of time, materials, and finished products of which industrial slackers are guilty and which, as far as profits are concerned, may bring to naught the best efforts of the efficient and industrious.

From the point of view of the rank and file of workers the most serious limitation of profit-sharing is the difficulty of correlating shares in profits with individual efforts. The profits or losses of a business are to a large extent attributable to factors entirely beyond the sphere of control of

labor, such as changes in the general level of prices, the cyclical movement of business, good or bad judgment on the part of the management, the severity of competition, and general trade policies. Profit-sharing plans arouse the expectation that there will be profits to divide. If labor does its best, and if in spite of such honest efforts there are no profits to distribute, it may prove embarrassing for management to explain the situation, and profit-sharing is apt to lose what appeal it had. Moreover, even when there are profits to distribute, the problem of their distribution may generate fresh conflict between labor and management. Organized labor, it may safely be said, is almost always suspicious of and usually hostile to the system. Union leaders assert that profit-sharing is a covert plan of the employer for reducing regular wages or for keeping them low. They say that the "prince hountiful" rôle of the employer in distributing profits is a mask concealing his real self. They insist that profit-sharing is cunning strategy to weaken the labor movement. It must be admitted that the hostile attitude to organized labor of many employers who extol and practice profit-sharing has undoubtedly furnished tangible support for these convictions.

A variation of profit-sharing to which interest has shifted in recent years is employee stock ownership, which exists in any corporation when its employees are encouraged and aided to acquire voting shares of its stock. It is a plan by which the laborer may become a capitalist. The management of a corporation may encourage its employees to acquire stock by paying them bonuses which can be applied on the payments for the stock, or by offering the stock at attractive prices when compared with market values. The stock so acquired may be held in the names of individual employees, or it may be held jointly for their benefit by an association organized for the specific purpose. Hundreds of American corporations have developed employee stock ownership plans.²³

The most important objection to employee stock ownership from the points of view of both employees and employers, is the financial risk involved. Most workingmen should invest their all-too-meager savings in the safest forms of investment available, such as homes, interest-bearing deposits in savings-banks, and high-grade government bonds. They are in no position to take the chance of losing their savings by assuming unusual financial risks. What they need is security of their hard-earned principal, even though this means a low return, rather than the opportunity to make speculative profits.

Stabilizing the income of workers. One of the most recent and promis-

²³ Cf. National Industrial Conference Board, *Employee Stock Purchase Plans and the Stock Market Crisis of 1929* (New York, 1930); U.S. Federal Trade Commission, *National Wealth and Income* (1926); E. Davis, *Employee Stock Ownership and the Depression* (Princeton University, 1933).

ing methods for the betterment of industrial relations is offered by various plans for stabilizing the income of workers. The idea of a contractual "annual wage" for workers strikes at the core of labor's dissatisfaction with its own industrial status, namely, the risk of sudden unemployment and the loss of all wages. So far plans for guaranteeing either annual wages or annual employment have been most successful in enterprises the demand for whose products is fairly stable, such as the processing of some foods, and the manufacture of soap and shoes. On the other hand, concerns operating in industries characterized by wide fluctuations in the demand for their products, such as building construction and the manufacturing of railway equipment, have not been able to develop successful plans for stabilizing income and employment.

In 1950 the "Big Three" guaranteed annual wage plans in the United States, all backed by impressive experience, were those of Proctor and Gamble, the Nunn-Bush Shoe Company, and Geo. A. Hormel and Company. The Hormel plan, for example, was put into effect gradually during the early thirties, and is now an integral part of the Company's contract with the United Packinghouse Workers, a C.I.O. union. It covers about 95 per cent of the plant personnel. In an attempt to maintain a steady year-round supply of skilled and efficient labor, the Hormel Company plan provides for the following:

1. Labor costs are spread over 52 weeks and each employee receives a weekly pay-check;
2. The weekly pay-check is the same throughout the year even though work may vary from a maximum of 53 hours a week during the busy season to about 25 hours per week during the slow season;
3. Workers are guaranteed pay for about 38 hours per week, although they have been averaging slightly less;
4. No prior period of service is required for eligibility under the plan.

Trade agreements. Perhaps the most realistic plan of all for composing the inevitable conflict of interests between employers and employees is offered by the trade agreement. Organized labor certainly regards trade agreements as the most practical, even if least idealistic, method of compromising the differences between employers and employees and of improving industrial relations. Trade agreements record in writing the collective bargain entered into by the representatives of organized labor and of employers concerning conditions of work. They may apply to a particular plant or to an entire industry within a given geographic region.

When trade agreements are first drawn, they are usually very simple, applying to such obvious matters as wages and hours of work. With the continued success of this method of adjusting relations, however, trade agreements tend to become more inclusive and detailed. Ultimately, they may cover most contentious subjects within industry, and even set up

formal agencies for both the settlement and the prevention of industrial disputes. They have sometimes been described as industrial constitutions, or more aptly as industrial treaties. They usually run for a specified period of time, toward the expiration of which new agreements may be negotiated and put into effect.

The popularity and strength of trade agreements as a form of industrial government are attributable to their attempts to adjust differences peacefully rather than by resorting to force, to their frank recognition of both a conflict and a harmony of interests in industry, and to the fact that for their successful negotiation both employers and organized labor are directly responsible.²⁴

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Since workers strike chiefly for higher wages, and there is economy in paying higher wages, industrial conflict is unnecessary.
2. It is inadvisable for a union to strike for higher wages during a period of good business, since it is during this period that the employer is strong and best able to resist new demands.
3. Trade unions which engage in strikes against firms selling products in interstate commerce violate the Sherman Anti-trust Act.
4. Court decisions concerning mass-picketing have destroyed the effectiveness of picketing as a weapon of labor in industrial disputes.
5. Secondary boycotts always affect third parties (other than the immediate disputants), whereas primary boycotts never affect third parties.
6. There is little practical distinction between striking and boycotting.
7. Injunctions in labor disputes are issued by courts only after extensive investigation and hearings in open court.
8. In industrial disputes the injunction may be used just as effectively by labor unions as by employers.
9. Since labor statutes contain no prohibitions against sabotage and physical violence, the courts can afford the employer no protection against such activities.
10. Arbitration depends upon legal sanction for its effectiveness in settling labor disputes.
11. There is no practical difference between conciliation and mediation.
12. A record of a large number of disputes settled by voluntary arbitration in a particular industry indicates excellent union-management relations.
13. The certain knowledge that disputes will be arbitrated if a collective bargaining agreement cannot be reached tends to prevent settlement of the dispute short of arbitration.
14. No union should be permitted to call a nation-wide strike under any circumstances, since it is clear that such a strike would create a national

²⁴ The policies of organized labor discussed in Chap. VI, "Labor Organizations and Their Policies in Production," are largely translated into action by means of trade agreements.

emergency with detrimental effects to the health and welfare of the people.

B

1. The Omega Corporation manufactures shoes which are sold at many retail outlets, one of which is the Beta Shoe Store, Inc. The employees of the Beta company belong to a retail clerks' union, but the employees of the Omega company are not members of any union. The chief competitor of the Omega Corporation is the Gamma Corporation, which manufactures the same line of shoes. The employees of the Gamma company all belong to an industrial union which has a union shop agreement with the company.

Comment on the reasons for and the legality of the union's and the employer's actions in each of the situations below. Explain what conditions should have prevailed in each instance for action which was illegal to have been legal.

- a. The union representing the workers of the Gamma Corporation decided that the Omega Corporation must be unionized. Accordingly, it assigned certain of its members to picket duty before the gates of the Omega Corporation's plant. This union tried to bargain on behalf of the employees of the Omega Corporation for a union shop and a wage increase, but the employer refused to bargain.
- b. The vice-president in charge of labor relations at the Omega Corporation called all of the workers to a meeting in the plant on company time, told them that the company was opposed to their joining the union which was picketing its plant, and offered instead to provide funds and furnish facilities and advice for the establishment of an independent union for employees of the company only. He made it quite plain that under no circumstances would the company negotiate with the industrial union.
- c. After an organizing campaign among the employees of the Omega Corporation, they joined the same industrial union which has an agreement with the Gamma Corporation. They then joined the pickets sent from the union members at the Gamma Corporation in a strike against the Omega Corporation.
- d. The vice-president in charge of labor relations at the Omega Corporation contacted a well-known detective agency in a nearby state to furnish protection for the plant and the small minority of workers who did not join the industrial union and wished to continue work. This detective agency agreed also to recruit non-union workers from the nearby state and transport them by railroad to the gates of the Omega factory.
- e. The industrial union, with members now from among the employees of both the Gamma Corporation and the Omega Corporation, concluded that the only way to bring the Omega Corporation to terms was to picket the retail outlet of the non-union manufacturer in an effort to enlist the indirect aid of the purchasers of Omega shoes. Accordingly, two pickets carrying "unfair labor practices" signs patrolled the area in front of the Beta Shoe Store.
- f. The members of the retail clerks' union employed by the Beta Shoe Store refused to cross the picket line established by the industrial union. Consequently, the manager of the store discharged them and

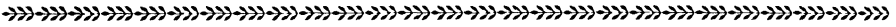
- called upon a local employment agency to send non-union clerks to the store. The union clerks claimed that they were still employees under terms of their agreement with the Beta company, and that the manager had no right to discharge them.
- g. When the non-union clerks arrived, the union clerks, who had since joined the picket line *en masse*, marched in front of the store with arms interlocked, making entrance to the store by either the non-union clerks or customers impossible.

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CHAPTER VIII

The National Income Analysis of Production and Other Economic Functions



THE FUNCTIONING OF THE economic system in the production of material goods and services may be studied from the point of view of the individual operating within that system or from the point of view of the economy as a whole. In the first instance, the transition of ideas is from the individual to the business firm to the single industry and finally to the economy as a whole. In the latter, study begins with the over-all functioning of the entire economy. Both approaches lead to the same goal. Neither analysis is exclusive of the other; they supplement each other.

The analysis of the preceding chapters has largely been from the individual point of view. The chapters have dealt with the organization and functioning of the economic system in bringing forth an endless succession of goods, and with the conflict of interests that often arises in their distribution. Until a comparatively short time ago the quantitative measurement of the economy's gross production was crude and inadequate; detailed facts were lacking, available data were not systematically collected, and no agency with sufficient funds, such as the government, statistically analyzed the performance of the economy as a whole. In recent years the Department of Commerce has undertaken the continuous study of the national income and related items and publishes its results quarterly, though putting them on an annual basis. It is one of the most informative reports to the people by any branch of government.¹

In the United States more than sixty million gainfully employed persons, working on a great variety of rich natural resources, and working with an incomparable array of capital goods, have created an aggregate product which has grossed more than \$210 billion in each of the last seven

¹ Student-readers are advised to supplement the discussion of the national income that follows by consulting the latest monthly issue of either the *Survey of Current Business* or the *Federal Reserve Bulletin* for the current estimates of the national income and related items. The former is published by the United States Department of Commerce and the latter by the Board of Governors of the Federal Reserve System.

years. In 1950 it exceeded \$260 billion. What this product represents and what disposition is made of it are matters with which national income analysis is concerned. The over-all productive performance of the American economy in 1949 (the last full year for which detailed data are available at this time) is presented in the accompanying table on the "Relation of Gross National Product, National Income, Personal Income, and Disposition of Income, 1949."

GROSS NATIONAL PRODUCT

Various measurements of production and the income that results from it have been developed in the national income statistics. They are neither contradictory nor mutually exclusive. They measure product and income in different ways, each of which may have its special use.

The lead-off concept is that of the *gross national product* (GNP). By the gross national product is meant the market value of the output of material goods and services produced by the nation's economy within a specified period of time, such as a year. Production has been defined as the creation of economic goods, whether they be material commodities or personal services. The national output takes innumerable forms. Consumers' goods and producers' goods, soft goods such as foods and hard goods such as motors, durable goods and non-durable goods, commodities and services, all in seemingly endless variety and in enormous quantity make up the national output. To measure the output it is possible to count the number of physical units produced and the number of services rendered. But this does not add up to any common magnitude. Only measuring the goods produced in terms of what it costs to produce them or in terms of their market value does this.

In this national accounting by the Department of Commerce of the goods produced and the income generated all the goods are end or final products. The value of the raw materials shows up in the value of the finished goods. To count both the value of the raw materials produced in a given period and the value of the finished goods into which they enter would be double counting. If desired, the producers of raw materials and of semi-finished goods can be given credit for the values they have added to the final product, which is merely a way of allocating the value of the finished good (perhaps a Ford, Chrysler, or Cadillac) among all those instrumental in its production.

To credit a particular period, such as the year 1949, with the value of all the goods that pour out of productive establishments whether they be farms, mines, or factories, would be to overstate the gross national product for that period. For included within the gross national product is the contribution of capital goods used up in the process of production.

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RELATION OF GROSS NATIONAL PRODUCT, NATIONAL INCOME, PERSONAL INCOME,
AND DISPOSITION OF INCOME, 1949

(Millions of dollars)

<i>Gross national product</i>	255,578
Less: Capital consumption allowances	18,772
Depreciation charges	15,789
Accidental damage to fixed capital	528
Capital outlays charged to current expense	2,455
<i>Equals: Net national product</i>	236,806
Plus: Subsidies minus current surplus of government enterprises	118
Less: Indirect business tax and nontax liability	21,299
Business transfer payments	697
Statistical discrepancy	-1,903
<i>Equals: National income</i>	216,831
Less: Undistributed corporate profits	9,203
Corporate profits tax liability	10,601
Corporate inventory valuation adjustment	2,233
Contributions for social insurance	5,665
Excess of wage accruals over disbursements	-45
Plus: Net interest paid by government	4,656
Government transfer payments	11,591
Business transfer payments	697
<i>Equals: Personal income</i>	206,118
Wage and salary receipts	132,016
Total employer disbursements	134,217
Less: Employee contributions for social insurance	2,201
Other labor income	2,919
Proprietors' and rental income	41,703
Dividends	7,821
Personal interest income	9,371
Transfer payments	12,288
Less: Personal tax and nontax payments	18,674
Federal	16,193
State and local	2,481
<i>Equals: Disposable personal income</i>	187,444
Less: Personal consumption expenditures	178,832
<i>Equals: Personal saving</i>	8,612

Survey of Current Business, Vol. 30, No. 7 (July, 1950), pp. 9, 10.

This year's output is in part the product of the capital goods created in previous years or periods. That part of the expected life of a capital good which is spent in any production period must be accounted for in depreciation and lessens by that much the true gross national product of that period.

As inspection of the accompanying table shows, the gross national product for 1949 was \$255.5 billion. For many purposes it is the most convenient and appropriate of the measurements of our productive efficiency. If the gross national product of one year or other period is compared with that of another, corrections may have to be made for changes in the price level. The gross national product twenty years earlier, in 1929 at the peak of our inter-war prosperity, has been estimated at \$103 billion. The wholesale commodity price level, however, accounts for some of the difference since prices in 1949 were 1.6 times as high as they were in 1929.

NET NATIONAL PRODUCT

The gross national product, as shown above, includes output which is the result in part of using up capital goods produced in the past. *Net national product* (NNP) is the gross national product less capital consumption allowances. These include not only ordinary wear and tear of capital goods, recorded as depreciation, but also extra-ordinary allowances for damage to fixed capital occasioned by such destroyers as fire, flood, and wind. Since the net national product is the gross national product less depreciation charges and other allowances for the consumption of durable capital goods, it more nearly represents the net gain to the economy attributable to current productive activity. The summation of the net national products for a series of years represents the net gains from current production as the addition of the successive gross national products does not.

In 1949 after deducting from the gross national product capital consumption allowances of one sort or another—aggregating over \$18.7 billion—the net national product stood at \$236.8 billion.

Gross National Product
Less Capital Consumption Allowances
Equals Net National Product

NATIONAL INCOME

Both the gross national product and the net national product appraise the output in terms of what it will *bring* on the market. There is an alternative measurement of the output, namely what it *costs* to put it on the market. This is essentially what the *national income* (NI) concept repre-

sents. The national income may be derived from the net national product. If we subtract from the net national product indirect business taxes, such as excise and sales taxes, and any non-tax liability to the government, the remainder is largely payment for the factors of production. National income is essentially this *outgo* for the factors of production, which becomes the *income* of those who supply the productive factors. Factor costs to the business firm and factor income to the recipients of wages, salaries, interest and the like, are two sides of the same economic fact. The national income, no less than the gross and net national products, is a way of measuring the productive performance of the economy, this time from the point of view of factor costs rather than from that of the market value of the output. In 1949 the national income amounted to \$216.8 billion.

Net National Product
Less Principally Indirect Business Taxes
Equals National Income

PERSONAL INCOME

National income is not identical with *personal income* (PI). Some items in factor cost (national income) are not received by individuals at all. Examination of the preceding table shows four such items: undistributed corporate profits, corporate profits taxes, corporate inventory valuation adjustments, and social insurance contributions. These are regarded as factor costs (and so part of national income) but they are either retained by the corporation or paid to the government and consequently are not part of personal income to anyone. On the other hand, persons may receive income from business firms or the government for reasons other than current production, such as bonuses and gifts. Personal income then is national income less items of factor cost not received by individuals, plus items received by individuals but not a part of either factor costs or factor income. Personal income in 1949 aggregated \$206.1 billion. Personal income, as the table shows, is the sum of wage and salary receipts, other labor income, proprietors' and rental income, dividends, personal interest income, and transfer payments. Included in personal income under transfer payments are transfers from the government and from business to persons, such as pensions, but excluded are transfers among persons.

National Income
Less (Undistributed Corporate Profits, Corporate Profits Taxes, and Social Insurance Contributions)
Plus Transfer Payments to Individuals from Government and Business
Equals Personal Income

DISPOSABLE PERSONAL INCOME AND PERSONAL SAVING

Not all the personal income that comes through to the pockets and bank accounts of people is theirs to do with as they please. In general they may do three things with their income: pay taxes and other obligations to the government, spend it on consumption goods, and save it for investment. Two further concepts are necessary and important in this income analysis of production and related economic functions. They are *disposable personal income* (DI) and *personal saving* (PS). Personal income reduced by the amount of the personal taxes and non-tax obligations to the government is the disposable personal income. The payment of taxes is inescapable. Taxes represent a prior lien on personal income. Only what is left of personal income after the taxes have been met is freely disposable personal income. Such income persons can largely spend and partly save, or partly spend and largely save, as personal circumstances may dictate. Upon the decisions to spend and to save, and in what proportions, much of the functioning of the economic system depends.² In 1949 the disposable personal income was recorded at \$187.4 billion.

Personal Income
Less Personal Taxes
Equals Disposable Personal Income

Personal saving is the disposable personal income less the personal consumption expenditures. It may be either a plus or minus quantity. In the latter case we have dis-saving, the using up of past savings. The amount of the personal saving, plus or minus, is the balancing item in the personal income account as surplus is the balancing item in the income account of a business firm. Personal saving in 1949 amounted to \$8.6 billion.

Disposable Income
Less Personal Consumption Expenditures
Equals Personal Saving

USEFULNESS OF THE AGGREGATE INCOME ANALYSIS

National income statistics as a tool of analysis. The gross national product, the net national product, the national income, the personal income, the disposable personal income, and personal saving are all specific ways of measuring and comparing the performance of the economy. There are other ways of measuring it, but these six measurements are best

² Cf. Chap. XXVII, "Business Cycles," pp. 630-632, for a discussion of consumer spending, saving, and investment in their effects upon the economy, and also Chap. XXIX, "Spending, Saving, and Investment," pp. 676-691.

known and most widely used. Moreover, they provide an articulated framework of ideas into which still other ideas can be built. These national income statistics furnish the best tool of analysis economists have had in studying the over-all functioning of the economy. They enable anyone who chooses to do so to begin with study of the economy in the aggregate rather than to begin at the level of individual effort. This is the difference in approach and emphasis of what some writers have called *macro-economics* and *micro-economics*.

National income statistics provide the over-all empirical data from which many valid and useful conclusions can be drawn. Observed relationships between series of data may suggest new problems, further research, and analysis.

National income statistics as substantive contributions. But national income statistics are something more than an invaluable tool of analysis. They represent substantial contributions to economic understanding and thinking. Without the estimates of both the gross and the net national products, for example, our knowledge of changing levels of production of the economy would again be sketchy and utterly inadequate. Not much more than a decade ago, when economists were looking for economic signs of the times they had to content themselves with changes in such statistical series as the amount of pig iron production or the value of construction awarded. These were regarded as prophetic of changes in the economy as a whole. But often such series were conflicting, and always they were fragmentary. Economics became more realistic when adequate and comprehensive data were supplied and analyzed. Information concerning the national product leads to better understanding of employment, the national income, disposable personal income, consumption expenditures, and what they mean in the over-all functioning of the economy.

Similarly, national income statistics shed light on the volume of savings, both corporate and personal, and the possibilities of building up capital through further real investments. Such further investments have much to do with expanded national products in the future.

And again, national income statistics illuminate the distribution of income, the part of the personal income that is absorbed by wages and salaries, by proprietors' and rental income, by dividends and interest. The steadiness or fluctuations of these "shares" as total income changes are interesting and significant deductions.

A practical contribution of national income statistics is that they enable businessmen and others interested in the marketing of goods to estimate the potential demand for goods in the aggregate resulting from changes in disposable personal income. A sharp and sudden decline in disposable income, for example, is the flashing light of caution or of danger to pending business plans of expansion.

National income statistics record only changes in aggregates, plus or minus as the case may be. The individual situation or case may differ from the aggregate.

And finally, national income statistics measure only changes in quantitative magnitudes. They do not and cannot record changes in the quality of the output. Both quantity and quality of the output may be either up or down, or one may be up while the other is down. Perhaps qualitative improvements might be considered as the equivalent of certain assumed quantitative increases, but so far no satisfactory method of measuring such qualitative changes has been devised.

PROBLEMS

1. Assume the following national income statistics for a given year:

Gross national product	.....	\$300 billion
Personal consumption expenditures	.....	195
Capital consumption expenditures	.....	25
Personal taxes: federal, state and local	.....	30
Indirect business taxes and related liabilities	.....	30
Contributions for social insurance	.....	10
Net interest paid by government	.....	5
Corporate profits and inventory valuation adjustment	.....	45
Dividends	.....	10
Government transfer payments	.....	25

Define, compute, and explain the uses of each of the following national income categories:

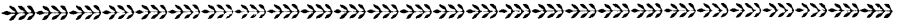
- a. Net national product;
- b. National income;
- c. Personal income;
- d. Disposable personal income;
- e. Personal savings.

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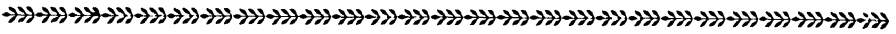
PART II



EXCHANGE

CHAPTER IX

The Money System of Exchange



SPECIALIZED PRODUCTION, upon which the efficiency of our modern economic system so largely depends, necessitates an equally efficient system of exchange. It is folly to specialize in production unless those who specialize can be assured of at least two things: a fairly steady market for their specialized products and a fairly constant supply of the goods they need both in production and in consumption. Both of these conditions are realized, even though imperfectly, in our modern exchange economy. An intricate system of exchange has been built up, including the use of money, credit, and foreign exchange, of transportation to carry goods into the uttermost parts of the world, and of organized markets, through all of which the commodities and services of one group of specialized producers may be exchanged for those of all the rest.

DEVELOPMENT OF THE MONEY SYSTEM OF EXCHANGE FROM BARTER

The complicated money and credit exchange system of today is the product of a long process of evolution. It had its crude beginning in a barter economy. Barter, once the prevailing method of exchange and today familiar through limited experience to almost everyone, consists in the direct exchange of one commodity or service for another. When two students exchange textbooks, or one farmer exchanges a cow for another farmer's horse, the transactions are on a barter basis. Barter, however, has distinct limitations as a method of exchange. Its most obvious limitation arises out of the necessity of finding two parties each of whom wants to offer what he has in exchange for something the other party has. Another limitation arises from the difficulty of agreeing upon an acceptable ratio of exchange. The former may result in prolonged and wasteful search, the latter in unsatisfactory or impossible terms. The farmer who wants to trade a cow for a horse may find another farmer willing to barter something, but if the latter has no horse or wants no cow, a transaction between these two is impossible. Even if two prospective parties to a barter exchange are interested in obtaining each other's goods, a transaction is only possible provided they can trade in even units. If the farmer, who has a horse to trade,

insists that the cow offered in exchange is worth only two thirds as much as the horse, no barter is possible, since it is obviously impracticable to divide the horse. Should it be agreed that six cows for four horses constitute a fair exchange, it might well follow that each party to the barter transaction would have a surplus of horses or cows for which he would have no personal use, and for which he would have to find still other traders.

Such decided limitations in a system of exchange by barter led to the use of commodities that could serve as common denominators of value and media of exchange. Some commodities proved more generally acceptable in exchange than others; someone always wanted them, and everyone wanted them at some time. Very naturally such a commodity or commodities became the customary medium of exchange, or money, of any economic community. In its origin, money was any generally accepted commodity which served as a medium of exchange and measured the values of the goods to be exchanged. General acceptability is still the prime requisite of a satisfactory money commodity. A commodity can only serve effectively as money if people generally desire it so strongly that they will unhesitatingly exchange their goods for it. And the strength of their desire is powerfully reinforced by the knowledge that everyone else will do the same.

THE SELECTION AND SURVIVAL OF METALLIC MONEY

There never has been, and there is not today, desirable as it may seem, any universal form of money. Many commodities, varying with the conditions of time and place, have served as money. The first monetary commodities of any community are apt to be things of beauty or of necessity, which qualities make them widely prized and generally acceptable. Beads, jewels, ivory, and shells, furs and feathers, tea and tobacco, grain and cattle, iron, copper, silver, and gold are common examples of such commodities. The selection of the monetary commodity was a matter neither of accident nor of chance. It was made because at a given time and place a particular commodity best served as a medium of exchange. Gradually, however, the metals, and especially the precious metals, demonstrated their superiority as the monetary commodities of the world. While silver and gold are far from perfect as monetary commodities, they have certain qualities, in addition to their general utility, which make them superior to any other commodities for this use.

One of the chief merits of the precious metals as money is their relative *stability of value*. This quality characterizes gold very much more than silver. Even gold, however, is not perfectly stable in value, ideal as this would be in a commodity that serves as the translator of all other values.

But the value of gold has proved so very much more stable than the value of other commodities that it has functioned better as a monetary standard and measure of value than any other single commodity. If money served merely as a medium of exchange, its stability of value would not be a quality of major importance; a money-holder's gains or losses would be restricted to changes in the value of the money he had on hand, which would normally represent only a minor percentage of his wealth. But money functions not only as a present medium of exchange, but also as a standard of value in future payments. In financial obligations to be discharged perhaps years in the future, it is a matter of very great importance whether the money in which they are to be paid has stability of value or not. If the money which serves as a standard of deferred payments changes in value, one party to a long-term obligation, be it the debtor or the creditor, is bound to suffer loss, while the other party gains. Both the loss and the gain are not deserved. Such injustice is largely avoided if the standard of value itself is fairly stable in value.

The relative stability of value of the precious metals in comparison with other commodities (and such stability, it is worth emphasizing, is much more characteristic of gold than it is of silver) is largely attributable to their *durability*. Unlike most other commodities, gold and silver, except for slow abrasion, are not destroyed by use. The world's supply of gold and silver, consequently, slowly increases, but the annual increase is only a very small percentage of the already existing supply. Small annual production and extreme durability of the stock of precious metals already produced combine to give these generally desired metals what stability of value they have. Durability is an important quality in a standard money commodity, for without it money would not only fluctuate in value but would soon lose all value. Food, tobacco, and iron have served as money in some communities; but in time food spoils, tobacco deteriorates, and iron rusts. Only valuable commodities that do not lose their distinctive qualities with the lapse of time—which means only durable commodities—can serve well as commodity money.

A third quality contributing to the superiority of the precious metals as money is their *portability*. High value for small bulk is essential if a commodity is to serve as pocket money, and also if it is to be cheaply transported in making long-distance payments, either within a country or in foreign lands. Difficulties or cost of handling preclude the monetary use of bulky commodities, such as coal, or ultra-precious commodities, such as diamonds. When cattle and sheep were used as money in primitive economic societies, they had the undoubted advantage of a measure of long-distance portability, supplied by themselves, but at the same time they had other obvious limitations as monetary commodities.

Divisibility is another ideal money-quality possessed by the precious

metals. While every commodity is divisible, only a few such as gold and silver are so perfectly divisible that amounts of equal weight are also equal in value. This perfect divisibility is due to their homogeneity of substance. Even gold and silver are not of uniform quality throughout a given mass as found in their natural state, but they are more homogeneous than any other commodities, and whatever shortcomings they have in this respect are easily corrected in the processes of assaying and refining. Homogeneous in substance and malleable in form, gold and silver are readily divisible into whatever counters of value happen to be desired.

In addition to the distinctive merits just described, gold and silver have the further advantage as monetary commodities of being readily recognized. *Cognizability* implies not only that the commodity having it shall be easily distinguished from all others, but that the quality of the commodity itself shall be easily determinable. If costly and time-consuming examination is necessary in order to distinguish a given commodity from imitations or counterfeits, such a commodity cannot acceptably serve as money. The cognizability of gold is better than that of silver, because the latter is sometimes confused with lead.

GOVERNMENT COINAGE AND PRINTING OF MONEY

Because of their general desirability and the possession of other qualities which an ideal money commodity should have, gold and silver, imperfect as they are, have become the preeminent money commodities of the world. Their selection was a matter of growth and custom rather than of deliberate choice. But a matter of such great importance to the economic life of a people as the use of a standard of value and medium of exchange for all other commodities and services could not long pass without the recognition and sanctions of whatever government existed. From remote times to the present, one of the most precious prerogatives of government has been the power to establish and to regulate the monetary system of the people. In the United States the Constitution grants to Congress the exclusive power "to coin money and to regulate the value thereof." In the exercise of its control over money every modern government selects the commodity which shall serve as the standard of value, with which all other values may be compared; it specifies the amount of this commodity which shall constitute the monetary unit, such as a dollar, in which all other values may be measured; and it establishes a government monopoly of coining and printing money.

Gold had become the standard of value of most of the world until chaotic economic conditions culminating in 1931 compelled Great Britain and ultimately about thirty-five other nations to suspend payments in gold. Prior to this abandonment of gold, only China, among the great nations

of the world, still maintained the silver standard, and the Chinese Government had announced its intention of giving up silver for gold. For other reasons China was forced to abandon silver in 1935.

After the standard money commodity has been adopted, the amount of this commodity which shall serve as the monetary unit of value becomes a matter of legal definition. In the United States and Canada the unit of value is the gold dollar; in Great Britain, the gold sovereign or pound; in France, the gold franc; in Germany, the gold mark; in Japan, the gold yen. All over the world each country has its distinctive monetary unit, although in a few cases the units, whether known by the same or different names, have had identical values in gold. It might greatly facilitate international financial transactions if the nations of the world had not only a common standard but also a common unit of value. The strong inertia of national customs, however, makes the realization of any such dream only a remote possibility. Varying amounts of gold constitute the units of value of different countries, just as we still have unlike units of weight and measure in different countries of the world. In the United States the weight and fineness of the gold dollar remained unchanged from 1837 to 1934. It consisted of 25.8 grains of standard gold, but one tenth of the weight of a standard gold coin was an alloy of copper in order to give the coin greater durability than it would have if it were made of pure gold. Every gold dollar, therefore, contained 23.22 grains of pure gold and 2.58 grains of copper. The weight of the gold dollar was changed by presidential proclamation on January 31, 1934, under powers previously given the President by Congress. The new dollar contains 15.23 grains ($15\frac{5}{21}$) of standard gold or 13.71 grains of pure gold. Its weight is 59.06 per cent of the weight of the old gold dollar. The price of gold at the mints was fixed at \$35 per ounce in contrast to the price of \$20.67 an ounce which had previously prevailed. A dollar is now $\frac{1}{3.5}$ of an ounce of pure gold instead of a trifle under $\frac{1}{20}$ of an ounce of gold. This increase in the dollar price of an ounce of gold, with its corresponding decrease in the weight of a gold dollar, is known, although somewhat inaccurately, as the "devaluation of the dollar."

The coinage of money. For reasons already mentioned the coinage of money is the special privilege of the government. Coinage is the manufacture of metallic money units of certified weight and fineness. If coinage were a private privilege instead of a public function, there would be a confusing variety of private coins. The temptation to debase the coinage (to put less pure metal into a coin than is specified on its face) would prove irresistible to some—in the past some sovereigns have not been above this practice. The coinage of money is properly a government monopoly, which at least ensures uniformity, and should guarantee integrity, of the monetary system.

Government coinage of any metal may be either limited or unlimited.

Under a system of limited coinage the government buys whatever amount of any metal it chooses to coin. Under a system of unlimited or free coinage anyone having a specified minimum amount of a standard metal may take it to a government mint and ask that it be converted into coin. Until 1933 there was unlimited coinage of gold in the United States. The holder of gold bullion had the constant option of selling it in the open market for any desired industrial use, or of exchanging it for gold coin at the mint.

Sometimes the government performs the service of converting standard gold bullion into coin without any charge to the individual presenting it; in such a case coinage is said to be gratuitous. Gold coinage was gratuitous in the United States after 1875. If the gold brought to the United States mint was not standard gold, but required assaying and refining and the addition of the prescribed copper alloy to make it standard, the government charged for its industrial and commercial services in these respects. Such charges, however, were not for coinage, which was still gratuitous.

Some governments make a charge for converting standard metal into coin; such charges may take the form either of brassage or of seigniorage. Brassage is a charge just sufficient to cover the actual cost of coinage. It costs the government a good deal of money to maintain and operate its mints. Brassage represents an attempt to make each output of coin carry its share of this expense.

Seigniorage, on the contrary, is a charge sufficient to yield the government a profit on its coinage operations. It may easily be collected by withholding for the benefit of the government part of the bullion brought to the mint for coinage. The face value of the coins made from the bullion brought to the mint is greater than the value of the bullion by the amount of the seigniorage. The theory underlying seigniorage is that it is possible for the government to maintain a difference between the face value of the standard coin and the value of the bullion which it contains. As long as this difference is slight and the coins circulate only in domestic trade, it is not impossible. In foreign trade, however, face value signifies nothing, no matter whose face adorns the coin, unless it precisely equals the bullion value of the coin. Even in domestic trade, where seigniorage is charged for the coinage of standard money, there is an almost irresistible tendency for prices to rise to offset the lightening or cheapening of the standard coins. In the practice of some monarchs, notably Henry VIII of England, and Philip IV and Louis XIV of France, seigniorage was shamefully abused. Instead of restricting seigniorage to a slight charge for the coinage of new metal, these monarchs sought to replenish the empty royal treasury by making a profit on the recoinage of the metallic money already in circulation. Old coins were melted down and new coins bearing the same face values were issued in their stead. The new coins, however, were either lighter in weight or, if their weight was the same as that of the old coins

as a concession to custom, they contained a large amount of alloy. Regardless of their face value and of the likeness of the ruler or other seignior stamped upon them, they were cheaper money because they contained a smaller amount of the precious standard metal. This reprehensible abuse of seigniorage meant the debasing of the currency, the rise of prices because they were expressed in cheaper money units, and the general unsettlement of economic life. The government monopoly of the coinage of standard metal is no longer considered as a possible source of profit but rather as a necessary public function for the promotion of uniformity in our price economy and of integrity in our monetary system. Either gratuitous coinage or brassage has been the prevalent practice of modern governments with reference to the coinage of standard metal.

The engraving and printing of money. Because every currency system contains paper money in addition to coin, and usually as the principal element of the currency, the engraving and printing of paper money is a government monopoly no less than the coinage of money. Again the purpose of a government monopoly is to secure uniformity and integrity of the currency. Every known safeguard is set up in the selection of the paper, the designing of forms, the engraving and printing of the currency, to prevent successful counterfeiting. In the United States some kinds of paper money have been or are the direct obligations of privately owned banks. All forms of paper money, however, in the interest of safety, are prepared by the Bureau of Engraving and Printing of the United States Treasury.

STANDARD MONEY

Forms of standard money. Many different metallic units and pieces of paper are found in the monetary systems of the world. But in every country there is one form of money which sets the standard for all the rest. The money system of the United States, for example, at present still includes eleven different kinds of money, although three are in process of retirement. Gold is held in the United States Treasury; silver, nickel, and copper coins are in use, in addition to seven forms of paper money: gold certificates, silver certificates, United States notes, United States Treasury notes of 1890, national bank-notes, federal reserve bank-notes, and federal reserve notes. United States Treasury notes of 1890 are nearly all retired, and national bank-notes and federal reserve bank-notes have been called for retirement. Of these eleven varieties, however, only gold is standard money; the rest are forms of fiduciary money. Standard money is money which measures all other values—it is a common denominator to which all other values may be reduced and in terms of which they may be expressed. Usually a single commodity, like gold, which has important non-monetary as well as monetary uses, serves as the standard money. At times an attempt

has been made to have two commodities, gold and silver, jointly serve as standard money. Occasionally, by force of circumstances, paper money has for a time had to serve as the standard because specie was not available. Normally, however, standard money is a quantity of metal (usually gold) of specified weight and fineness, the bullion value of which exactly equals its value as money. Should the government stamp be effaced from standard money coins, they would have the same value as bullion to be used in the industrial arts that they had as coins. Standard money furnishes the unit in which the value of all forms of fiduciary money is expressed, and with which fiduciary money is most easily kept at par as long as the two are freely interchangeable.

Technically, a country is on the gold standard when its unit of value, such as the dollar, consists of a fixed quantity of gold whose value is determined in an open gold market. In practice this means that gold can be sold without restrictions in either the industrial markets or at the mints, that it is free to move into or out of a country, and that the paper money of a gold-standard country is, directly or indirectly, convertible into gold. In the past, gold as the standard money of the world has enjoyed the privilege of free or unlimited coinage and has been full legal tender in the discharge of all money obligations. The essence of the gold standard consists in furnishing a uniform and effective standard of value measured by a designated quantity of gold.

The most familiar form of the gold standard is the *gold coin or specie standard* which was maintained in the United States prior to the spring of 1933. Gold was freely coined; there were no restrictions on its movements to the mints or into the industrial arts; it could be freely shipped abroad without any permit from the United States Treasury; and all forms of fiduciary money were kept at par with gold because in practice they were exchangeable for gold.

Another form of the gold standard is the *gold bullion standard* under which there are no circulating gold coins at all. Gold is converted into gold bars of designated amount, such as 400 ounces under the British practice from 1925 to 1931. Except for having gold coins circulate as a medium of exchange (such circulation had been declining in importance in recent years) the gold bullion standard performs all the functions of the gold specie standard. Moreover it economizes the use of gold. A sub-commission of the World Economic Conference meeting in London in 1933 declared: "Under modern conditions monetary gold is required not for internal circulation, but as a reserve against central bank liabilities and primarily to meet external demands for payments caused by some disequilibrium on foreign account. It is consequently undesirable to put gold coins or gold certificates into internal circulation." Since January 31, 1934, the United States has been on a limited gold bullion standard in its inter-

national dealings. Under the provisions of the Gold Reserve Act of January 30, 1934, and subsequent regulations of the Treasury, gold bullion may be exported and also imported and sold to the Treasury. Gold moves fairly freely in the settlement of international accounts. Our currency, however, is not convertible into gold bullion for domestic use. If it were, we should be on a full gold bullion standard. Many monetary authorities regard the establishment of a full gold bullion standard as highly desirable in the further development of our monetary system.

Some nations have found it difficult to establish the full gold standard in spite of their preference for it. The transition from a silver to a gold standard is sometimes an expensive undertaking, because the necessary reserves of gold must first be obtained. Certain European countries found it impossible to return to the gold standard at once after the financial upheaval that followed the World War of 1914-1918. To meet such situations a modification of the gold standard, known as the *gold-exchange standard*, was developed. If a country operates on a gold-exchange standard, its currency is redeemable in bills of exchange or drafts themselves payable in gold in some foreign country.¹ In order to offer such foreign bills of exchange in the redemption of its own currency, a government must maintain gold reserves in the country on which the bills of exchange are drawn. The advantage of such a system is that the gold reserves do not need to be as large as if a full gold standard were maintained. Neither is it necessary for the government to displace the familiar silver currency, or to put gold coins into actual circulation. India and the Philippines are among the countries which used the gold-exchange standard, their gold credits having been in England and in the United States respectively.

The value of standard money. The value of the standard commodity money, which is almost invariably gold, like that of any other commodity, is determined by the interaction of the forces of demand and supply in the market. Any good has value if the supply of it is limited in relation to the demand for it. What gives gold value is the effective demand for it for industrial as well as for monetary uses, combined with the scarcity of the yellow metal. The use of gold for ornaments, rings, watches, pens, dental fillings, and the like is in constant competition with its use for money. Together the non-monetary and monetary demand for gold absorbs all the gold that is produced. The annual production of gold, on the other hand, is small. In 1940, for example, the world output of gold outside Russia, the highest in history, approximately equalled \$1,297,349,000.² It has been estimated that after thousands of years of gold-digging, Europe at the time Columbus discovered America possessed only about \$170,000,000 worth of gold (present dollars) in the form of coin and com-

¹ For a description of bills of exchange or drafts, cf. pp. 255-260.

² *Federal Reserve Bulletin*, XXXI (1945), p. 959.

modities. The total world production of gold from 1493 to the close of 1949, on the other hand, amounted to about \$58,000,000,000. Of this amount under 60 per cent is today a part of the world's monetary gold supply; the rest has gone into the industrial arts or has been lost. The entire monetary gold supply of the world could easily be stored in many a bank lobby; it would make not more than a forty-foot cube.

The value of standard gold bullion and the value of gold coin for equal amounts of gold are the same. Wherever there is free coinage of gold, gold bullion may be taken to the mint and exchanged for gold coin. Gold coin, conversely, can be melted down, taken to the industrial market, and sold as gold bullion. There is neither gain nor loss on either transaction. Why must the value of a given amount of gold coin always equal the value of the same amount of gold bullion and vice versa? The answer lies in their interchangeability. If for some hypothetical reason the value of gold coin should become greater than the value of gold bullion, bullion would seek the mints to take advantage of its greater value there. The effects of this movement would be to decrease the market supply of gold bullion and to increase the mint supply of gold coin, which would result in a higher value for gold bullion and a lower value for gold coin. It would only be a question of time when such a movement would restore the parity of gold values in the bullion market and at the mint. For the same reason, if the value of gold bullion should temporarily become greater than the value of the gold coin that can be made from it, the movement of gold coins would be into the bullion markets, where they could be melted without loss. The effects of this movement would be to decrease the supply of gold coin and to increase the market supply of gold bullion, which would soon result in a higher value for gold coin and a lower value for gold bullion. Thus again, the assumed lack of parity between the value of gold as bullion and its value as coin would tend at once to correct itself. On account of the unrestricted alternative uses of gold in the industrial arts and for monetary purposes, the value of standard gold money equals the value of the bullion which it contains, and the value of a quantity of bullion equals the value of the coin into which it can be made.

The functions of standard money. The primary and principal functions of money are to serve as a *medium of exchange* and *standard of value*. These two basic functions of money are intimately related. As a universal medium of exchange, money overcomes the difficulties of barter. It enables the owner of a good, which he desires to exchange, to sell it for money, and then at his own pleasure to buy whatever goods he can with the money so acquired. Money is precisely a *medium* of exchange, a means for the accomplishment of a desired end.

Money serves so acceptably as a medium of exchange because at the same time it functions as a standard of value. In every exchange transaction

the question arises, how much of a good is wanted or offered in exchange for a given good? While the price of any commodity, like a watch, may be expressed in fractions or units of all other commodities likely to be exchanged for it, it is incalculably more convenient to express its price in terms of a generally accepted medium of exchange. Standard money is the measuring rod of price, the common denominator in which the prices of all other goods are expressed. The gold standard for measuring the values of other goods is not perfect, because the value of gold, like the value of everything else, is subject to change over periods of time. But it is by far the most stable commodity standard the world has yet tried. While all forms of money serve as a medium of exchange, only standard money functions as the measure of value. When values are expressed in fiduciary money, it is in the confidence that fiduciary money is exchangeable for standard money or in some other way kept at par with it. Whenever this has proved not to be the case, standard money prices and prices in fiduciary money, instead of being identical, have tended to diverge sharply, the latter being the higher prices.

Standard money serves not only as a standard of value in present transactions, but it functions also as a *standard of deferred payments*. Its use in this respect has been of increasing importance throughout the development of our credit system of exchange. Most business transactions today are concluded on a credit rather than a cash payment basis, which means that they call for future payments. When goods are sold on credit, or money is lent at interest to be repaid on some future date, the value of the standard in which such future deferred payments are to be made is a matter of very great importance to both debtor and creditor. An ideal standard of deferred payments would itself be perfectly stable in value. The debtor must always pay the number of dollars, or other units of value, agreed upon in the original credit transaction. These dollars, however, may have a very different purchasing power at the time of payment from what they had at the time the obligation was incurred. Naturally, the debtor does not wish to pay back more purchasing power than agreed upon, nor the creditor to receive less. Actually, debtors often pay more, and at other times, creditors often receive less. There is no perfect standard of deferred payments in use anywhere.

Standard money may also function as a *store of value*. It was once very much more common than it is today for people to hoard money, particularly the precious metals, in places they hoped would be secure against the depredations of private thieves and the misappropriations of avaricious public officials. But since the development of our banking system and the multiplication of investment opportunities, there has been comparatively little hoarding. What hoarding took place in the United States during the depression of the thirties was not so much hoarding of gold (though some

of this occurred) as of currency, largely induced by fear of bank failures. Hoarded money is idle wealth, which yields no income; it has only whatever value the hoard possesses. The typical stores of value today are found not in hoarded money, but in income-producing investments. And yet to some degree money still functions as a store of value. Money on hand or deposited in a bank is at least temporarily a store of value for its owner.

In an exchange system in which credit and fiduciary money are as widely used as they are today, not the least important of the functions of gold is to serve as a *reserve supporting bank deposits and note circulation*.³ Gold reserves provide the thermostatic control over the expansion of credit and currency. It is good banking practice to require a minimum cash reserve in gold or other lawful money against deposits in order to help maintain the liquidity of banks. Federal reserve banks in the United States, for example, must carry a reserve of 25 per cent in gold or other lawful money against the deposits made with them by their member banks. They must also maintain a 25 per cent gold reserve against the circulating federal reserve notes issued through them. Standard commodity money has an important function to discharge in helping to give strength and stability to a country's credit and fiduciary money system. It furnishes a necessary anchor for paper currency and credit.

In the monetary economy of the United States gold performs all the functions that it ever did with the single exception that it no longer circulates as coin. Legally, gold is still our standard of value; only the size of the unit of value was changed in 1934 when the present content of 13.71 grains of pure gold per dollar was established. Since our fiduciary paper currency however, is no longer convertible into gold, our official standard of value may be described as operating through "remote control" only. But it would be called upon to operate if our paper-money system broke down. Although gold no longer serves as a domestic means of payment it functions as a highly coveted means of international exchange. As a result of the nationalization of gold only the government can now use gold as a storehouse of value. Gold also still serves as anchorage for both our paper currency and credit, and furnishes some restraint upon the possible folly of man in issuing excessive amounts of paper currency.

From the foregoing discussion of the functions of money it is evident that money is the language of the modern business world. Commodities and services of all kinds are bought and sold for money. The economic value of all goods is measured and expressed in terms of money. All financial records are kept in units of money. Standard money comes closer to being a universally intelligible language than any other "tongue" of man.

³ This subject is discussed in the next chapter (pp. 283-284).

FIDUCIARY MONEY

Forms of fiduciary money. Fiduciary money, as its name implies, is money which people accept on faith in the confident expectation that others will do the same. Of the forms of money in circulation in the United States all must today be classified as fiduciary money. A simple, even if not accurate, classification of the fiduciary money of the United States may be represented as follows:

FIDUCIARY MONEY OF THE UNITED STATES

- I. Coined money
 - A. Silver dollars and subsidiary silver
 - B. Nickel five-cent pieces
 - C. Bronze cents (95 per cent copper)
- II. Paper money
 - A. Certificates
 1. Gold certificates (Use restricted to federal reserve banks)
 2. Silver certificates
 - B. Notes
 1. Government notes
 - a. United States notes ("greenbacks")
 - b. United States Treasury notes of 1890 (Called for redemption but some still outstanding)
 2. Bank-notes
 - a. Federal reserve bank-notes (Called for redemption but some still outstanding)
 - b. Federal reserve notes (Issued by Board of Governors through federal reserve banks)
 - c. National bank-notes (Called for redemption but some still outstanding)

Coins. Present coins are fiduciary money, because the bullion value of the metal which they contain is less than the money value stamped upon them. Silver dollars are sometimes still described as "standard silver dollars," but the expression is anachronistic, suggesting the time when not only gold but also silver was standard money. When Congress in 1837 established a ratio of 16:1 (actually 15.988:1) between silver and gold, it made 371.25 grains of pure silver one dollar because 23.22 grains of pure gold were defined as the gold dollar. Since there are 480 grains in a troy ounce, one standard silver dollar contains $0.7734+$ of an ounce of pure silver ($371.25 \div 480 = 0.7734$). Because $0.7734+$ of an ounce of silver equals \$1, it follows that an ounce of silver equals \$1.2929 ($1.00 \div 0.7734 = \1.2929). Late in 1939, however, the price of silver in the markets of the world sank to the lowest figure recorded in modern times — 34.75 cents per fine ounce (20.56 cents in terms of the old dollar). This wide disparity between the commodity and nominal monetary values of silver would flood the mints with silver were it not for the fact that the govern

ment limits the amount of silver that it buys and coins and, when it buys, it buys at the market price or at such higher price as it chooses to offer. At the low price of 1939, therefore, the amount of pure silver contained in a silver dollar had a market value of only 26.87 cents (15.90 cents measured in the old dollar). It is apparent that our silver dollar is very much of a fiduciary coin.

Subsidiary silver coins—half-dollars, quarter-dollars, and dimes—contain even less silver proportionately than a silver dollar. The amount of pure silver in ten silver dimes, for instance, is less than the amount of pure silver in a silver dollar. This lightening of subsidiary silver coins goes back to a time in our history when the commodity value of a given quantity of silver and the amount of money that could be coined from it were nearly, but not exactly, the same. In 1834 Congress declared that at the mints of the United States sixteen parts of silver should be considered equivalent in value to one part of gold. At the time, this was also approximately the ratio of the market values of silver and gold. Soon thereafter, however, the market value of silver rose, so that it no longer required as many as sixteen parts of silver to equal in value one part of gold. Silver was undervalued at the mint. Consequently, little or no silver was brought to the mint, and silver coins themselves were melted and used in the industrial arts. The result was that the country was embarrassed by a lack of small change. To guard against the recurrence of any such inconvenience in the future, Congress finally in 1853 passed a law which provided for abandoning the unlimited coinage of subsidiary silver and which reduced the amount of pure silver in these coins by 6.9 per cent so that they have never since disappeared from circulation. Nickel and bronze coins, which together with silver coins are sometimes called token coins, are also lightweight fiduciary coins to ensure their constant use as money.

Paper money certificates. An important element in the fiduciary money of the United States consists of paper money certificates, both gold and silver. A gold certificate states that there have been deposited in the Treasury of the United States the number of dollars in gold bullion printed on the face of the certificate. Prior to April 20, 1933, the gold was payable to the bearer on demand; since that date private individuals possessing the certificates have been compelled to present them to the Treasury for redemption in other lawful money. Only federal reserve banks are allowed to hold them against gold deposited in the treasury. The gold certificates that are still in circulation, which means that they are outside the Treasury and federal reserve banks, have either been lost or are still being hoarded. A silver certificate is identical in form, but the deposit and promised payments are in silver. Gold and silver certificates are a device for enabling gold and silver to serve as money by proxy. They have frequently been described as warehouse receipts for bullion or coin deposited in the Treas-

ury. Gold and silver certificates have the undoubted merits of convenience and economy. They are convenient, because it is much easier and safer to carry them than equivalent amounts of coin, especially when large amounts are involved. They are economical, because when gold and silver lie in the Treasury there is no abrasion such as inevitably occurs in circulation.

Government notes. Circulating notes, whether issued by the government or by banks, are forms of credit money. They are freely accepted as long as people have faith in the ability and integrity of the issuing institutions to redeem them in something of value equivalent to the amounts promised in the notes. Government notes are non-interest-bearing promissory notes, in which the government promises to pay the bearers the sums named in the notes. To ensure its ability to do so, it is usual for the government to maintain a partial gold or other lawful money reserve. United States notes, popularly called "greenbacks" when first issued during the Civil War period, illustrate government notes circulating as fiduciary money. United States notes are promises to pay by the United States Government. In all, about \$450,000,000 worth of such notes were issued during the Civil War period, some of them being subsequently retired. By act of Congress passed in 1878, however, the notes then outstanding, amounting to \$346,681,016, were made a permanent part of the fiduciary money of the United States. This act requires that the notes be reissued after they have been presented for redemption in order not to reduce the quantity of money in circulation. The so-called Treasury notes of 1890 furnish another illustration of government notes circulating as money. They were originally issued under authority of the Sherman Silver Purchase Act of 1890 to pay for silver bought by the government. Treasury notes amounting to over \$155,000,000 were issued before the act authorizing them was repealed in 1893. These notes are canceled and retired when presented for redemption, but an amount approximating \$1,000,000 is still in circulation. Some of this is doubtless being hoarded by collectors of rare money, and some has been lost or otherwise destroyed.

Bank-notes. Not only the government but also certain banks of issue contribute their notes to the fiduciary money system of the country. In the United States national banks issued their own circulating notes from 1863 to 1935, securing them by the deposit of an equal amount of United States Government bonds. Today the only banks of issue are the federal reserve banks, which are empowered to issue or are the medium of issue of both the federal reserve bank-notes and the federal reserve notes. Federal reserve bank-notes are the direct promises to pay of the federal reserve bank that issues them and so far have functioned largely as emergency currency. The power to issue federal reserve bank notes was terminated by act of Congress approved June 12, 1945. Much more important than these are the federal reserve notes. They are both the largest and most useful

form of fiduciary money in circulation in the United States. Nominally, they are issued by the United States Government; actually, however, they are issued through the agency of the federal reserve banks. The initiative for issuing them is not taken by the government, as in the case of all government notes, but rather by the federal reserve banks themselves. Practically, the federal reserve notes, as far as issuance, security, and retirement are concerned, are bank, not government, notes.

The accompanying table ⁴ of the kinds of money in circulation in the United States on May 31, 1950, shows the relative importance of each of the preceding forms.

KINDS OF MONEY IN CIRCULATION

May 31, 1950

(Money outside Treasury and federal reserve banks)

Gold certificates	\$ 41,000,000
Federal reserve notes	22,694,000,000
Treasury currency—total	4,355,000,000
Standard silver dollars	169,000,000
Silver certificates and Treasury notes of 1890	2,180,000,000
Subsidiary silver coin	961,000,000
Minor coin	360,000,000
United States notes	322,000,000
Federal reserve bank notes	276,000,000
National bank notes	87,000,000
Total	\$27,090,000,000

The value of fiduciary money. The value of fiduciary money, unlike the value of standard money, is not determined by the value of the substance from which it is made. The value stamped or printed upon its face is higher than its commodity value, which in the case of paper money is negligible. With so many forms of fiduciary money in circulation in the United States, the question naturally arises: how is it possible to maintain uniform prices when so many different kinds of money are in use? The answer was simple as long as standard gold money either circulated or was available for redemption: all forms of fiduciary money were directly or indirectly exchangeable for gold and so were freely interchangeable. Gold has universal acceptability. But in the United States today, as well as in most other countries, fiduciary currency is not convertible into gold. What then supports its value? For one thing, the amount of such currency is still limited. For another, the greater part of it is still anchored to gold, since the customary gold reserves are maintained against it in the United

⁴ *Federal Reserve Bulletin*, Vol. 36 (1950), p. 848. National bank-notes and federal reserve bank-notes were called for retirement in 1935. Those still in circulation have so far failed to find their way back to the Treasury for redemption.

States Treasury. What is more, people have confidence that the currency will not be allowed to depreciate unduly, and that ultimately it will again be convertible into gold, if necessary, to maintain its parity with the standard unit of value. The Gold Standard Act of 1900 directs the Secretary of the Treasury to maintain the parity of all forms of money with gold. The Gold Reserve Act of January 30, 1934, further provides "That gold certificates owned by the federal reserve banks shall be redeemed at such times and in such amounts as, in the judgment of the Secretary of the Treasury, are necessary to maintain the equal purchasing power of every kind of currency of the United States."

Specific security supporting each kind of fiduciary money. Whenever a government is unable to redeem its fiduciary money in gold, or chooses not to do so, the specific security supporting each form of fiduciary money may become of very great importance. It operates as a limiting factor in the issuance of such money. Silver dollars are unsupported by any specific reserve. Other subsidiary coins are legally exchangeable for certain forms of "lawful money," namely, silver dollars, silver certificates, United States notes, and Treasury notes of 1890, but there is also no specific reserve against these outstanding coins. ("Lawful money" here means coin or paper currency issued by the Treasury, rather than the paper currency issued by the federal reserve banks or any other bank.) Gold and silver certificates are supported dollar for dollar by equivalent amounts of gold and silver. United States notes, being the direct obligations of the United States Government, are supported by the general credit of the government. In addition, however, by the Gold Standard Act of 1900 they are secured by a specific gold reserve amounting to \$150,000,000. Since there is a constant amount of them outstanding (\$346,681,016), for they must again be injected into the circulation after they have been redeemed, the reserve backing them is partial, not complete. The small amount of Treasury notes of 1890 still outstanding is also supported by the gold fund securing United States notes and in addition is backed by an exactly equal number of silver dollars "earmarked" to replace them directly or in the form of silver certificates whenever they are presented for payment. When national bank-notes were in circulation, they were secured, dollar for dollar, by the deposit with the Treasury of eligible United States bonds. The possible failure of a national bank accordingly was not a source of worry to the holders of its notes as long as the credit of the United States Government was good. Federal reserve bank-notes, when first issued, were like the national bank-notes secured dollar for dollar by eligible United States bonds. Under the emergency banking legislation of 1933, they also were supported by sound promissory notes, commercial bills of exchange, and bankers' acceptances. Finally, the federal reserve notes are supported by collateral security amounting to 100 per cent of the value

of the notes issued. A minimum of 25 per cent of this security must be in gold certificates; the remaining 75 per cent may be in gold certificates, commercial paper or direct obligations of the United States Government.⁵

Legal-tender qualities of fiduciary money. What legal attributes any form of money shall have is a matter of legal definition. Legal-tender money is money which the law compels a creditor to receive at par in the settlement of a debt, unless the contract specifically names the non-monetary medium in which it shall be paid. No legal-tender law abridges the contractual rights of debtor and creditor to specify payments in kind. When a particular form of money, however, has been made legal tender by legislative act, it thereafter is lawful money for the discharge of obligations. A creditor's refusal to accept it discharges the debtor from the payment of interest accruing subsequent to the tender of the money which the law authorizes him to offer. It does not discharge him from the obligation of the debt itself. The purpose in exactly defining what money shall be legal tender, and whether for full or limited amounts, is to make impossible any misunderstanding between debtor and creditor concerning the means of payment. Most financial contracts merely state that payment shall be made in the monetary unit of the country concerned. Usually it has been a matter of indifference what kind of money was used, because all were convertible into gold. At times, however, when it is necessary to suspend payments in gold, as it was in the United States during the Civil War period and in Europe as well as the United States during and after the period of the First World War, what constitutes legal tender may be a matter of great concern.

The legal-tender quality and the value of money are sometimes confused. For a government to declare a form of money legal tender is not *ipso facto* to give it value. Russian paper rubles and German paper marks became virtually worthless in spite of the fact that they were full legal

⁵ Commercial paper includes the notes, drafts or bills of exchange, and acceptances which arise out of actual commercial transactions. They are described more fully in the following chapter (p. 255). As a result of the scarcity of eligible commercial paper during the business depression of the thirties, federal reserve notes were sometimes backed 75 per cent or more by gold. This greatly reduced the supply of "free gold" in this country which could be used, for example, to meet gold withdrawals from the United States by foreign countries. To remedy this situation Congress, in the winter of 1932, adopted the Glass-Steagall Amendment to the Federal Reserve Act, which permitted federal reserve banks, subject to the approval of the Federal Reserve Board, to deposit direct obligations of the United States Government in lieu of the maximum 60 per cent commercial paper backing for federal reserve notes, which was then required. Since the lack of commercial paper was considered temporary, this provision of the Glass-Steagall Act was made to expire March 3, 1933, but was subsequently extended until 1945. The authority to use direct obligations of the United States Government as collateral security for federal reserve notes was extended indefinitely by Act of Congress approved June 12, 1945.

tender. To declare money legal tender will help to promote its circulation, but its value depends upon all the forces affecting the demand for it and the supply of it.

In the United States prior to May 12, 1933, some of our money was full legal tender for the discharge of debts between private parties, namely, gold, gold certificates, United States notes, Treasury notes of 1890, and silver dollars. Subsidiary silver coins were legal tender for amounts not exceeding ten dollars, and minor coins of nickel and bronze for amounts not in excess of twenty-five cents. Silver certificates, national bank-notes, federal reserve bank-notes, and federal reserve notes were not legal tender at all. All this has now been changed and all our metallic and paper money is *full legal tender* for the discharge of both private and public obligations.⁶

Uses and abuses of fiduciary money. Fiduciary money is a most useful part of the monetary system of any country provided it is generally acceptable at par with standard money. Its general acceptability depends upon the confidence of people in the integrity of the government and the banks which issue it, and upon the ability of these institutions to keep it at par with gold or other standard money. The advantages in using fiduciary money include its convenience, its economy in conserving gold, and its flexibility in providing whatever supply of money is needed.

The issue of fiduciary money, however, is easily abused. The perennial danger in its use, particularly in the use of paper money, whether inconvertible or based on slender reserves, is the danger of inflation—the issue of more of it than is normally needed to do business. Confronted by extraordinary fiscal needs, virtually every government at some time inflated its fiduciary money circulation as a supplement to and frequently as a substitute for taxation. It injected its own legal-tender notes or the notes of a central bank into the circulation, with the usual results of cheapening the fiduciary money and raising prices. With every rise in prices the government, no less than private individuals, found it harder to pay for what it wanted. The only alternative to taxes was more inflation. Every rise in prices seemed to necessitate more issues of money, and the new issues of money raised prices still further. Ultimately, inflation finished its treacherous course when the fiduciary money issued became practically, if not absolutely, worthless.

Financial history abounds in illustrations of the dangers of using inconvertible paper money or fiduciary money based upon very inadequate reserves. Such was the experience of the American Colonies, both individually and united under the Continental Congress. To wage wars against

⁶ Cf. Thomas Amendment to the Agricultural Adjustment Act (Public No. 10, 73d Congress, approved May 12, 1933) and Joint Resolution to Assure Uniform Value to the Coins and Currencies of the United States (Public Resolution No. 10, 73d Congress, approved June 5, 1933).

the Indians, and later to fight the Revolutionary War, the Colonies issued their circulating notes. Since taxes were not levied to redeem these notes, their value fell as more of them were issued, and as confidence waned in the ability of the colonial governments to redeem them. The Continental Congress, indeed, had no direct power to levy taxes, but had to depend upon the Colonies, whose creation it was, for such funds. The paper money of the Continental Congress, issued to defray the expenses of war, at last became practically worthless, though after the establishment of the federal government some was redeemed at the rate of one cent per dollar. From that day to this it has been said of a thing having little or no value "It isn't worth a continental." The experience of the Colonies was repeated during the Civil War by the Confederate States of America, whose redundant paper-money obligations were never redeemed. The first large-scale exercise of the power of the United States Government to issue paper money also brought disaster in its wake. The Civil War furnished the occasion. Taxes proved inadequate to meet the expenses of the government. The government borrowed what it could. So great were its needs for money, however, that beginning in 1862 Congress authorized the issue of legal-tender United States notes (greenbacks) which the government put into circulation. The total issue of greenbacks amounted to about \$450,000,000. Whatever the public expectation with reference to the ultimate redemption of these notes may have been, the fact is that from 1862 to 1879 the government suspended specie payments. During this period the greenbacks were irredeemable. As was to be expected, their value sank. Indeed, their purchasing power fluctuated with the fortunes of the Union arms, which affected the chances of their ultimate redemption in full. During the Civil War two sets of prices prevailed: greenback prices and prices in gold. Since greenbacks were the cheaper money for the settlement of obligations, they drove the dearer money, gold, out of circulation.⁷ It was not until shortly before January 1, 1879, the date of the resumption of specie payments, that the greenback dollar again rose to parity with gold. At one time in 1864 its value was only slightly more than one third the value of a gold dollar. Since the greenbacks led to severe price inflation, but were ultimately all redeemed at par, the cost of the Civil War to the government was greatly increased as a result of their use.

Most tragic of all the abuses of fiduciary money was the practice of European countries during and after the First World War. The war was the cause of the tragedy. When a nation is at war it needs unlimited con-

⁷ This principle that "the cheaper money drives the dearer out of circulation" is known as Gresham's law. It is named for Sir Thomas Gresham, who explained the principle to Queen Elizabeth when she was mystified by the disappearance of good full-weight coins and the persistent retention in circulation of debased coins.

trol over men and materials. Men may be drafted; materials must usually be bought. To buy them requires immediate purchasing power. Taxes convey purchasing power to the government, but too slowly to make it practical to finance a war out of taxes alone. The usual recourse is to borrow from the banks and the general public in the expectation of paying the loans out of taxes later. But for most European governments in the First World War neither taxes nor ordinary loans sufficed to pay current war bills. Consequently, they felt obliged to resort to note issues: directly, through the issue of legal-tender government notes; indirectly, through the issue of notes by central banks which the governments controlled. Whatever the method of note issue adopted, the results were the same: an accelerating increase in notes issued, which in some cases developed into grotesque inflation; a rapid decline in the purchasing power of each unit of note issue or, conversely, a rapid advance of prices to hitherto undreamed-of levels. Specie payments were suspended early in the war by nearly every European country.

A few illustrations will show some of the absurdities of the greatest inflation of fiduciary money in the world's history. Austria, Hungary, Poland, Russia, and Germany were the greatest offenders against sound monetary policy, and in the long run the greatest sufferers. At the outbreak of the war Russia's paper currency consisted of about 1,775,000,000 rubles,⁸ mostly in the form of government notes. At the peak of the inflation of her currency in February, 1924, Russia had issued government notes amounting to 866 quadrillion rubles (866,000,000,000,000,000). Her price level at the close of 1923 was 3,781,000,000 times as high as it had been in 1913. Finally, early in 1924 the Soviet government ceased issuing any more paper notes and gathered up the worthless ruble rubbish by offering one gold ruble for 50 billion Soviet paper rubles.⁹ The German currency in 1913 included just under 3 billion paper marks.¹⁰ When Germany's orgy of inflation came to an inglorious end in 1924, it was found that she had issued more than 1½ sextillion paper marks. (In September, 1924, the amount stood at 1,520,510,653,712,000,000,000 marks in the form of notes of the Reichsbank.)¹¹ Germany's wholesale price level at the close of 1923 was about 1,261,560,000,000 times as high as it had been in 1913.¹² After that during the remaining months of inflation it became even more

⁸ A pre-war ruble was equal to 51.4 cents.

⁹ For above figures on Russian inflation cf. League of Nations, *Monthly Bulletin of Statistics*, V, No. 12 (Dec., 1924), p. 27; *Memorandum on Currency and Central Banks, 1913-1924* (Geneva, 1925), II, p. 140, I, p. 199.

¹⁰ Both the pre-war and post-war German mark equaled 23.8 cents on the basis of the old dollar; 40.33 cents on the basis of the new.

¹¹ League of Nations, *Monthly Bulletin of Statistics*, V, No. 12 (December, 1924), p. 27.

¹² League of Nations, *Memorandum on Currency and Central Banks, 1913-1924* (Geneva, 1925), I, p. 194.

meaningless, and had further to be expressed in magnitudes only useful in measuring celestial distances. The resulting financial chaos could not long be endured. Germany, too, had to make a fresh start. She withdrew the paper marks from circulation by "redeeming" them at the ratio of 1 trillion paper marks for 1 gold mark. The fates of Russia and Germany also befell Austria, Hungary, and Poland, the first two of which were financially rehabilitated through the aid of the League of Nations. Great Britain, France, Italy, and other European countries escaped similar disasters because they were able to stop the inflationary process before it was too late. It had gone so far in France and Italy, however, that neither country was able to restore its pre-war unit of value; the French franc was devalued to 3.92 cents, and the Italian lira to 5.26 cents, as compared with a pre-war parity in both cases of 19.3 cents on the basis of our old gold dollar.

During the Second World War, when financial operations were on a far larger scale, inflation, fortunately, was far better controlled. Experience had proved a good teacher. Belgium, Greece, Hungary, France, and China, however, were notable sufferers from runaway inflation. China in 1937 had a money supply of 3,600,000,000 Chinese national dollars. By December, 1947, this number had increased to 55,000,000,000,000 Chinese dollars. The wholesale price index, with prices in 1937 as the base of 100, rose to 2,617,781 in 1947. Such inflation marked the ruin of China's monetary system.

BIMETALLISM AND THE PRESENT SILVER PURCHASE POLICY OF THE UNITED STATES

For more than a century the United States, along with many other countries, sought to maintain not a single but a double standard of value, the so-called bimetallic standard of value. Since the integrity and stability of the standard of value affect every economic relationship, it is not surprising that questions concerning the standard constitute one of the most basic inquiries of economic theory and have been one of the most perplexing issues of practical politics.

The argument for bimetallism. Bimetallism, as its name implies, is a monetary system in which two metals, gold and silver, serve concurrently as the standard of value. In contrast to monometallism it establishes a double rather than a single standard. Under bimetallism the unit of value, such as the dollar, is measured interchangeably in a specified number of grains of gold or of silver. This mint or coinage ratio is fixed by statute. The mint ratio is a ratio of weights; a mint ratio of 16:1, for example, means that the unit of value shall consist interchangeably of a specified amount of gold or of sixteen times this amount of silver. If 23.22 grains of

pure gold constitute the dollar, then under such an assumed bimetallic system 16 times 23.22 grains or 371.25 grains¹³ of pure silver also constitute the dollar. A legislative body can fix the mint or coinage ratio because this is a ratio of selected weights; what it cannot do is to fix the market ratio, for this is a ratio of values. The market ratio of silver to gold, a ratio of values, is determined by all the forces that affect the monetary and industrial demand for these metals, on the one hand, and the cost of mining them, on the other. This ratio is beyond ordinary legislative control and fluctuates with market changes. Besides establishing a legal ratio between gold and silver, bimetallism contemplates the unlimited coinage of both gold and silver at the mints and the full legal-tender attributes of both metals.

What causes the continued interest in bimetallism and other substitutes for the gold standard is the recurring instability of prices when expressed in a single commodity. Instability in prices causes great injustice in the relations between debtors and creditors. A rise in prices affects adversely the status of persons dependent upon relatively fixed incomes and of wage-earners whose wages do not rise as rapidly as prices do. If prices fall, it is difficult to maintain the previous levels of wages and of fixed incomes. The bimetallic standard insists that the double standard of value will prove a great stabilizer of prices. There is no question that any monetary system that could give us greater price stability than we have had would be highly desirable. The question is, can bimetallism ensure the desired stability?

Such stabilization of prices, the bimetallic standard argues, will come through what is known as the *compensatory action* of the double standard. By this compensatory action is meant that any threatened or actual small change in the market value of either of the metals will be counteracted by a change in the use of this metal for coinage purposes. If silver, for example, should become more abundant and consequently have a tendency to fall in value in the markets of the world, it could be taken to the mint for coinage and this alternative use of silver would counteract the tendency of the market value to fall. The opportunity to coin thus compensates or offsets the tendency of silver to fall in value. The bimetallic standard admits that temporarily the market ratio and the legal coinage ratio may diverge, but insists that a wisely established legal ratio will soon correct the situation, restoring the market ratio to the established legal parity.

Asked how and why the legal ratio can have such a corrective influence upon the market ratio, the bimetallic standard argues substantially as follows. Let us suppose that the coinage ratio between silver and gold has been estab-

¹³ The familiar ratio of 16:1 is approximate. The United States Congress had declared 23.22 grains of pure gold and 371.25 grains of pure silver to constitute, respectively, the gold and the silver dollars. $371.25 \div 23.22 = 15.988$, or approximately 16:1.

lished at 16:1. No legislative body acting with wisdom would think of establishing such a legal ratio except as this legal ratio corresponds to the existing market ratio. To do so would be to invite disaster at the outset. For almost 200 years (1687-1873) the market ratio of silver to gold stood at about 16:1. Let us further suppose that some time after the establishment of this legal ratio, as a result of the discovery of additional silver mines or improvements in the mining of silver, the supply of silver is greatly increased. If the demand for silver does not increase proportionately, only one thing can happen: the value of silver in the markets of the world must decline. Let us suppose that it does. Then 16 parts of silver will no longer equal in value 1 part of gold, but, let us say, it will take $16\frac{1}{2}$ parts of silver to equal 1 part of gold in value. What follows? In accordance with Gresham's law the cheaper metal, silver, will begin to drive the dearer metal, gold, out of circulation.¹⁴ But the market itself, the bimetallic contends, will soon correct the situation and restore the parity of silver and gold at the established ratio. An increase in the use of the cheaper silver and a decrease in the use of the dearer gold for monetary purposes would decrease the market supply of silver and increase the market supply of gold. Such increase in the monetary use of silver would raise the value of silver in the market. Such decrease in the monetary use of gold would make more of it available for export and the industrial arts; since the market cannot indefinitely absorb additional gold without change of its value, the effect would be to lower the value of gold. Under a bimetallic system, therefore, with unlimited coinage of both metals, the opportunity to coin compensates for small changes in the market value of either metal, thus tending to make the market ratio coincide with a wisely established legal ratio.

That under bimetallicism the legal ratio will have a steadying effect upon the market ratio is admitted by all. The important question, however, is this: will the admitted compensatory action of the double standard be strong enough in practice to keep the market ratio actually identical with the legal ratio? The bimetallic says that it will. He pins his faith to the comparatively small annual production of the precious metals in relation to the existing supply, and to the further fact that most of this increase finds its way to the mints, where under his system unlimited coinage prevails.

The bimetallic experience of the United States. The bimetallic experience of the United States offers striking evidence of the extreme difficulty of keeping the legal and market ratios together. When Congress established the American monetary system in 1792, largely as recommended by Alexander Hamilton, the system was built upon a bimetallic standard with the ratio between silver and gold fixed at 15 to 1. This was approximately the

¹⁴ Cheaper or dearer than the coinage ratio fixed by law.

prevailing market ratio. Before the government could put its mint into operation, however, a number of years passed, and in the meantime the market ratio changed. The value of silver in terms of gold fell (which means that it took a larger amount of silver to buy a given amount of gold) with a resulting rise in the market ratio. While the market ratio fluctuated from year to year in the forty-year period from 1794 to 1834, on the average it stood a little higher than $15\frac{1}{2}$ to 1. Because the United States was a new country, and relatively isolated from the centers of commerce and finance, this divergence between the market and legal ratios did not at once result in the disappearance of gold, which was dearer in the markets than as expressed in the 15 to 1 ratio established at the mint. During the last half of this period, however, gold began to disappear from circulation. In the market one ounce of gold could be exchanged for $15\frac{1}{2}$ ounces of silver; at the mint 15 ounces of this silver could be converted into as many dollars as an ounce of gold. Anyone making such an exchange, therefore, gained one-half ounce of silver on the transaction. The inevitable result was that all available gold, including gold coin converted into bullion, was exchanged for silver, silver alone was coined, and gold completely disappeared from circulation. At the mint ratio of 15 to 1 silver was over-valued, because in the market 1 part of gold commanded more than 15 parts of silver. Gold, the under-valued metal, disappeared from circulation.

This proved an unwelcome fact. In 1834 Congress took cognizance of the situation and amended the bimetallic act by establishing a legal ratio of 16 to 1 (actually 16.002 to 1). In 1837 a further slight change in the mint ratio of the metals was made when a ratio of 15.9884 to 1 was established—practically 16:1. These changes were made by reducing the amount of gold in the gold dollar to the recently existing amount of 23.22 grains. Although it was known that this ratio represented an over-valuation of gold, it was, nevertheless, made the legal ratio, because there was a very strong desire to bring gold back into circulation, and perhaps because it was thought that the value of silver would continue to fall a little more. The market ratio, however, did not permanently reach 16 to 1 until forty years later. During the period 1834 to 1873 silver was the under-valued metal, since in the markets less than 16 parts of silver had to be given in exchange for 1 part of gold. If we assume a typical market ratio of $15\frac{1}{2}$:1, for every $15\frac{1}{2}$ ounces of melted-down silver coins or of bullion 1 ounce of gold could be obtained. For this ounce of gold as many dollars could be obtained at the mint as with 16 ounces of silver. Anyone making such an exchange, therefore gained the equivalent of one-half ounce of silver on the transaction. This time the unavoidable result was that all available silver, including silver coin converted into bullion, was exchanged for gold, gold alone was coined, and silver completely disappeared from circulation. At the mint ratio of 16 to 1 gold was over-valued, because in the

market 1 part of gold commanded less than 16 parts of silver. Silver, the under-valued metal, disappeared from circulation. From 1834 on, the country, while still nominally adhering to bimetallism, gradually worked over to a gold monometallic basis. This transition was greatly accelerated by the discovery of new gold after 1848, which widened the discrepancy between the market and the legal ratios.

In order to give legal status to a recognized economic fact, Congress in 1873 passed an act which dropped the silver dollar from the list of coins which the mint was subsequently authorized to make. The action was wholly incidental to a general revision of the nation's coinage laws. Practically no silver dollars had been coined since 1834. No one wanted silver coined in 1873 because the mint ratio under-valued it. Silver dollars were obsolete as coins. What is more, neither silver nor gold was in circulation at the time, because specie payments had been suspended beginning in 1862, and the country was getting along as best it could on a "greenback" base. Congress had hardly acted, however, before the economic law of supply and demand played a confusing trick upon mere man-made law, as if to assert the supremacy of economics over politics. Although the market ratio of silver to gold had ranged within rather narrow limits for almost two centuries, and in the monetary experience of the United States from 1792 to 1873 had never been less than 15 to 1 nor more than $16\frac{1}{4}$ to 1, the value of silver about this time began sharply to decline. The average annual market ratio in 1874 crossed the legal ratio of 16 to 1, and twenty years later had more than doubled it. If it had not been for the abolition of the free and unlimited coinage of silver by Congress in 1873 (an act subsequently called the "Crime of 1873" by ardent bimetallists), silver would certainly have flooded the mints and gold would have disappeared from circulation. If the mint ratio could not stabilize the market ratio when the variation between them was only a little more than one part of silver, is there any real likelihood that it could have done so when the variation was many times as great?

This sudden decline in the value of silver and appreciation in the value of gold, together with the resumption of specie payments in 1879, gave rise to an insistent demand for cheaper money. One expression of it was the "greenback" movement, which permanently placed \$3,46,000,000 of United States notes in circulation. Another was the free silver movement, which vigorously insisted upon the reestablishment of the bimetallic standard at the legal ratio of 16 to 1. The groups interested in the reestablishment of bimetallism included, particularly, the debtor classes and those interested in silver production; the former wanted cheaper money so that they would not have to return to their creditors a larger purchasing power than they had borrowed, and the latter not unnaturally wanted a bigger outlet for their product, which was greatly augmented by the output of

newly discovered silver mines. This alliance, reinforced by support from other quarters, kept the issue of bimetallism before the American people for another quarter-century.

The movement for bimetallism reached its climax in the exciting presidential campaign of 1896. The country was still in the throes of a severe economic depression. Prices were falling; the value of gold was rising. Debtors who had to meet their obligations during this time found they had to work longer and harder to get the necessary number of dollars than if the price level had not fallen. Creditors gained more purchasing power than they had lent. Debtors complained. The fact that the country was actually upon a gold basis was blamed for most of the industrial and financial ills of the people. William Jennings Bryan, in the Chicago convention of the Democratic Party, closed his speech urging the adoption of a ringing platform declaration for the free and unlimited coinage of both gold and silver by dramatically exclaiming: "You shall not press down upon the brow of labor this crown of thorns. You shall not crucify mankind upon a cross of gold." The defeat of the Democratic Party, with Bryan as its standard-bearer, kept Congress from reestablishing a bimetallic system. What stopped the agitation for bimetallism more than anything else, however, was the discovery of large new gold supplies in Alaska, Canada and South Africa. Prices rose. With the gradual return of prosperity, many of the hardships of the debtor class disappeared. Still another presidential campaign was fought in part on the money issue, although Congress in March, 1900, had definitely adopted the gold monometallic standard.

A human generation passed before the issue of bimetallism was again revived. During the depression of the thirties the agitation for bimetallism was renewed as part of the movement to raise prices by lowering the purchasing power of the dollar and "to do something for silver" in order to satisfy the insistent demands of the silver producers. By the Thomas Amendment to the Farm Relief Act of May 12, 1933, the President was given the discretionary authority to restore bimetallism at such ratio between silver and gold as he saw fit. So far the President has not seen fit to exercise this power conferred upon him, and congressional attempts to make it mandatory have failed of adoption.

The silver purchase policy of the United States. The President, however, by a proclamation of December, 1933, did authorize the Treasury to begin buying domestically mined new silver for 64.64 cents per fine ounce—nominally at \$1.2929 per ounce less a seigniorage charge of 50 per cent. This was done to fulfill an agreement reached at the World Economic and Monetary Conference of 1933 in London under which, in order to raise the price of silver, the United States had agreed for a period of four years to purchase annually about twenty-four and a half million ounces of silver produced in this country. Thus began the latest chapter in the amazing

story of our government's silver purchase policy. At this time silver was selling in the open markets for about 45 cents per ounce. Allegedly to broaden the country's monetary base, Congress soon thereafter passed the Silver Purchase Act of 1934. Under its main provision the Secretary of the Treasury is authorized and directed to purchase silver, at home and abroad, until the proportion of silver in the combined stocks of gold and silver of the United States is one fourth of the total monetary value of such stocks. The "joker" in the act, if there is one, lies in the absence of any time limit for the achievement of a 3:1 ratio between gold and silver in the monetary stocks of the United States. It has been calculated that to make this act effective as of 1934 would have required the purchase of a quantity of silver equal to all the domestically mined silver in the United States for the preceding twenty years.

The act provides that the silver so purchased may be bought "at such rates, at such times, and upon such terms" as the Secretary of the Treasury "may deem reasonable and most advantageous to the public interest," provided that "no purchase of silver shall be made at a price in excess of the monetary value thereof." Since the content of the silver dollar has not been changed, an ounce of silver still equals \$1.29 in silver dollars, and accordingly this represents the highest price the Secretary of the Treasury can pay. The Treasury paid varying prices for silver until Congress exercised its own authority on July 6, 1939, by instructing the Treasury to increase its buying price for silver mined in the United States to 71.11 cents per ounce. On July 31, 1946, Congress further raised the price of domestically mined silver to 90.5 cents per ounce. Throughout this buying period the price paid for foreign silver was substantially lower than that paid for the domestic product. The Treasury may purchase such silver at whatever price it deems appropriate—within the statutory limits set upon its authority. All of this silver has been paid for through silver certificates, which the Treasury so far (1951) has issued only against the actual cost of the silver, rather than against the statutory monetary value of silver at \$1.29 per fine ounce. For every 1,000 ounces of silver bought at 90.5 cents per ounce, for example, \$905 of silver certificates are put into circulation instead of \$1,290, which are legally permissible. As far as attaining the declared objective of a 3:1 ratio between gold and silver in the monetary stock of the country is concerned, the government is further away from its goal than when the silver buying started. The principal reason, of course, is the large increase in this country's stock of gold, which amounted to over \$23 billion toward the close of 1950.

Except as a subsidy to a relatively small American industry, which supplied less than 15 per cent of the silver bought during the first five years of operation under the act, the silver buying policy of the United States Government fails to make sense. Instead of leading to the wide-

spread restoration of silver as a monetary metal, it drove China, the last remaining important silver standard country, off its silver base. Because silver was more valuable as bullion in America than as currency in China, China forsook her silver standard for a managed paper currency. We did not need to buy the silver to add to our subsidiary coinage, for we already had ample supplies. We have no use for silver as a reserve against our paper currency, because gold performs this function much better and we have ample stocks of gold. The United States is acquiring an enormous store of silver for which no monetary use is in sight. Silver did prove an important strategic mineral during the Second World War, largely as an alloy, and as a substitute for other metals, such as copper and tin. The United States Treasury lent nearly 900 million ounces of silver to war plants for industrial use, with the understanding that the silver would be returned at the close of the war.

MANAGED CURRENCY SYSTEMS

With the eclipse of the gold standard, which began in 1931, managed currency systems provided the only feasible alternative. In one form or another managed currency systems are as prevalent today as the gold standard was prior to 1931. They are part of the nationalism of our day. But the idea of deliberately managing the currency so as to accomplish a specified economic end, such as the stabilization of prices, is nothing new in monetary history. What is new is the sudden emergence in actual practice of numerous managed inconvertible paper currencies, with or without a gold backing.

Fiat money. Long antedating present hybrid forms of managed currency, but never yet deliberately put into operation, is the proposal for the establishment of a pure fiat money system. Fiat money is one form of managed currency, probably the most completely managed form conceivable. In the quest for an ideal standard of value the proposal is recurrently made that we should abandon the use of a metallic standard and substitute for it irredeemable paper money, which circulates solely because of the decree of the government. Such money is fiat money.¹⁵ Fiat money is irredeemable paper money which the government issues, against which it holds no reserve of specie, and which it makes full legal tender in the discharge of obligations. Its value would hinge on its general acceptability, which in turn would depend upon the success or failure of the government in controlling the supply of such money. Managed currency of the fiat-money type presupposes boundless faith in the wisdom and will-power of government not to run the money printing-presses when its own fiscal

¹⁵ *Fiat* is the Latin third person singular, subjunctive present of *feri*, used as the passive of *facere*, meaning "to make." It therefore connotes "let it be made or done."

needs exceed its revenues. The only check on the volume of fiat currency is the government's will.

The argument offered in support of the alleged superiority of fiat money over metallic money may be stated thus: if government will intelligently and wisely control the amount of fiat money issued, prices can be more stable than when measured in a commodity the value of which fluctuates with conditions of the market. If a question be raised as to why anyone should be willing to accept such money, the fiat money advocate points to the limited supply and the legal-tender powers of such money in settling all obligations, private and public. He also cites the historical fact that there have been many instances of the continued circulation of fiduciary money long after there was any prospect of its ultimate redemption. People will accept fiat money, he argues, if they are confident that others will do the same.

It must be admitted that if we could be certain of the surpassing wisdom of legislative bodies in providing a stable currency, of legislative restraint in the issuance of such money, of the avoidance of inflation, and of general acceptability of the money issued, a system of fiat money might conceivably work. But these conditions are difficult, if not impossible, of attainment. The risk of failure is greater than the prospect of success.

What experience the world has had with fiat money has come about through the inability of governments to redeem inflated issues of fiduciary money. When people believe that fiduciary money is no longer redeemable, it becomes fiat money in effect. Genuine fiat money is inconvertible from the moment it is issued. Much fiduciary money has become inconvertible through force of circumstances. It began with the promise of redemption; suspension of specie payments followed; excessive amounts were issued; people hoped that the fiduciary money was only temporarily irredeemable; ultimately came the awakening that there was no real chance of redemption, that the fiduciary money was pure fiat, or perhaps one should say impure fiat, since it was not frankly designated as inconvertible at the start. The world has had enough experience with such broken-down forms of fiduciary money, that are fiat money in effect, to learn the perilous risk of taking a chance on a system of pure fiat money.¹⁶ The tragic monetary experiences of Europe in the aftermath of two World Wars should never be forgotten. It may be possible to devise a fiat-money standard that would represent an improvement upon any standard the world has known, but until men have acquired both the wisdom and the will to control the issue of such money in order to stabilize its value, the world's monetary experience unmistakably points to the dangers lurking in the use of fiat money.

¹⁶ Cf. preceding discussion on the abuses of fiduciary money, pp. 235-238.

The multiple commodity dollar. A most vigorously urged proposal for currency management in the United States, since our partial abandonment of the gold standard, is the plan or group of plans that has come to be known as the commodity dollar. In a "fire-side chat" on October 22, 1933, President Roosevelt said: "We are continuing to move toward a managed currency. . . . When we have restored the price level, we shall seek to establish and maintain a dollar which will not change its purchasing and debt-paying power during the succeeding generation." Unquestionably, this statement of the President aroused interest in the possibilities of the commodity dollar as an alternative to the traditional gold dollar. The underlying idea in all commodity dollar plans is a "monetary unit stabilized in purchasing power." It is proposed to measure the purchasing power of the dollar by an index number of the prices of a selected list of commodities, and then to keep this purchasing power as steady as possible.¹⁷

Commodity dollar plans may be linked to gold or be based upon an inconvertible paper currency. Illustrative of the former is the so-called *compensated dollar* proposed by Irving Fisher. Fisher points out that the dollar is a dollar only in name. It is a unit of weight but not of purchasing power. What we need, however, is a unit of stable purchasing power, if we would avoid sharp price fluctuations. Every other unit of measure used in commerce, such as the yard and pound, has gradually been standardized. At one time these were no more standardized as units of length and weight than the dollar is standardized now as a unit of purchasing power.

Fisher's proposal is that instead of measuring the value of a dollar in terms of a fixed quantity of pure gold, such as 23.22 or 13.71 grains, the value of the dollar shall be measured by an aggregate of goods selected on the basis of their relative importance in trade. He calls such a dollar a "goods-dollar." Changes in the value of the goods-dollar are to be measured by index numbers. While the goods-dollar would be a satisfactory standard of value it would be an impractical, if not impossible, medium of exchange. Accordingly, Fisher proposes to retain the gold dollar as a medium of exchange, but not as a coin. He plans to let it circulate by gold certificates redeemable in varying amounts of gold bullion. If the index number shows that the prices of the commodities composing the goods-dollar have increased one per cent, he would increase the weight of the gold dollar one per cent in order to pull prices down again. If the index number shows that prices have fallen one per cent, he would decrease the weight of the gold dollar one per cent in order to raise prices. Fisher proposes to limit the change in gold bullion paid out to one per cent per

¹⁷ Index numbers are devices by which changes in the value relationship of goods and money are expressed as percentages, the prices of some year or other period of time being taken as the base of 100. For example, the wholesale price index for 1940 in the United States was about 78 with 1926 as the base of 100.

month but thinks that ultimately this would offset any price changes likely to occur. By the device of redeeming gold certificates in varying quantities of gold bullion he expects to keep the gold dollar close to the goods-dollar and thus to stabilize its purchasing power.¹⁸

Among the chief objections urged against the compensated dollar is the contention that in times of rising prices governments may find it politically inadvisable to try to reduce prices by increasing the gold content of the dollar, since this might stifle the expansion of business. The chances are, it is held, that the gold content of the dollar would be reduced but not increased. The prevention of speculation in dollars, which would be undertaken in order to profit by changes in the gold content of the dollar, would also constitute a problem of the first magnitude. Foreign exchange rates would also be disturbed by the varying gold content of the dollar. The plan of varying the gold content of the dollar leaves untouched the much larger and more important problem of credit control.

Closely related to Fisher's plan of varying the weight of the gold dollar, as a means of affecting prices, was the gold-buying plan of the United States Treasury as practiced from October, 1933, to January, 1934. Upon the advice of its consultant, the late George F. Warren, the Treasury bought gold at varying prices per ounce, culminating in the price of \$35 per ounce set on January 31, 1934. The expectation was that by varying the price of gold (that is, the number of paper money dollars to be offered for an ounce of gold) the domestic price level could be raised or lowered at will. In spite of the fact that an ounce of gold was made to equal \$35 instead of \$20.67, and therefore a given amount of gold represented a much larger number of dollars, the domestic price level fell far short of rising proportionately.

The more usual plans for a commodity dollar now are divorced from the use of gold. They call for varying amounts of currency in circulation in accordance with what the index numbers of commodity prices show. If commodity prices are rising, the rise is a signal to some central monetary authority to reduce the volume of currency. If commodity prices are falling, such fall is a signal that the currency should be expanded. Changes in commodity prices are the signal for action, which it is hoped will keep price changes within a narrow range and thus furnish a dollar of stable purchasing power.

The chief claim made for the commodity dollar by its advocates is that it will provide a dollar of stable purchasing power. This will remove such injustice as occurs in a period of falling prices when debtors may be called

¹⁸ Cf. Irving Fisher, *The Purchasing Power of Money* (New York, The Macmillan Company, 1911); *Stabilizing the Dollar* (New York, The Macmillan Company, 1920), Chaps. II-IV; *Stable Money* (New York, Adelphi Company, 1935).

upon to pay creditors a larger purchasing power than they had borrowed; or in a period of rising prices, when creditors may have to accept in payment of maturing loans a smaller purchasing power than they had extended. The commodity dollar is expected to furnish an element of stability for all economic relationships into which money enters.

Grave doubt exists, however, that the commodity dollar can measure up to expectations. Changes in the quantity of the currency, upon which the alleged effectiveness of the commodity dollar largely depends, are not the only, or even the most usual, element in accounting for changes in prices. The velocity of circulation of both the currency dollar and the bank deposit dollar often has more to do with such changes in prices; and nothing in the plan of the commodity dollar furnishes any control over such velocity of circulation. If the dollar is to be managed largely through the device of controlling the number of such inconvertible dollars, there is also the constant risk that government may be tempted to meet some of its own obligations by creating paper money issues rather than by collecting taxes. Similarly, whatever agency is charged with managing the currency, will be under heavy pressure from groups seeking personal advantage through the manipulation of prices, or seeking relief when the prices of their products in relation to other prices are adversely affected. Currency may be mismanaged as well as managed effectively.¹⁹

What distinguishes present managed currency plans from the older fiat money schemes is their reliance upon certain control devices. Only such variations in the quantity of the circulating medium are to be made as will ensure a fairly stable domestic level of prices. To prevent wide fluctuations in the value of a country's irredeemable currency in terms of foreign currencies, foreign exchange is to be bought and sold through the operation of exchange equalization or stabilization funds.²⁰

The managed gold dollar. It is fallacious to assume either that the gold standard was wholly automatic in its functioning, or that it must necessarily be free from all management. Management of the currency is possible on either a gold or paper base. It is a question of what kind of management is wanted, and of how much is desirable. Many champions of the gold standard contend that gold, with the superstructure of convertible paper currency and of bank deposits built upon it, furnishes ample scope for such monetary management as can safely be entrusted to any central monetary authority. Currency management, they insist, should be carried on within the limits of a monetary standard that is at least semi-automatic in its functioning. When a country is on the gold standard, gold serves

¹⁹ For further discussion of the relation between managed currency and credit and the control of the business cycle, see Chap. XXVII, "Business Cycles," pp. 639-642.

²⁰ See discussion of these funds in Chap. XI, "International Trade and Exchange," pp. 325-326.

as a brake against possible reckless excesses on the part of a monetary management that may prove inefficient or subservient to political pressure groups. Many persons prefer to put their monetary trust in gold rather than in monetary managers. If management of the currency is considered desirable, much can be done without sacrificing the safeguards of the gold standard. Changes in the discount policies of central or federal reserve banks with the avowed purpose of easing or tightening the amount of available credit may help to manage the circulating medium. Similarly, the purchase or sale of government securities by such institutions, for the purpose of supplying funds to or withdrawing funds from the market, may help to achieve the same result. Changes in the gold reserves required against outstanding paper currency or bank deposits provide a powerful implement of management in the hands of a central monetary authority.²¹ Unquestionably, there can be much monetary management of a currency based on gold. It is not necessary to run the risks of an inconvertible paper currency in order to test the possibilities of monetary management. The gold dollar has been managed and can continue to be managed. Currency management, however, should neither be furnished by men swayed by political ambitions nor by private bankers desirous of making profits. Preferably it should be in the hands of central or federal reserve banks who have the qualifications and the experience to supply whatever currency and credit management is both possible and needed.

The present currency system of the United States. To classify the present currency system of the United States is difficult, if not impossible. It is certainly not the orthodox gold-standard system. Nor is it a system built on a clean-cut managed paper-dollar standard. It is a cross between the two: a monetary hybrid. It is not the time-honored gold-standard system because the United States Treasury no longer redeems the country's fiduciary money in gold, and redemption of fiduciary money in gold upon demand is one of the essential features of the gold standard. But all other important functions of gold are still utilized in the monetary system of the United States. Gold is the country's standard of value and a designated amount of it constitutes the dollar. Gold serves the country as an international medium of exchange. And gold provides the anchorage for most of the country's paper money and bank deposits, since gold reserves must be maintained against both. The present currency system of the United States, on the other hand, can hardly be classified as an outright managed paper-dollar system, because it is based too much on gold. And yet, domes-

²¹ See discussion of these policies in Chap. X, "The Credit System of Exchange," pp. 283-288. If the plan of the compensated dollar, which is based on the idea of redeeming the paper dollar in varying amounts of gold, were put into operation, it would be a managed gold dollar of a sort. In this case, however, the degree of management would be guided by the showing of an index number of prices, which would make it also a form of the commodity dollar, but one still based on gold.

tically, the country is operating on an inconvertible paper-money base, and the currency system as a whole shows many signs of management. Evidences of the latter include various powers that have been conferred upon the President to increase the volume of the circulating media (some now repealed) and powers of the federal reserve banks to affect credit through the fixing of discount rates, the buying and selling of government securities in the open market, and the changing of required gold reserves against outstanding paper currency and bank deposits. Our monetary system is a somewhat managed, inconvertible paper-money system, which has not been divorced from gold. Perhaps the gold connections have been retained because gold has so long inspired the confidence of the public, and has cast an aura of respectability over monetary arrangements based upon it.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

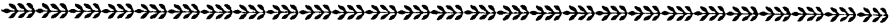
1. A commodity may serve as a satisfactory standard of value, without being used as a medium of exchange.
2. By the beginning of the present century barter had been entirely supplanted by a metallic money system of exchange.
3. Paper money meets the requirements of a good monetary commodity just as adequately as gold and silver coins.
4. The levy of a seigniorage charge, as well as the levy of a brassage charge, results in a devaluation of the standard money.
5. Since none of our gold is in actual circulation, gold is of no real importance in our currency system.
6. A country is not on the gold standard unless it actually coins gold and puts it into circulation.
7. When a nation is on the gold standard, the value of fiduciary money must coincide with the value of gold.
8. The value of standard money and fiduciary money depends, in part, upon the relative scarcity of the monetary medium.
9. Fiat money can be expected to perform satisfactorily all of the functions now performed by commodity money (gold).
10. Paper money cannot serve as a satisfactory element in the currency system of a country unless it is made full legal tender.
11. Federal reserve notes are a more elastic element in our currency system than either silver certificates or United States notes.
12. Silver certificates are backed 100 per cent by silver coins, and are therefore not fiduciary money.
13. The very existence of a bimetallic standard would tend to keep the market ratio of gold and silver at the same level as the mint ratio.
14. When the United States Government stopped redeeming its currency in gold, its paper money changed from fiduciary to fiat money.

SUGGESTIONS FOR FURTHER READING

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CHAPTER X

The Credit System of Exchange



THE IMPORTANCE OF CREDIT IN MODERN EXCHANGE

THE BULK OF business today consists of credit rather than of money transactions. It is estimated that in merchandising more than 90 per cent of the business is handled on a credit or time rather than on a cash basis. The essence of a credit transaction consists in the exchange of present goods for the promise of a future equivalent. The parties to such a transaction are known as the creditor and the debtor. The creditor is one who transfers goods in the expectation of future payment. He is said to grant or extend credit to his debtor. The debtor is one who incurs the obligation of making a future payment. A person's credit is good if he can readily obtain present goods in exchange for a future equivalent. The credit itself that is asked and granted rests upon faith¹ in the personal honesty of the debtor and in his financial ability to meet his obligations when they fall due. What distinguishes a credit transaction from a cash transaction is the lapse of time.

The extension of credit greatly facilitates production. Because their credit is good, men of proved ability and integrity can supplement their own resources for productive enterprise by borrowing from others. Some of this borrowing may be for long-term investment; some of it, for current operating needs. Without the credit furnished by those who have savings to invest, a large part of modern production could not be carried on. The credit system enables producers to borrow on the anticipated value of their future products.

The extension of credit also facilitates exchange. By an intricate system of credit arrangements the consumer may buy on credit from the retailer, the retailer may similarly buy from the wholesaler or other intermediaries, the wholesaler often is "carried" by the manufacturer, and the manufacturer frequently is indebted to the banks, which grant credit largely on the base of money deposited with them. It is readily apparent that such a credit system greatly intensifies the risk of business enterprise, for if debtors do not pay their obligations promptly, creditors may find

¹ The word "credit" is derived from the Latin *creditus*, past participle of *credere*, meaning "to trust or believe."

themselves embarrassed for lack of working capital. But if the debts incurred are promptly extinguished as they mature, such a system makes possible a more even flow of goods into the hands of the ultimate consumer. Buying can be better distributed. The ever present danger lies in the over-expansion of credit, in the assumption of future obligations which cannot readily be met out of future income. The widespread plan of instalment selling, under which so large a part of the furniture, household equipment, and automobile business is done, is a conspicuous example of how credit can facilitate exchange. It also carries a warning concerning the dangers of so mortgaging future income as to leave no margin for future needs and emergencies.

The general use of credit enables the exchange transactions of the world to be conducted with only a fraction of the money that would otherwise be required. Gold is needed, but principally as a reserve. The credit system substitutes for cash payments a variety of credit instruments, such as promissory notes and bills of exchange, most of which are ultimately set off against each other in bank settlements in such a way as to require the actual transfer of only a relatively small percentage of cash. A safe credit structure presupposes a sound money system. But when the foundations of the latter have been deeply and securely laid, the superstructure of business that rears its towering form is built largely of credit.

FORMS OF CREDIT AND TYPICAL CREDIT INSTRUMENTS

Investment credit. The credit structure of business is found upon examination to consist very largely of two forms of credit: investment credit and commercial credit. Investment credit is extended through loans the proceeds of which are put into the fixed assets of a business enterprise. If the owners of a business cannot themselves furnish all of the capital necessary for investment in land, buildings, and equipment, obviously what they need is loans of capital running over a considerable period of years. The reason is that such loans must ultimately be paid out of the net returns of the investment, and most relatively permanent investments can only slowly be converted into cash again through the sale of products derived from them. But if a business proves a successful "going concern," and if sufficient time be allowed for its net earnings to accumulate, the business can meet the claims of its investment creditors, retire its long-term loans, and find itself free from such debt. If a business tried to finance any considerable part of its investment in fixed capital by means of short-term loans, running for periods less than a year, it might very well find itself embarrassed by lack of funds when the loans mature. The typical credit instrument used to obtain long-term credit is the mortgage bond. In such an instrument the debtor signs a formal written agreement in which he

promises to pay the principal sum mentioned on the terms indicated (this is his bond) and pledges part of his property as security by executing a mortgage in which he conditionally transfers title to the property to his creditor. If the debtor promptly meets the conditions of the mortgage bond which he has given, he retains an unencumbered title to his property.

Commercial credit. In addition to seeking credit for long-term investment in fixed assets, most businesses periodically ask for commercial credit in the form of short-term loans. Commercial credit is credit supplied for current business operations, such as the manufacture and marketing of goods. It often takes more working capital than businesses can themselves supply to pay for raw materials, to make the outlays for wages, to meet such overhead costs as heat, light, and power, to provide for insurance and taxes, to advertise and otherwise sell the goods, and to carry inventories of finished goods until they can be converted into cash. To help finance such operations short-term loans, usually running from thirty days to six months, are negotiated. Commercial loans, like investment loans, must ultimately be paid out of the accumulated earnings of a business. But if the business proves successful, and if the loans are kept well within the business earnings of the immediate future, such loans can be safely made and promptly paid. Commercial loans are based upon quick assets, such as raw materials and finished goods, which are in constant process of liquidation and thereby provide the cash with which to extinguish the loans.

Commercial credit instruments. In the extension of commercial credit two principal types of legal instruments are used: *promises to pay* and *orders to pay*. If a business man needs credit for his ordinary current operations, the usual procedure for him is to borrow from his bank. On the strength of his credit standing with the bank, he may execute a *promissory note* in favor of the bank. His note constitutes a binding contract in which he promises to pay the bank a specified principal sum on a given date with interest at a stated rate payable either in advance or upon maturity. In the case of the promissory note the debtor is the drawer or maker of the instrument.

Business enterprises of excellent and well-known financial standing sometimes find it advantageous in meeting their credit needs to sell their promissory notes not to the bank or banks with which they customarily do business but in the open market for such commercial paper. Commercial paper houses exist whose principal function it is to take the promissory notes of borrowing business enterprises and to sell them again to banks and other financial institutions in search of highly liquid paper for the temporary investment of funds. For its services as note broker or middleman, the commercial paper house charges a small commission, commonly 0.25 per cent. If it buys the notes outright, its profit is made by the difference between the price at which it subsequently sells the notes to investing

PROMISSORY NOTE

\$25,000.00 Madison, Wis., May 1, 1951.
Three months after date, for value received, I
 promise to pay _____ THE FIRST NATIONAL BANK OF MADISON _____ or order
Twenty-five thousand _____ Dollars
 with interest after date, at the rate of 4 per cent per annum.
 Address Madison, Wis. *Ray-O-Vac Company*
By _____

institutions and the price paid for them. The promissory notes which it buys and sells are issued in even denominations by the borrowers. The rate of discount at which these notes can be sold to the commercial paper houses will depend upon conditions of the market, but normally the rate is lower than the customers' rate charged by the commercial banks. Indeed, this more advantageous rate is one reason why business houses may at times choose to sell their notes in the open market rather than to borrow from their banks directly. Another reason is that they may prefer to keep their "lines of bank credit" available for regular use and to rely upon the commercial paper market for unusual or seasonal demands. Still another reason is that a business house may wish to borrow more than its bank cares to lend or legally can lend to a single customer. National banks are prohibited from lending an amount greater than 10 per cent of their unimpaired capital stock and surplus to any one borrower.

Increasingly in the United States, though the practice has long been customary in other parts of the world, commercial credit is extended by means of orders to pay. In an order to pay, the creditor, not the debtor, is the drawer or maker of the instrument. A debtor may promise, a creditor can order, to pay. Orders to pay are typically represented by *bills of exchange*, or *drafts* as they are more commonly called. A bill of exchange or draft is an unconditional written order drawn by one party (the drawer) on a second party (the drawee), ordering him to pay a third party (the payee) a specified sum of money, either on demand or on some future date. An ordinary bank check is a simple form of an order to pay.

For convenience in selling such a commercial bill of exchange, the drawer, if he prefers, may insert his own name as payee. Bills of exchange or drafts commonly arise out of commercial transactions, such as a sale of goods by a wholesaler to a retailer. By arrangements between them the wholesaler may draw upon the retailer for the amount of the purchase price. His order to pay becomes a *trade acceptance*, if the retailer, after receiving it from the wholesaler, writes the word "accepted" across the face of the bill of exchange together with date and place of payment and over his own signature. The acceptance then has all the force of a promis-

TRADE BILL OF EXCHANGE OR DRAFT

<u>\$25,000.00</u>	<i>Chicago, Ill.,</i>	<u>May 1, 1951.</u>
<i>At thirty days' sight</i>		pay to the
order of	THE FIRST NATIONAL BANK OF CHICAGO	
	<u>Twenty-five thousand</u>	Dollars
To	<u>Harry S. Manchester, Inc.</u>	
Address	<u>Madison, Wis.</u>	<u>Marshall Field & Company</u>

sory note. Such an acceptance can be sold in the money market to anyone seeking investment for idle capital funds. When the wholesaler receives the accepted bill of exchange from the retailer, he may sell it to his own banker. As soon as the bill accepted by the retailer falls due, he must pay it to the wholesaler's bank, or to whatever institution or person presents it for payment. The real source of credit in such a commercial transaction is the bank or other agency that buys the accepted bill of exchange and waits until its maturity for reimbursement. The commercial paper houses, which at one time bought and sold only promissory notes, now also deal in trade acceptances.

Trade acceptances have long been known, but comparatively little used, as a device for obtaining commercial credit in the United States. Here the customary instrument is still the promissory note, though the use of commercial bills is growing. In Canada, Great Britain, France, and elsewhere, the commercial bill of exchange is the more customary means of financing the movement of goods. Although the majority of American business men still prefer to buy goods on an open charge account, borrowing money from banks on promissory notes when needed to help meet pressing obligations, a credit system based upon acceptances has many advantages. To the seller of goods it has the distinct advantage of enabling him to secure an immediate cash payment, which replenishes his working capital. The bank that buys the trade acceptance extends credit to the buyer of the goods. Extension of credit is one of the most distinctive functions of banks, and one which they can perform much better than the average manufacturer or wholesaler. To the buyer of goods, such as a retail merchant, the trade acceptance has the advantage of serving as a curb on the amount of his purchases. If he buys on an open book or charge account, it is easy for him to become careless in the volume of his buying and in the promptness with which he meets his obligations; the wholesaler, for fear of losing his future business, may not compel him to pay promptly. If he does business by periodically borrowing from his own bank, his relations with the bank may be such as to make it comparatively easy to obtain an extension or renewal of the loans. Such credit situations may help to breed inefficiency in the prompt conversion of goods into cash. But if

the retail merchant buys goods through arranging for a trade acceptance, he definitely obligates himself to pay for the goods on a specified date. What is more, the trade acceptance will in all probability be presented for payment by a bank or other agency with which the retailer has no regular business connections. Such an institution, more easily than any other, can force the prompt payment of the account when it falls due. The trade acceptance acts as a curb upon ill-advised buying and uneconomical credit arrangements. To the banker, trade acceptances have the advantage of providing the greater security which "two-name" commercial paper presents. The drawer and the drawee (who becomes the acceptor) furnish the two names of recourse. If the acceptor of a commercial bill of exchange should default its payment, the drawer would also be liable. On the contrary, in the promissory note, which is usually "one-name" paper, only the maker is liable, unless the note has been endorsed by a second party. Banks often hesitate to ask for the endorsement of a regular customer's note, even though circumstances might warrant their asking it, for fear of giving sufficient offense to lose his future business. Since trade acceptances are based upon current purchases and sales of goods, they approach the banker's ideal of self-liquidation, and consequently are a high-class medium for the investment of bank funds. To the seller and the buyer of goods, as well as to the banker, trade acceptances have the undoubted advantages of putting business on practically a cash basis, of eliminating open accounts that are so apt to become overdue and to obstruct the flow of future business, and of keeping the sources of bank credit fresh through constant liquidation.

In addition to the instrumentality of promissory notes, and trade bills or acceptances, credit may also be extended through a third medium, the *banker's bill of exchange* or *banker's acceptance*. Bankers' bills are drawn upon banks instead of on ordinary business houses as trade bills are. When a bank agrees to pay such a bill of exchange according to its terms, it becomes a banker's acceptance. Bankers' bills are usually drawn by banks, and always drawn upon banks.

Bankers' bills may be used to finance either domestic or foreign trade, and the initiative in securing the bank credit may be taken by either the buyer or the seller of goods. Goods, the movement of which is financed through bankers' acceptances, consist of staple articles of commerce, agriculture, or industry, such as cotton, wool, and flour, which are readily marketable and the value of which is easily ascertained. In the United States bankers' bills have so far found their most distinctive place in financing foreign trade. Trade bills are not as acceptable, because in foreign trade the exporter cannot always easily ascertain the credit standing of the importer. If the importer, however, will arrange for the acceptance of the exporter's bill of exchange drawn upon the importer's bank, whose finan-

cial standing is known to be satisfactory, the transaction can be conveniently arranged.

The practice of extending credit in domestic trade by means of bankers' acceptances, which is of growing importance in the United States, may be illustrated as follows. Suppose that B, a manufacturer of woolen cloth in Boston, wishes to buy some wool from C, a wool merchant in Chicago, and to have sixty days in which to settle the account. Buyer B may arrange with his Boston bank, in consideration of a commission and through a properly supported agreement which he signs, to accept a bill drawn upon it by C (or C's bank). B then sends C the necessary bank authority to draw. Thereupon C ships the wool and draws the authorized bill of exchange upon the Boston bank. After attaching the bill of lading, which he receives from the transportation company, and other necessary documents to it, he may sell it to a Chicago bank at a discount and thus get immediate payment for his wool. The Chicago bank sends the bill to its Boston correspondent, who presents it to the Boston bank for acceptance. The Boston bank, having agreed to do this, stamps the usual acceptance form across the face of the bill and signs it, thereby converting the bill into a banker's acceptance. The Boston bank is now responsible for payment of the acceptance sixty days from the date it bears. The acceptance may now be sold by the Boston correspondent of the Chicago bank to an acceptance dealer and thus the Chicago bank be reimbursed. Prior to the expiration of the sixty days B must provide his bank with funds to pay the acceptance which some investing holder will present, thereby closing the entire transaction.

If the bank sells the acceptance in the open market, as is customary, it lends no funds of its own to its customer. What it does is through the instrumentality of its own good name to enable its customer to secure funds in the open market on very favorable terms. Acceptance dealers buy such paper and then sell it again, principally to banks in search of highly liquid investments. Banks may elect to buy their own acceptances (which means to advance the funds) and add them to their investment portfolio. Since bankers' acceptances are generally drawn only upon banks of widely recognized standing, they combine security with high marketability, which makes them a very desirable medium for the investment of capital funds

BANKER'S ACCEPTANCE

<u>\$50,000.00</u>	<i>Chicago, Ill.,</i>	<u>May 1, 1951.</u>
<i>Sixty</i>	<i>days from</i>	<u>sight</u>
pay to the order of _____	<i>Ourselves</i>	_____
<i>Fifty thousand</i>		Dollars
To <u>The Boston Bank</u>		
<u>Boston, Mass.</u>	<u>Chicago Wool Merchants</u>	

that the owner wishes to keep as liquid as possible. The rates at which they can be sold are lower than the rates on either customers' loans at the commercial banks or the rates on commercial paper.

CONVERSION OF PERSONAL CREDIT INTO BANK CREDIT

Bases of personal credit. In extending credit, whatever its purpose and means, the important question which every prospective creditor must consider is this: will the prospective debtor be able promptly to meet the financial obligation which he seeks to incur? If it is a case of asking for credit from a merchant, the merchant is keenly interested in knowing whether the customer will pay his bill promptly when it is presented. If it is a matter of asking for credit from a bank, the banker must be satisfied concerning the customer's trustworthiness before he is warranted in making the loan.

In extending credit either to an individual or to a business enterprise, both the character and the economic status of the borrower are matters of prime importance. A borrower's ability to obtain credit is sometimes said to rest upon four C's of credit: *character*, *capacity*, *capital*, and *collateral*. Integrity of character, evidenced by a solid reputation for faithfulness in the discharge of past obligations, is presumptive evidence of the borrower's good intentions in the future. Strong character inspires confidence. A tarnished reputation raises questions and prompts rigorous safety measures to ensure the security of a possible loan. But honesty of character alone does not suffice as a basis of personal credit. There must also be confidence in the borrower's capacity to pay. His reputation for ability, based upon certain personal qualities, training, and successful experience, gives reasonable assurance that he will in time acquire the means with which to repay the loan. The combination of character and capacity is often enough to secure necessary credit. It is the foundation of so-called "character loans" for which no other security is asked. In procuring a bank loan of any considerable size, however, or in establishing a line of credit with a bank, which enables a business enterprise to borrow up to a specified maximum amount, the unencumbered capital or resources of the borrower are of great importance. The larger the unpledged capital of a borrower, the greater is his borrowing power. But not all capital makes good collateral security for a loan, because it is not readily marketable. If the borrower is a successful business man, he is usually able to borrow something on the strength of what his own financial statement of assets and liabilities shows his net worth to be. If his resources are fairly liquid, that is, easily converted into cash, or if his business is a strong "going concern," his potential borrowing capacity is much greater than if the reverse is the case. If he has specific property, such as stocks and bonds, or real

estate, which he can conditionally assign to the person or institution lending him money, his ability to obtain credit is greatly enhanced. Lenders, whether individuals or institutions such as banks, must protect their own solvency by carefully scrutinizing the conditions on which credit is granted.

The exchange of personal credit for bank credit. If a person's credit is to be most usable in exchange transactions, it is necessary to convert it into bank credit, which is more generally acceptable. Without bank credit against which he has the right to draw, a person seeking goods in return for the promise of a future equivalent must establish his credit standing with each individual seller. With bank credit, the process is much simplified: he satisfies the bank that he is entitled to credit, obtains a loan either in the form of cash or deposit credit, and uses the funds so obtained in doing business with others.

To obtain a bank loan, an acceptable borrower must sign a promissory note in which he agrees to pay the bank a specified sum on a given date—say \$10,000 at the end of six months. The note may read either with or without interest. If it reads with interest, at an assumed rate of 5 per cent, the borrower receives \$10,000 on the date of the loan and six months later must pay the bank \$10,250 principal and interest. The process is known as lending (loaning), and the interest amounting to \$250 represents the price paid the bank for the immediate use of the funds.

If the note for \$10,000 payable six months from now reads without interest, the bank cannot afford to give the borrower the full sum of \$10,000 at the time of granting the loan. If it did so, it would receive no compensation for its services in the transaction, because the note calls for the payment of only \$10,000 at its maturity. To both borrower and lender \$10,000 today is worth more than \$10,000 six months from now. Consequently, what the bank does is to discount the note at the prevailing rate of bank discount. If it be assumed that this rate is 5 per cent, the bank discount on \$10,000 payable in six months will amount to \$250. The bank, accordingly, gives the borrower cash or deposit credit amounting to \$9,750 and six months later collects \$10,000. This process is known as discounting; discount differs from ordinary interest in that it is collected in advance by deducting it from the principal of the loan. Interest is paid at the maturity of a loan.

Whether a borrower pays interest on the principal sum of his note at maturity or accepts a bank discount of this principal sum in advance, he always has the option of taking the proceeds of the loan in cash or deposit credit. Usually, borrowers elect to receive deposit credit, because this is safest and most convenient. Since both interest and bank discount are computed on the face value of the note, it is evident that discount collected in advance is more profitable to the bank than equal interest collected at

maturity, because the bank has the immediate use of the discount. The proceeds of a note that has been discounted also represent a somewhat smaller investment to a bank than a note that must be collected at maturity; in the above situation, under the discounting operation only \$9,750 of the bank's funds are transferred to the borrower, as compared with \$10,000 in the case of a loan with interest at maturity.

ORIGIN AND STRUCTURAL DIFFERENTIATION OF BANKS

Origin of banks. As the preceding discussion on the necessity and means of converting personal credit into bank credit has shown, the institutions on which the credit system of exchange is built are the banks. The progenitor of the modern banker was the goldsmith of the Middle Ages. In great trading centers such as Venice, Genoa, London, Amsterdam, and Hamburg a large variety of coins was in circulation, many of them being of doubtful value. To determine their true equivalent value required the special knowledge and technique which the goldsmiths had, since they were workers in precious metals. Accordingly, the necessities of business compelled some goldsmiths to become money-changers. To their habit of keeping money and bullion in a strong box on a bench (called "bank" in German, "banc" in French, and "banca" in Italian), the present terms of "bank" and "banker" are doubtless due. In addition to appraising and exchanging foreign and domestic coins, these goldsmith-bankers sometimes undertook the custody of the money of their customers—a function which ultimately developed into the modern banking function of receiving deposits. While the money left with them for safekeeping was subject to the call of the depositors, experience proved that few of these called for their funds at the same time. The goldsmith-bankers had money on hand, supplied partly by themselves and partly by those who left money with them, some of which they found they could lend at interest and still meet the demands of their depositors for cash. From such simple beginnings, the intricate structure and operations of modern banking have developed. Gradually, the business of exchanging, receiving, and lending money became so profitable that many goldsmiths gave up their craft in order to devote themselves exclusively to banking. Some municipal governments, particularly of important commercial cities, set up banks of their own.

While banking of a sort was known in antiquity among the Babylonians, Egyptians, Greeks, and Romans, modern banking can trace its ancestry directly to the great Italian banks of the Middle Ages. This does not imply that banking as we know it today goes back to the Middle Ages, but rather that it had its beginnings then. The Casa di Giorgio of Genoa, established in 1148, began functioning in 1408 as a bank for the book transfer of payments. Venice had private bankers, devoting themselves to

deposit banking, in the fourteenth century. The frequent failure of such private banks led to the establishment in 1584 (1587?) of a public bank, the Banca della Piazza del Rialto, which did business until 1806. The municipal Bank of Amsterdam was established in 1609. Largely, though not exclusively, developed by private enterprise, banking affects all business so vitally that the maintenance of a strong banking system has always been a deep concern to government.

Kinds of American banks classified as to source of legal power. The banking system of the United States includes a variety of banking institutions. Some of these are chartered by the federal government and others by the states. Since the adoption of the National Banking Act in 1863 the United States Government has chartered *national banks*; not quite 5,000 such banks were in existence at the close of 1950. In 1913, after fifty years of experience with the national banking system, Congress created the federal reserve banking system, a sort of super-banking system designed particularly to federate all the national banks and eligible state banks. Twelve *federal reserve banks* were chartered by the United States Government in 1914; these have since established twenty-four branches.

With the passage of the Federal Farm Loan Act of 1916, the United States Government authorized the creation of special types of mortgage banks, designed to help finance agriculture, which ordinary commercial banks cannot do very satisfactorily. Twelve *federal farm land banks* have been established in territories roughly corresponding to the twelve federal reserve bank districts. These banks are investment banks; through the sale of securities they raise funds with which to make farm mortgage loans to local coöperative farm loan associations, composed of farm-owners who want to borrow. Twelve institutions, known as *intermediate credit banks* and managed by the federal farm land banks, provide credit for investment, not in real estate, but in livestock and in warehouse produce. Farm land banks and intermediate credit banks are both under the supervision of the Farm Credit Administration, which is the United States Government's administrative agency for supervising agricultural credit.

To help meet the financial needs of prospective home-owners the federal government in 1932 established twelve regional *federal home loan banks*. The capital stock of these banks, other than what is supplied by the United States Government, was subscribed for by member institutions, consisting principally of building and loan associations. Individual home-owners, actual and prospective, may become members of building and loan associations, and through them obtain loans with which to help finance the ownership of their homes. These loans can then be amortized over a period of years through monthly instalments. Member institutions can borrow from the federal home loan banks on the security of the home mortgages they hold and thus increase their facilities for lending to home-owners.

Although not a bank itself, the Reconstruction Finance Corporation, which was created by Congress in 1932 to help meet an emergency situation, has functioned as one of the country's leading lending institutions. The government supplied it with its initial capital of 500 million dollars, and authorized it to borrow a maximum of three times as much. During the depression of the thirties, the Reconstruction Finance Corporation was a heavy lender to the banks themselves, supplying them with funds to liquidate frozen credits and to strengthen their capital structure. Loans were also made to railroads, insurance companies, industrial and commercial corporations, and to other financial institutions of the government, such as the Home Owners' Loan Corporation. In the financial operations of the Second World War, the Reconstruction Finance Corporation, through such affiliates as the Defense Plant Corporation and the Defense Supplies Corporation, proved an indispensable agency in the advance and investment of billions of dollars. Although created as an emergency lending institution, the Reconstruction Finance Corporation has undertaken so many lending activities, some of them in competition with the banks, that it bids fair to remain with us for years to come.

In addition to the banks chartered by the United States Government, the American banking system includes a variety of *state banks*. In fact, the majority of American banking institutions are chartered by the states; on June 28, 1950, 9,700 out of a total of 14,675 banks were state institutions. Of these much the largest number were commercial banks. Loan and trust companies, savings-banks, and private banks made up the rest. Loan and trust companies specialize in the investment and care of their customers' funds, including the administration of trust estates, both of the living and of the dead. In the course of their development, however, some of them have come to assume most of the ordinary functions of commercial banks, such as receiving deposits subject to check and making commercial loans to their customers. Savings-banks accept deposits, normally small in amount and sometimes restricted as to the total, invest them as securely as possible, and pay a relatively low but certain interest rate upon them to their depositors. Private banks are unincorporated institutions, organized under general state law as sole proprietorships or partnerships and devoted very largely to investment banking. Private banks, such as those associated with the name of Rothschild in London, Paris, and other European financial centers, play an important part in the promotion of corporate enterprise, in the underwriting of security issues, and in handling the transfers of international finance.

Structural types of American banks. American banking has been intensely individualistic. Nowhere else has unit banking developed as it has in the United States. Characteristically, American banks have been unit banks, locally owned, managed by local men, and neither operated nor

affiliated with any other banking institution. The great majority of the banking offices of this country are still unit banks.

In direct contrast to unit banking stands branch banking. In a branch banking system a parent bank establishes branches in various localities, but all of the branches are controlled by the board of directors of the parent bank, and a single capital structure suffices for all branches in the system. Almost every important commercial country in the world, with the striking exception of the United States, has a system of branch banking. In Canada, with a territory approximately as large as that of the United States and a population no larger than that of metropolitan New York, the unit bank has disappeared. Ten banks with over 3,300 branches and sub-agencies do the banking business of Canada (1947). In England, too, the unit banks which flourished a century ago have almost disappeared. Instead there are branch banking systems, but the so-called "Big Five"² own and manage more than 90 per cent of these branches. In 1949 there were approximately 10,000 branches of London clearing banks covering Great Britain and Northern Ireland. Branch banking is the system in virtually all Europe and has established itself wherever European banking influence has been dominant. The system is by no means foreign to the United States, since thirty-eight of our states permit branch banking in one form or another, California being the most notable example. In California the Bank of America, with hundreds of branches, has grown to be the largest bank in the United States—and in the world (525 branches in 1950). Under the McFadden Act of 1927, Congress granted national banks the right to establish branches within the city in which the parent bank is located, provided the state concerned permits branch banking.

Because of the limited amount of branch banking allowed under the federal law and because of the positive prohibition of branch banking by some states, group banking has grown up in some parts of the United States alongside of our unit banking system. Group banking is a term used to designate a system in which ownership and control of the banks in the group are typically vested in a holding company, or in a directly controlling bank where this is legally permissible. The holding company is usually organized for the purpose by the leading stockholders of the principal banks in the projected group. In most cases the group centers around some strong, well-known metropolitan bank. The banking units in the group retain their separate capital structures, together with their distinct boards of directors and managing officers—indeed in law are unit banks—but ultimate control rests with the holding company. The Wisconsin Bankshares Corporation, The First National Bank Stock Corporation and the Northwest Bancorporation, both of Minneapolis, are familiar examples.

² Barclays, London Joint City and Midland, Lloyds, National Provincial and Union, and Westminster are the five big branch banking systems of England.

FUNCTIONS OF BANKS IN THE CREDIT SYSTEM

More important, however, as a mark of differentiation than the governmental source from which a bank derives its powers or the structural type that it represents are the functions which it performs. Banking is of two general types: commercial and investment banking. Although both of these phases of banking have frequently been handled by the same institution, they are, nevertheless, distinct and are recognized as such in the internal organization of banks. Federal law has now compelled the divorce of these functions. More distinctively than in anything else, commercial banking consists in using funds for making *short-term loans* to borrowers, which it is expected will be readily and promptly liquidated out of current earnings. Investment banking, on the other hand, is distinguished by *long-term loans* to borrowers. The investment banker purchases large issues of bonds and other high-grade securities and resells them, directly or through investment houses, to investors seeking a relatively long-term commitment of their funds. The federal reserve banks, as will be shown later in this chapter, were conceived as commercial banks; their loans, however, are usually made only to banks. The national banks and state banks are predominantly commercial banking institutions. Mortgage banks, savings-banks, and investment houses are investment banks.

Receiving deposits. Perhaps the most familiar function of commercial banks is the receipt of deposits. The deposits of a bank fall into two classes: demand deposits and time deposits.

Demand deposits are precisely what their name implies: deposits made by a bank customer subject to withdrawal upon demand. Whenever a depositor wishes to use his bank funds for any purpose, he may draw a check against them ordering the bank to pay to the specified person or bearer the amount stated in the check. The balance of his checking account with the bank will be decreased by the exact amount of every check so drawn. To offset such outgoing payments and to prevent the depletion of his checking account the bank customer must of course from time to time make new deposits of money or its equivalent in credit instruments. The greater convenience, economy, and safety of making payments with the aid of checks rather than by the direct use of money have led to the enormous growth of deposit banking in modern times. Since many checks drawn by depositors upon a given bank are redeposited in the same bank by other depositors, it is evident that the settlement of such accounts involves only bookkeeping transfers within the bank itself, some accounts being charged or debited and others being credited by like amounts. Similarly, every important bank in a financial community daily receives as deposits checks drawn upon other banks in the same community, and at the same time becomes indebted to each of them by the amount of the

checks against itself received by them. In the daily settlement between any two banks, either directly or indirectly, comparatively little cash need be used. Only the adverse balance must be paid in cash or an acceptable equivalent.³ The establishment of bank deposits, therefore, and the process of drawing checks against them greatly simplify and facilitate the transaction of business.

Time deposits represent funds left with a bank not on call but for stated periods of time. Funds thus deposited may draw interest. Withdrawal of such deposits technically requires prior notice of intention to withdraw, at least thirty days' notice usually being required. This requirement is generally not enforced except during periods of economic distress. Loss of interest on time deposits not left with a bank for the customary minimum of three months tends to reduce the number of irregular withdrawals. A larger percentage of a bank's time deposits can be invested, in less liquid forms of loans, as well as for longer periods of time, than is the case with its demand deposits, because the bank is not compelled to pay them on a moment's notice.

While it is natural to think of the process of receiving deposits as consisting of the deposit of money, the great bulk of a country's bank deposits does not originate in this way. Statistical proof of this statement is found in the fact that in the United States, for example, bank deposits in 1950 were nearly six times as large as the total supply of money in circulation. Not only cash but also credits may be deposited. The credits which help to build up a depositor's account may originate in two ways: they may be credit instruments, such as checks and drafts, drawn in his favor and left with the bank for collection (what are known as cash items); or they may be the proceeds of loans obtained from the bank by the depositor himself and entered to the credit of his checking account.

Making loans and discounts. For the dual purpose of serving the credit needs of its community and of investing its funds so as to realize earnings, a bank engages in the business of making loans and discounts. Loans are made in consideration of a price paid by borrowers; interest is the price paid by borrowers for the use of a sum of money or its equivalent for a specified period of time. Interest may be paid either upon maturity of the loan or in advance at the time that the loan is made. If interest on a loan is collected or deducted in advance it is known as discount. Unfortunately for precision in the use of words, the term *discount* sometimes also means the *process* of lending by the method of collecting interest in advance and again in the parlance of financial circles it is at times loosely used as synonymous with loans. When a bank in its financial statement lists among its assets *loans and discounts*, it enters the face value of all the loans it has made, whether the interest is payable at maturity or has been paid in ad-

³ This process of "clearing checks" is described on pp. 291-293.

vance. It is evident that on the date such a statement is made the bank understates, by the amount of the accrued interest, the value of the loans with interest and overstates, by the amount of the discount collected but not yet earned, the value at the moment of the loans that have been discounted. These apparent value discrepancies are corrected by entering as an asset *interest earned but not collected* and as a liability *discount collected but not earned*.

The loans made by a commercial bank in exchange for the promissory notes of its customers fall into two main classes: loans on collateral security and loans on the credit standing of the borrower without the pledging of specific security. If the loan is a "collateral loan," the borrower delivers to the bank securities, such as government or corporation bonds, stocks, bills of lading, or warehouse receipts showing ownership in marketable commodities, the market value of which is substantially greater than the amount of the loan. If through some mishap the borrower is unable to pay his note upon maturity and the bank is unwilling to renew it, the collateral may be sold to pay the loan, any excess of course being returned to the borrower. Loans on the general credit standing of the borrower are sometimes called "unsecured loans," which merely means that no specific property is pledged to support them. They represent a claim, however, against all the unencumbered assets of the borrower, which are presumed to be ample to meet the obligation.

In seeking a bank loan, what a customer of good financial standing wants is a more convenient and readily acceptable means of making payments than his own promissory notes afford. The cash or deposit credit which the bank extends him provides the desired medium. What the bank really does is to substitute its own credit, which is generally acceptable, for the credit of the borrower, which is not so widely acceptable.

Usually the extension of loans by a bank results in some net increase of its deposits. Deposits arising from loans are known as "derivative deposits" to distinguish them from "primary deposits," which consist of cash or cash items left with a bank. Loans are made for a purpose. Although they temporarily take the form of deposit credit equal to either the face value or the proceeds of the loans, the borrower-depositors soon check against them, thus reducing their deposit balances. These checks in turn become "primary deposits" for the banks that receive them. What part of its "derivative deposits"—those resulting from loans—an individual bank is likely to hold depends upon local banking conditions and practices. Unless the bank is isolated, from 5 to 20 per cent represents a fair estimate for banks in the United States. While from one point of view it may be said that loans result in deposits, from another it may be equally truly said that deposits tend to create loans. The reason is that a bank cannot afford to be the custodian of idle deposits, unless depositors are willing to pay the cost

of such custodianship. Normally, a bank gets its principal income from the making of loans. The bank, therefore, has a strong motive to put its deposits to work in income-producing loans or other investments. In the ordinary business of commercial banking there is a fairly constant intake of fresh deposits and an outgo of new loans. At the same time old deposits are being withdrawn through checks and other instruments of withdrawal, and maturing loans are being paid. Except under unusual circumstances, the general level of a bank's deposits and loans changes fairly slowly.

In shaping its credit policy a bank is guided by three principal considerations: the credit needs of its customers, the safety of its deposits, and the necessity of earning income to pay for its own operations. A bank is naturally interested in meeting the credit needs of its customers because the bank itself only grows with the economic development and prosperity of its community. No bank will decline to make a good loan provided it falls within the scope of its particular type of banking business and the bank directly or indirectly is able to make it. But what a bank must always consider in making loans is the safety of its deposits. Indeed, a bank's first duty is to its depositors. It should at all times have sound assets with which to pay its depositors in full and to keep its own capital unimpaired. Within the limits of such safety the profit motive impels bankers to meet the current demand for loans. In their practice of making loans some bankers get the reputation of being "conservative," which means that they put "safety first," and others of being "liberal," which means that they are disposed to take bigger chances and which in the end has often proved to mean that they have been too "liberal" with "other people's money."

There is a good deal of popular confusion concerning the lending capacity of any individual bank. It is often said that a bank simply manufactures credit, the implication being that the bank makes it out of nothing. But the old philosophical dictum *ex nihilo nihil fit* is still true and applies with great emphasis to bank credit. It is absurd to suppose that credit can be made out of nothing. Banks to a large extent direct the flow of credit, but the credit extensions themselves can only be made because of the resources of the bank supplied by its deposits, capital, and surplus.

One of the most perplexing issues in banking turns on the difference between the lending capacity of a single bank and that of the banking system as a whole.⁴ The lending capacity of any single bank is rather closely

⁴ See pioneering work of C. A. Phillips, *Bank Credit* (New York, The Macmillan Company, 1920), Chap. III, especially pp. 55-56. He has suggested a formula for calculating what an ordinary bank in normal interbank relations can lend as a result of an accretion of cash through new deposits. He supposes that a bank receives \$10,000 in new demand deposits against which it must maintain a cash reserve of 10 per cent, which was the average for banks that were members of the federal reserve banking system at the time he wrote. As a result of this increase in cash the bank is in a position to expand its loans and will be impelled to do so if there is an

restricted by its cash resources (its cash and items readily convertible into cash). When these cash reserves mount to a sum that is beyond what the law and experience dictate as necessary and desirable to meet the normal demands of depositors for cash, the lending activities of banks are stimulated to find some employment for such excess reserves. There may not be enough suitable borrowers, but this is not usually the fault of the bank. The point is that normally an increase in the cash deposits of a bank puts it in a position to expand its loans, and that it will be impelled to do so if there is an active demand, in order to invest its deposits profitably. But if an ordinary bank had the temerity to expand its loans several times over any addition to its cash resources, it would run the grave risk of losing the bulk of these loan-created deposits to other banks, which might imperil its cash position. It has been estimated that in these days of constant inter-bank relations in the United States the ordinary bank loses 80 per cent of its derivative deposits (its loan-created deposits) to other banks through the regular process of drawing checks against them. If the bank is isolated or dominates the banking life of its community, the percentage of its derivative deposits which it will retain through transfers to other accounts within the bank will be much larger than under the usual banking conditions. Since the individual bank must be prepared to part with most

active demand, in order to invest its deposits profitably. Suppose further that of its loan-created deposits (derivative deposits) the bank loses 80 per cent to other banks, because the borrowers check against their newly created deposits and the checks become the primary deposits of other banks. The Phillips formula for the possible credit expansion of a single bank is as follows:

$$x = \frac{c(1-r)}{Kr + 1 - r}$$

In this formula x = the possible expansion of loans resulting from new deposits or cash; c = the additional cash deposited which increases the bank's reserves (\$10,000); r = the required percentage of cash reserves against deposits (10 per cent), and K = the percentage of the derivative deposits which remains in the bank (20 per cent). If now the actual figures be substituted in the formula we find that

$$x = \frac{\$10,000(1 - .10)}{(.20 \times .10) + 1 - .20} = \frac{\$9,000}{.82} = \$10,975.60$$

According to this theory the loans that can be made exceed the new cash deposits by less than 10 per cent. If we assume that 80 per cent of the possible \$10,975.60 of new loan deposits will be checked out to other banks and 20 per cent will remain as derivative deposits in the bank, the bank will lose \$8,780.48 of its \$10,000 increase in cash, retaining \$1,219.52 as a net increase in its cash reserves. At the same time its derivative deposits will now stand at \$2,195.12 (\$10,975.60 -- \$8,780.48), which with the original primary deposit of \$10,000 will make the increased deposit liability as a result of these assumed transactions equal \$12,195.12. The increase in the cash reserve of \$1,219.52, if a 10 per cent cash reserve against deposits is required, will just support the increase in the loan-created deposits.

or all of what it lends, it is evident that the size of its cash reserves in relation to its deposits is the limiting factor in its capacity to lend.

Although an individual bank cannot expand its loans very much more than the amount of any increase in its cash deposits or reserves, this is not true of the banking system as a whole. Multiple expansion of credit for the system as a whole is possible because the ordinary bank does retain a percentage of its loan-created-deposits, resulting from fresh accessions of cash, even though it loses the bulk of such deposits to other banks. The part, say 80 per cent, which it loses to them is payable in cash and becomes a primary deposit for them. With increases in their cash these other banks in turn are in a position to expand their loans and will do so if there is an active demand. As a result of the ordinary dispersion of derivative deposits from bank to bank and the accompanying readjustments in their cash position, it is possible for the banking system as a whole to expand credit several times over any new accessions of cash if the banks affected are all willing to expand their loans.

The following illustration supplied by the Board of Governors of the Federal Reserve Banking System shows how there can be multiple expansion of credit for the banking system as a whole.⁵ The illustration assumes that the banking system is in need of additional cash reserves and that they can be supplied through the purchase by the federal reserve authorities of government securities in the open market. It is further assumed that the entire purchase price of \$20,000,000, for example, is deposited in a single bank.

That particular bank's deposits and reserves will both be increased by \$20,000,000. But the bank is not required to have reserves of more than 20 per cent, and 20 per cent of the increase is \$4,000,000. (The reserve required is not in fact 20 per cent at present, but about 15 per cent on the average. The figure of 20 per cent is used for greater simplicity in illustration.) Therefore, \$16,000,000 of what the bank receives is excess reserves. It lends the \$16,000,000—assuming it can find borrowers—and the whole amount, let us suppose, is checked out and deposited in a second bank. This second bank with increased deposits of \$16,000,000 against which it is required to keep reserves of only 20 per cent, or \$3,200,000, gets in consequence excess reserves of \$12,800,000. It lends these funds, and they are checked out by the borrowers and deposited in a third bank. The third bank, having to keep reserves of only 20 per cent against the increase of \$12,800,000 in its deposits, gets excess reserves of \$10,240,000 to lend. It lends, and the amount is checked out by the borrowers and deposited in a fourth bank. It is evident that this process could go on till the amounts involved for successive banks were negligibly small. Including six more banks in the illustration, or ten in all, the additional deposits, loans, and reserves made possible by the Federal Reserve Bank's disbursement of \$20,000,000 would be as follows:

⁵ *The Federal Reserve System, Its Purposes and Functions* (Washington, 1939), pp. 72-73, 75.

	<i>Additional Deposits Received</i> (100%)	<i>Additional Loans Made</i> (80%)	<i>Additional Reserves Retained</i> (20%)
1st bank	\$ 20,000,000	\$16,000,000	\$ 4,000,000
2nd bank	16,000,000	12,800,000	3,200,000
3rd bank	12,800,000	10,240,000	2,560,000
4th bank	10,240,000	8,192,000	2,048,000
5th bank	8,192,000	6,553,600	1,638,400
6th bank	6,553,600	5,242,880	1,310,720
7th bank	5,242,880	4,194,304	1,048,576
8th bank	4,194,304	3,355,443	838,861
9th bank	3,355,443	2,684,355	671,088
10th bank	2,684,355	2,147,484	536,871
Total first 10 banks	\$80,262,582	\$71,410,066	\$17,852,516
Other banks in turn	10,737,418	8,589,934	2,147,484
	\$100,000,000	\$80,000,000	\$20,000,000

These figures assume, for the sake of simplicity, that every bank is able to find borrowers for the full amount that it can lend and that the full amount of every loan is checked out to some one other bank; that there are no leftovers and that the different banks come into the picture one at a time. They make no allowance for the fact that an individual bank in making loans is not limited to its excess reserves, because it can bring them up to the required level by borrowing from its Reserve Bank.

On this basis, the figures show that the first ten banks had additional reserves of \$17,852,516, additional loans of \$71,410,066, and additional deposits of \$80,262,582. Other banks sharing in the remaining portion of the \$20,000,000 of additional reserves would increase their loans by \$8,589,934 and would have additional deposits of \$10,737,418. In the end, accordingly, an expansion of deposits amounting to \$100,000,000 would be made possible by the \$20,000,000 of additional reserves created by Federal Reserve action.

The practical consequence of this is that the Federal Reserve authorities, by supplying a *relatively small* volume of additional reserve funds, make it possible for the banking system as a whole to supply the public with a *far greater* additional volume of credit. Contrariwise, by withdrawing a relatively small amount of funds, when member banks have no excess reserves, the Federal Reserve authorities can make it necessary for the banking system to borrow the amount withdrawn or to reduce loans and investments—and consequently deposits—by several times that amount.

One very noticeable change in the operation of banks during the depression of the thirties was a sharp decline in loans. This of course drastically reduced the earnings of banks. In good times as well as bad, however, banks invest their funds not only in loans but also in high-class securities, particularly those that can readily be converted into cash. In addition to ordinary loans and discounts, including commercial paper and bankers' acceptances bought in the open market, the investment portfolio

of a typical large city commercial bank will include United States Government securities, state and municipal bonds, and the bonds of private corporations. Banks as a rule are not allowed to hold stocks. After meeting his local demand for credit from those entitled to it, the practical problem of every banker is so to invest his funds as to ensure necessary liquidity on the one hand and earning power on the other.

The statement on the following page of the condition of the Chase National Bank of New York, one of the country's largest banks, published in response to the call of the Comptroller of the Currency, which is issued to national banks at least three times per year, will illustrate some of the foregoing discussion of banking functions and at the same time furnish the reader an actual financial statement of a representative bank.

Issuing notes. The issuance of bank-notes which circulate as money is properly the function only of central banks such as the Bank of England, or of our corresponding institutions, the federal reserve banks. In the United States, however, both state and national banks have had the privilege. The power of state banks to issue circulating notes, after many abuses leading to heavy losses by their holders, was legislated out of existence in 1866 through the imposition by Congress of a tax of 10 per cent per annum on notes issued by state banks, which tax proved prohibitive. National banks, which had been established under the National Banking Act of 1863, exercised the power of issuing circulating notes until 1935. With the creation of the federal reserve banks in 1913 these institutions gradually became the exclusive agencies for the issuance of circulating notes."

Bank-notes are simply the promissory notes of banks circulating as money. Banks are obligated to pay them in other money on the demand of any note-holder who presents them. Since the notes of our national banks circulated for years (about 87 million dollars of such notes were still in circulation in 1950 in spite of the fact that they have been called for retirement), and their holders usually knew nothing of the financial standing of the bank issuing them, the issue of such notes by the national banks was strictly regulated under the law. Three conditions were imposed. First, the notes had to be secured dollar for dollar by United States bonds owned by the issuing bank and deposited with the Treasurer of the United States as a guarantee of payment. Second, the issuing bank had to maintain in the United States Treasury a redemption fund in lawful money amounting to 5 per cent of its outstanding issue. Third, the total note issue of any bank could not exceed the amount of its capital stock. The purpose of these restrictions was to limit the quantity of such notes issued and to ensure the payment of the notes regardless of the fate that might befall the banks.

⁶ For discussion of the note-issuing function of the federal reserve banks, see pp 288-291.

THE CHASE NATIONAL BANK
OF THE CITY OF NEW YORK

STATEMENT OF CONDITION, SEPTEMBER 30, 1950

RESOURCES

Cash and Due from Banks	\$1,302,922,651.36
U. S. Government Obligations	1,492,793,271.86
State and Municipal Securities	178,285,802.00
Other Securities	196,809,183.17
Mortgages	38,121,660.03
Loans	1,587,141,192.98
Accrued Interest Receivable	10,032,348.95
Customers' Acceptance Liability	26,037,521.16
Banking Houses	28,915,076.94
Other Assets	3,357,299.09
	\$4,864,416,007.54

LIABILITIES

Deposits	\$4,448,165,040.52
Dividend Payable November 1, 1950	2,960,000.00
Reserves—Taxes and Expenses	16,740,369.20
Other Liabilities	16,710,006.57
Acceptances Outstanding	32,586,003.78
<i>Less: In Portfolio</i>	4,496,226.57
Capital Funds:	
Capital Stock	\$111,000,000.00
(7,400,000 Shares—\$15 Par)	
Surplus	189,000,000.00
Undivided Profits	51,750,814.04
	351,750,814.04
	\$4,864,416,007.54

Since our bond-secured national bank-notes did not represent a flexible element in our currency, expanding and contracting with business needs, they were not really a very useful currency element. National bank-notes were largely an historical anachronism in our currency. When the national banks were established during Civil War days, these banks were given the power to issue their notes against the security of government bonds to help create a better market for government bonds and to create a safe, uniform bank-note currency. The power survived for more than seventy years. When on March 11, 1935, the United States Treasury called for redemption the only bonds that carried the circulation privilege, and when no other bonds were made eligible in their stead, the end of the national bank-note issues had come. The Treasury paid the United States bonds which were owned by the banks and deposited against their outstanding note issues. The national banks in their turn paid the Treasury sums sufficient to redeem their notes. It may take years to remove them all from the monetary circulation of the country, but the Treasury has deposits of lawful money on hand with which to redeem them, and will cancel them whenever they are presented for redemption.

Solvency and liquidity of banks. Sound banking assumes that in conducting its operation a bank will at all times remain solvent and at the same time maintain sufficient liquidity to meet the demands of its depositors for cash. A bank is solvent when the fair market value of its assets equals or exceeds its liabilities. The liquidity of a bank depends upon its cash resources and other quick assets readily convertible into cash. The resources of a bank which ensure liquidity are cash and other assets quickly convertible into cash.⁷ The liquidity of a bank is indicated by its "reserve ratio," which for the ordinary bank means the ratio of its quick assets to its demand deposit liabilities.

In practice, the reserves of a bank are further designated as "legal reserves," "primary reserves," and "secondary reserves." For banks that are members of the federal reserve banking system, legal reserves are strictly limited to prescribed percentages of deposits which the banks must carry as balances with the federal reserve bank of their district.⁸ For non-member banks the legal reserves are whatever amount in lawful money the law of the state requires to be held against deposits. Although both the form and location of the legal reserves of a bank are strictly prescribed, its actual reserves are much larger. In meeting the claims of its depositors for cash a bank first falls back on its primary reserves, which consist largely of cash

⁷ This is the "orthodox" or conservative view of liquidity. The more "liberal" view of liquidity identifies it with "shiftability" and would include in the liquid assets of a bank any investments that can readily be sold in the market.

⁸ For discussion later in this chapter of the specific legal reserve requirements of member banks of the federal reserve system and of the forms which these reserves may take, cf. pp. 283-284.

in its own vault and deposits with other banks, including the federal reserve bank of its district, as well as exchange items in process of collection. Supporting the primary reserves are the secondary reserves, which function much in the same way as a football "secondary defense" backs up the "line" that must first withstand the attack. The secondary reserves of a bank include call loans based on stock-exchange collateral, bankers' acceptances and commercial paper eligible for rediscount at the federal reserve bank, United States Government securities, and other high-grade bonds of near maturity.

The practical problem of every commercial bank is so to handle its funds as to have adequate reserves or liquidity on the one hand and on the other to make loans and investments that will produce income. The more liquid a bank, the lower its earnings will be. The main objective in the selection of the secondary reserve account of a bank is marketability in case cash is needed; the contribution of the account to the earnings of the bank, while important, is subsidiary. It is the investment account of a bank, together with its loans, which is relied upon to yield the earnings. The great bulk of a commercial bank's earnings normally comes from loans made in meeting its community's need for credit. Bonds in the investment portfolio of a bank may include government, railway, public utility, industrial, real estate, investment trust, and foreign bonds. Should it become necessary for a bank to increase reserves in order to meet some of its demand liabilities, several courses of action are open to it. It may sell some of its investments and receive either cash or bank deposit credit in exchange for them. Or it may present some of its commercial paper to its federal reserve bank (or to some correspondent bank in the case of non-member banks) for rediscount and receive either cash or deposit credit in exchange. Still another thing the bank can do to raise the ratio of its reserves to its deposit liabilities is to decrease its liabilities. Since many deposits are derived from loans, they will inevitably decrease if a bank calls its demand loans, declines to renew maturing loans, or makes it more difficult to borrow by raising its discount and interest rates and using other methods to discourage applicants for loans. If, on the other hand, liquidity is not a prime consideration and the reserve ratio can safely be lowered, a bank will pursue the opposite policy. It will convert cash or bank credit into investments, including commercial paper, bankers' acceptances, and bonds, and will make the terms and conditions for loans as attractive as possible. It is much easier, however, for a bank to restrict credit than to expand it, because it has the direct power to do the former while the ultimate decision concerning the latter rests with the potential users of bank credit. If they are not interested in borrowing because of gloomy forebodings or a dismal outlook for business, a bank can do little in expanding its loans.

THE FEDERAL RESERVE BANKING SYSTEM

The United States had no real banking *system* prior to 1914. There were many thousands of independent local banks, some of them large but most of them too small safely and adequately to discharge the usual banking functions. Twice in our history we had had a central bank. The First Bank of the United States was chartered for a twenty-year period from 1791 to 1811. It was sponsored by Alexander Hamilton and ably supported by another great Secretary of the Treasury, Albert Gallatin. It performed its function as a central bank efficiently, extending credit largely through note issues, which it kept on a thoroughly sound basis. Economic opposition to its conservative credit policies by many of the local banks, and political opposition in Congress led by Henry Clay on behalf of the agricultural interests of the West, which it was alleged were not properly served, resulted in failure to renew the charter. After five years of financial chaos intensified by the War of 1812, and during which the local banks issued unsound currency and ultimately themselves collapsed, Congress authorized the establishment of the Second Bank of the United States as a reconstruction measure. Its charter also ran for twenty years, from 1816 to 1836. After a poor start due to bad management, the Second Bank like its predecessor functioned well as a central bank, serving as the fiscal agent of the government and meeting the credit needs of business through the issue of sound notes. Again, however, political opposition arose in the West due to the conservative credit policies of the bank. Andrew Jackson, outspoken foe of the bank, was President when the question of renewing the charter of the bank came before Congress. Under the spur of his aggressive leadership the measure which would have extended the life of the bank failed to pass. From its death in 1836 to the birth of the federal reserve banking system in 1914, the United States had no institution that performed the needed functions of a central bank. It was the era of individualism in banking. Thousands of local banks, all independent of one another, were organized and operated under state, not federal, laws. The federal government after the demise of the Second Bank took no further direct part in banking until the financial exigencies of the Civil War compelled action. Then in 1863 the national banking system was created. While the national banks were created to help provide a market for government bonds and to aid the government in any financial way possible, they were in no sense a central bank. National banks, like the state banks, were local independent banks. What the country now had, and has had ever since, was two sets of local banks, one organized under state, and the other under national, laws.⁹

⁹ The defects of our state and national banking organizations prior to the establishment of the federal reserve system are discussed below in connection with the

On the twenty-third of December, 1913, fifty years after the creation of our national banks, in order to correct the palpable defects in our state and national banking organization and to give us the substance if not the form of a central bank, Congress established the federal reserve banking system. The federal reserve banks came not to destroy but to federate the thousands of local banks—national banks by compulsion, state banks by choice. The legislation came just in time, for without the federal reserve system, which was put into operation in November, 1914, it is hard to imagine how we could have financed the First World War or “carried on” during the even greater financial difficulties of the post-war years. Unquestionably, the Federal Reserve Act of 1913 inaugurated a new era in our financial history.

Structural organization of the federal reserve banking system. To appreciate the ways in which the federal reserve system serves the banking needs of the country presupposes at least an elementary understanding of the structural organization of that system. The five important agencies or parts of the system are the Board of Governors, the Federal Open Market Committee, the Federal Advisory Council, the federal reserve banks, and the member banks.

The Board of Governors. The coordinating and governing body of the system as a whole is the Board of Governors of the Federal Reserve System (until August 23, 1935, known as the Federal Reserve Board), whose headquarters are in Washington. It is now composed of seven members, all appointed to the board by the President subject to the ratification of the Senate. Relatively long tenure of office is provided through overlapping terms of fourteen years each. One of the seven appointees of the President is designated by him as chairman to serve for four years; the chairman is the active executive head of the board. Since appointment of the governing body is by the President rather than by the banks, control of our federal reserve banking system through the office of the President rests with the people. The Board of Governors of the Federal Reserve System is the unifying agency of the system; it corrects the “lack of system” which was so glaring a defect of our banking organization prior to 1914.

The Federal Open Market Committee. The seven members of the Board of Governors together with five elected representatives of the federal reserve banks constitute the Federal Open Market Committee. The representatives of the banks are elected annually by the boards of directors of the banks grouped into regions for the purpose. This committee directs the open market operations of the entire federal reserve banking system, including principally the purchase and sale of government securities for

functions of the federal reserve banks. They include lack of any coordinated unity, inelasticity of credit, inelasticity of the currency, uneconomical use of reserves, and the periodic congestion of reserve funds in the money centers.

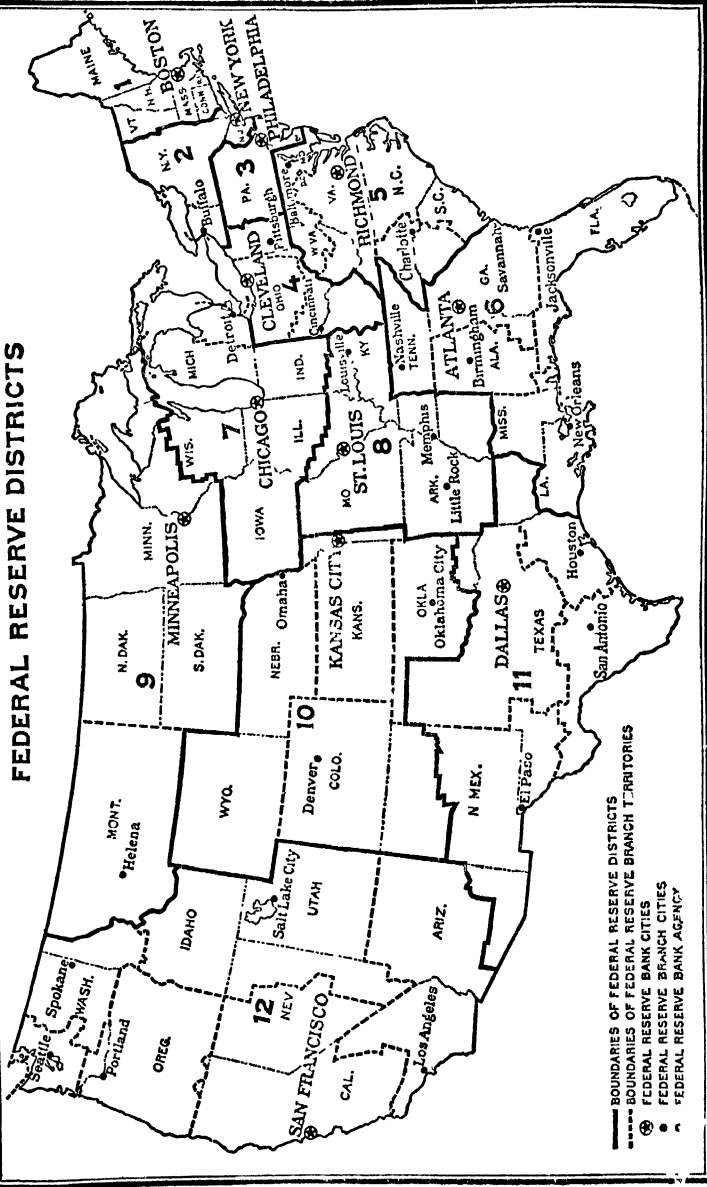
the purpose of easing or tightening the market opportunities to obtain credit.

The Federal Advisory Council. At the time of the establishment of the federal reserve system, the bankers had wanted a Federal Reserve Board whose members were to be selected by the banks. Congress and President Wilson insisted upon a board to be appointed by the President. While the law rejected the plan of the bankers, it did provide for an advisory body to be appointed by the federal reserve banks themselves, one member from each of the banking districts into which the country was divided. This Federal Advisory Council, which is largely composed of prominent bankers, periodically meets with the Board of Governors in Washington.

The federal reserve banks. In contrast to the single central banks of England, France, and Germany, our central banking organization is regional in character. The country is divided into twelve federal reserve districts and a federal reserve bank is established in each. It was the intention to draw the district boundaries in such a way as to observe natural lines of commercial and banking intercourse. Keen inter-city rivalry developed in some districts over the location of the federal reserve banks. Not all cities are yet willing to admit the wisdom of the choices made in designating certain cities as the financial centers of their districts. But the district numbers and federal reserve bank cities are as follows: 1, Boston; 2, New York; 3, Philadelphia; 4, Cleveland; 5, Richmond; 6, Atlanta; 7, Chicago; 8, St. Louis; 9, Minneapolis; 10, Kansas City; 11, Dallas; 12, San Francisco. The district boundaries are indicated on the accompanying map. After a few years of operation the Federal Reserve Act was amended to give federal reserve banks the power to establish branches and agencies within their own districts. Twenty-four such branches were in operation in 1951.

Each bank is a corporation and at present operates under an indeterminate charter. The capital stock of each federal reserve bank is owned by the banks of each district, known as member banks, who have joined the system. Member banks must subscribe for stock amounting to 6 per cent of their own paid-in capital and surplus, but so far only 3 per cent has actually been bought, the other 3 per cent remaining subject to future call. A national bank, for example, with a capital stock of \$1,200,000 and stated surplus of \$1,200,000 must subscribe for \$144,000 of the capital stock of the federal reserve bank of its district, but its present investment is only \$72,000. Member banks are entitled to receive a cumulative annual dividend of 6 per cent on their stock "if, when, and as" dividends are declared by the federal reserve banks. Any additional net earnings may now, under the Banking Act of 1933, be carried to the surplus account of the federal reserve banks. On June 28, 1950, the combined paid-in capital of the twelve federal reserve banks was \$219,074,000 and the surplus

FEDERAL RESERVE DISTRICTS



- BOUNDARIES OF FEDERAL RESERVE DISTRICTS
- - - BOUNDARIES OF FEDERAL RESERVE BRANCH TERRITORIES
- FEDERAL RESERVE BANK CITIES
- FEDERAL RESERVE BRANCH CITIES
- FEDERAL RESERVE BANK AGENCY

accounts, including "other capital accounts" resulting from undistributed earnings, \$682,291,000.

Like every other bank, a federal reserve bank is governed by a board of directors—in this case a board of nine. The board of nine directors is divided into three classes, known as A, B, and C, of three directors each. Class A directors are usually chosen from the ranks of bankers. Class B directors represent the business interests of their district and must be actively engaged in commercial, agricultural, or industrial pursuits in their district. Class C directors represent the general public. The usual procedure in electing the directors of a bank or other corporation is for each stockholder to cast as many votes as he holds shares of stock. In the present case, however, such practice would result in the control of the board by the banks having the largest capitalization. In order to give the smaller banks fair representation the member banks of each district are divided into three groups according to their capitalization: large banks, small banks, and middle-sized banks. The banks of each group elect one Class A and one Class B director or six in all. The three Class C directors are not elected by the member banks, but are appointed to the board by the Board of Governors. One of the three, a person of recognized banking experience, is designated as federal reserve agent and also as chairman of the board. He is the "contact man" between the Board of Governors in Washington and the particular federal reserve bank which he serves as chairman. Since two thirds of the bank's directors are chosen by the member banks, the banking interests are left in control of each federal reserve bank, although the Board of Governors has the power of removal. The board of directors selects its own president, who is the chief executive of the bank.

The member banks. The banks in the federal reserve system that have direct relations with the banking public are the member banks. These fall into two classes: the national banks, which are members by legal compulsion, and state banks and trust companies, which may become members by choice. It would be ideal if all commercial banks, or at least those with deposits in excess of one million dollars, were members of the federal reserve system, which is essentially a commercial banking system. Congress, however, had no direct authority over the state banks, which in number have always comprised the large majority of our banks. It could prescribe membership for the national banks but only offer membership to the state banks. If any national bank had failed to subscribe for its share of the capital stock of the federal reserve bank of its district, it would have lost its charter as a national bank. In the beginning less than a score of national banks failed to join, but in later years some withdrew and became state banks instead. State banks, to qualify for membership, must comply with certain conditions imposed upon national banks, including minimum capital requirements for cities of given size, legal reserves maintained

against deposits, limitations placed on loans, and examination by the federal reserve banks. In addition to the prestige value of membership in the federal reserve system, the advantage that member banks have in borrowing from their federal reserve banks, if occasion demands, was counted upon as a strong inducement to join for state banks doing a commercial business.

The percentage of the country's banking strength represented in the federal reserve system is evidenced by the following statistics:

NUMBER OF BANKS IN THE UNITED STATES, DECEMBER 31, 1949

Member banks .....	....	6,892
National banks	4,975	
State banks	1,917	
Non-member banks .....	....	7,795
Mutual savings-banks	528	
Other non-member banks	7,267	
Total number of banks .....	....	14,687

Numerically, nearly 47 per cent of the banks of the country are members of the federal reserve system.

LOANS AND INVESTMENTS OF ALL BANKS IN THE UNITED STATES,
DECEMBER 31, 1949
(In millions of dollars)

All banks ¹⁰	\$140,598
Member banks	101,528
Non-member banks	
Mutual savings-banks	20,384
Other non-member banks	18,686

DEPOSITS, EXCLUSIVE OF INTER-BANK DEPOSITS—ALL BANKS IN THE UNITED STATES, DECEMBER 31, 1949
(In millions of dollars)

All banks ¹⁰	\$164,467
Member banks	123,885
Non-member banks	
Mutual savings-banks	19,277
Other non-member banks	21,305

Functions of member banks. In turning attention from the structural organization of the federal reserve system to its operation, it seems best to reverse the order of discussion just followed and to consider first the

¹⁰ Mutual savings-banks were made eligible for membership in the federal reserve system by the Banking Act of June 16, 1933. Three joined in 1941. They are included in state member banks in the above table. Loans, investments, and deposits are partly estimated and are rounded to the nearest 10 million.

functions of member banks which directly serve the banking public, next the functions of the federal reserve banks for the discharge of which the whole system was created, then the duties of the Federal Advisory Council, and lastly the powers of the Board of Governors.

All that has been said earlier in this chapter about the functions of commercial banks in our credit system applies to the member banks of the federal reserve system. They are essentially commercial banks. Their primary functions are the receiving of deposits and the making of loans and discounts. Loans may be made to regular customers or in the open market through the purchase of commercial paper and bankers' acceptances. Loans may be made to brokers in the call-money market. Other investments are made to help produce needed income. In their lending and discounting operations, in their buying and selling of paper and securities, in good times as well as bad, the member banks have an unfailing source of help and counsel in the federal reserve banks.

Functions of the federal reserve banks. In the quarter-century and more of their operation, the federal reserve banks have rendered indispensable service in the custodianship of reserves, the rediscounting of commercial paper, operations in the open market, the issuance of notes, and the conduct of clearings, and in acting as fiscal agent and depository of the United States Government.

Custodianship of the central reserves of the system. To provide for the most effective mobilization of the banking strength of the country, the federal reserve banks have been made the custodians of all the legal reserves against deposits of the banks in the system. Sound banking requires that banks maintain adequate reserves against their deposit liabilities. It is mandatory under the Federal Reserve Act for member banks to keep all of their legally required reserves on deposit with the federal reserve bank of the district in which they are located. It is within their own discretion to keep as much cash in their own vaults as their local demands for currency may require. Under normal business conditions a bank receives about as much currency from some depositors as it is called upon to pay out to others.

For the purpose of reserve requirements member banks are classified into three groups according to location. Those located in New York or Chicago, which are known as "central reserve cities," must maintain in the federal reserve bank of their district a reserve of 24 per cent of their demand deposits. Those located in some sixty other large cities, known as "reserve cities," must maintain a reserve of 20 per cent of their demand deposits. All member banks located elsewhere, sometimes known as "country banks," are required to maintain a reserve of 14 per cent against their demand deposits. All member banks regardless of location are legally required to keep in the federal reserve bank of their district a reserve of 6

per cent of their time deposits. These rates became effective February 1, 1951. In the original Federal Reserve Act of 1913 the corresponding reserve ratios were 13, 10, 7, and 3 per cent. The law as it now stands permits the Board of Governors to change these original reserve requirements "in order to prevent injurious credit expansion or contraction," provided, however, that the requirements shall not be lowered at all, nor raised to more than twice the original figures. The federal reserve banks are the country's reservoir of cash reserves; this concentration of reserves makes possible their most effective use, particularly under emergency conditions.

Whenever the reserves of a member bank are running low and it becomes necessary to replenish them, two courses of action are open to the member bank: it may send cash or cash items for deposit with its federal reserve bank, or it may borrow from the latter the additional reserves that it needs. It may borrow on its own promissory note, when properly supported by collateral security, or it may borrow by rediscounting some of the commercial paper which it holds.

The reserves of member banks take the form of deposits of cash or checks with the federal reserve banks, against which these banks must also maintain proper reserves. The original Federal Reserve Act required federal reserve banks to maintain in *gold or lawful money* a reserve of 35 per cent of their deposits. An amendment of the Act in 1945 lowered this to 25 per cent. Since the nationalization of gold in 1934, by which the United States Treasury took custody of all gold, the federal reserve banks hold gold certificates in lieu of gold. The ultimate reserves in gold or lawful money against customers' deposits with member banks are reserves against reserves: 25 per cent of (24 or 20 or 14 or 6 per cent, as the case may be). Every dollar of demand deposits in a member bank located in either New York or Chicago, therefore, is actually supported by a reserve of 6 per cent in gold or lawful money in the Federal Reserve Bank of New York or Chicago. If the member bank is located in one of the large "reserve" cities, its deposits are supported by an ultimate reserve with the federal reserve bank of its district of 5 per cent, and if it is a "country bank," of 3.5 per cent. It is the requirement of maintaining gold or lawful money reserves against their own deposits, which serves as a limitation upon the power of federal reserve banks to create indefinite supplies of reserve funds through the simple expedient of lending to member banks.

Rediscounting of commercial paper. One of the basic functions of the federal reserve banks is the rediscounting of commercial paper (promissory notes and bills of exchange), when endorsed and presented for rediscount by a member bank. Banks extend credit to their customers by discounting their promissory notes or other instruments of indebtedness. If the discounting bank is itself in need of funds with which to replenish its reserves against deposits or to strengthen its cash position, it may re-

discount such paper with its federal reserve bank. The federal reserve banks provide an organized market for rediscounts of which member banks, and under emergency conditions some others, may avail themselves. If a customer wanted bank credit in the days before the federal reserve system, his ability to obtain it turned not only on his own credit standing but also on the size and location of the reserves of the individual bank with which he was doing business. In the case of the national banks federal law strictly prescribed both the amount and the location of the reserves, from 15 to 25 per cent being required, the exact amount varying with the location of the bank. In times of financial stringency it was a common occurrence that some banks had more cash in their vaults than they needed, while others had less. Fear of extraordinary demands upon them prevented banks strongly fortified with cash from freely lending to banks in need of funds. The country's banking reserves were scattered and immobile. In consequence, many perfectly sound and legitimate demands for commercial credit could not be met. We had inelasticity of credit, the inability to expand and contract loans in response to changing commercial needs. A good banking system, however, should provide elasticity of credit. This the federal reserve banks now furnish through the opportunity which member banks have of rediscounting commercial paper or discounting their own promissory notes with them.

If a member bank wishes to borrow from its federal reserve bank, the usual procedure is to present eligible commercial paper for rediscount. Within the limits of the law the Board of Governors from time to time declares what paper shall be eligible. To be eligible, paper must arise out of actual commercial transactions and be drawn for agricultural, industrial, or commercial purposes. Paper drawn for investment or speculative purposes is not eligible for rediscount. The object of excluding such paper is to prevent the resources of the federal reserve banks from becoming "frozen" and to provide for the steady liquidation of loans out of the business "turnover" which the borrowed funds make possible. Eligible paper includes commercial or industrial paper the maturity of which at the time of rediscount does not exceed three months, most bankers' acceptances also with a maximum maturity of six months, and agricultural paper which matures within nine months. All such paper when presented for rediscount must be endorsed by the presenting bank and thus becomes "two-name" paper or better. Paper arising out of transactions involving investment in or dealing in the securities of the United States is also eligible for rediscount—it is an exception to the ban against investment paper.

If a member bank is in need of short-term funds and does not wish to rediscount any of the commercial paper in its portfolio, it has the alternative of borrowing directly from the federal reserve bank on its own promissory note with a maximum maturity of four months, secured to the

satisfaction of the federal reserve bank and bearing an interest rate not less than 0.5 per cent above the current rediscount rate for eligible paper. Such extension of federal reserve credit is known as "advances" in contrast to "rediscounts."

The prevailing rate of rediscount is fixed every fourteen days by each federal reserve bank subject to the approval of the Board of Governors, although the latter may take the initiative in the matter. Under normal conditions the spread between the customers' loan rate (say 4 per cent) and the rediscount rate (say 3 per cent) is not very great. Under the abnormal conditions of a prolonged depression the differential may become much larger. As a general rule, if business is fairly normal, an increase in the rediscount rate, which must be passed on to bank customers, tends to discourage additional borrowing and thus to prevent the undue expansion of loans. Similarly, under normal business conditions, a decrease in the rate of rediscount may encourage new borrowing and stimulate a desired expansion of loans. When widespread speculation runs wild, however, as it did in the movement culminating in the crash of 1929, a moderate advance in the rediscount rate does little to cool the ardor of borrowers, who are seemingly willing to pay the higher prices for borrowed funds. And when business is prostrate, even a merely nominal rediscount rate has little effect in expanding loans because confidence in the future and the will to borrow are lacking. The only way in which the rediscount rate can directly affect the market rate for customers' loans is in case the member banks must turn to the federal reserve banks for rediscounting and in turn pass the rates on to their customers.

When a member bank rediscounts eligible paper, whether notes or bills, with its federal reserve bank, it has the option of taking the proceeds of the loan in either cash or deposit credit. If the member bank is in need of cash with which to meet local needs, currency will be shipped. If in need for building up its reserves with the federal reserve bank, it will ask for and receive deposit credit.

Under an amendment to the Federal Reserve Act enacted June 19, 1934, federal reserve banks may make direct loans to established industrial and commercial businesses for the purpose of supplying them with working capital, provided such businesses cannot obtain the "requisite financial assistance on a reasonable basis from the usual sources." Such industrial loans represent a departure from the original commercial banking character of the system.

Engaging in open market operations. Federal reserve banks cannot only rediscount commercial paper when offered by member banks and make direct advances to them, but they can also buy and sell certain obligations and securities in the open market. An "open" market is free to anyone who wishes to buy or sell, in contrast to markets which are restricted to

their members. When federal reserve banks buy obligations and securities in the open market they are supplying the market with funds and thus helping to ease the money market. On the contrary, when they sell obligations and securities in the open market they are withdrawing funds from the market and thus helping to tighten the money market.

The character of the paper in which the federal reserve banks can deal is prescribed by law and regulated by the Board of Governors. It includes securities of the United States Government, bankers' bills or acceptances, trade acceptances, the short-term obligations of state and local governments collectively known as "municipal warrants," and the acceptances or debentures of the federal intermediate credit banks and of national agricultural credit corporations. By far the largest purchases of the federal reserve banks have consisted of United States Government securities, with bankers' acceptances ranking next. While the federal reserve banks can deal in trade acceptances, they are not authorized to buy promissory notes in the open market, although of course they can rediscount them when endorsed by member banks. The earning assets of a federal reserve bank consist principally of rediscounts and advances to member banks and of investments in the open market.

In the conduct of their open market operations the federal reserve banks act through the Federal Open Market Committee.

No federal reserve bank shall engage or decline to engage in open market operations except in accordance with the direction of and regulations adopted by the Committee. . . . The time, character, and volume of all purchases and sales of paper eligible for open market operations shall be governed with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country.¹¹

The open market operations of the federal reserve banks are a necessary supplement to their rediscounting functions, if these banks are expected to exercise any effective influence upon the rates of the money market. In rediscounting, the initiative is taken by the member banks. If they do not find it necessary to rediscount, the rates of rediscount, whether high or low, will not have any direct effect upon the market because they will not be passed on in higher or lower rates to borrowing customers. In open market operations, however, the federal reserve banks themselves take the initiative. If in the judgment of the federal reserve authorities credit should be eased and borrowing by the public stimulated, the banks may buy commercial paper and securities in the open market. Those that sell, including banks, at prices that prove attractive then have funds and the federal reserve banks have added to their own investments in paper and securities. Supplying the market with funds has a tendency to

¹¹ Banking Act of 1935, Section 205.

lower interest and discount rates and to encourage borrowing. If it seems wise to restrict credit because expansion is occurring too rapidly, the federal reserve banks may sell acceptances and securities. By so doing they are taking available funds out of the market, which has an ultimate tendency to raise interest and discount rates. Lowering the rediscount rates and buying paper and securities in the open market are the principal devices at the disposal of the federal reserve banks for making credit easier and more plentiful. Raising the rediscount rate and selling paper and securities are the corresponding means for restricting credit. Open market operations can be more or less continuous; rediscount rates are changed only periodically. Open market operations may be used to prepare the way for changes in the rediscount rates. Changes in the rediscount rate are designed to affect the price of credit directly, while open market operations are designed to affect the supply of credit and thus indirectly to influence its price. The effectiveness of open market operations and changes in the rediscount rates in controlling credit, while of real importance, is also distinctly limited. There is no unlimited supply of either funds or securities with which to operate. At times a high rediscount rate is not a deterrent, and at other times a low rate is not a stimulant, to borrowing. While the federal reserve authorities can largely control the supply of credit they have no control over the demand for it. There are also numerous markets for funds outside the immediate influence of the central money markets.

The issuance of notes. In addition to an uneconomical use of reserves and inelasticity of credit, our banking organization prior to 1914 had the glaring defect of inelasticity in our currency. Like credit, currency is inelastic when it cannot readily be expanded or contracted in response to changing needs. There was not a single elastic element in our currency prior to the establishment of the federal reserve banking system. Of the principal paper elements in our currency gold and silver certificates merely did proxy duty for equivalent amounts of gold and silver in the United States Treasury, the volume of the United States notes depended upon an act of Congress and had stood unchanged at \$346,681,016 since 1878, and the volume of national bank-notes turned on the available amount and price of the United States bonds required as collateral. The federal reserve system now provides elasticity of currency in the form of federal reserve notes, which constitute the largest single element in our currency, accounting for about 85 per cent. Although federal reserve notes are described in the original Federal Reserve Act of 1913 as "obligations of the United States Government," practically as regards issue and supporting security they resemble bank-notes—asset currency issued by the several federal reserve banks.

To facilitate issue of the federal reserve notes when they are needed, a supply of these notes (which are printed by the Bureau of Engraving

and Printing in Washington) is constantly kept available in the treasury and mints of the United States. The procedure of issuing federal reserve notes consists in the application of a federal reserve bank to its federal reserve agent (the chairman of its board and the special representative in the bank of the Board of Governors) for whatever amount of such currency it needs. It lies within the discretion of the Board of Governors to approve or refuse the application, in whole or in part, and if desirable to impose an interest charge upon the notes so issued. No interest charge, however, has so far been imposed for the purpose of restricting the amount of the issue. The notes may be put into actual circulation whenever a member bank asks for currency to meet the demands of its own customers for cash. Just as an individual may get cash from his bank by drawing against his deposit account, so a member bank may obtain cash from its federal reserve bank by having it charged to its own reserve account. The local demand for cash varies from season to season. It is universally heavy during the Christmas holidays to help finance the extensive Christmas trade, and during other holiday periods when travel and vacation activities are stimulated. In the agricultural sections of the United States larger amounts of currency are needed when crops are harvested and marketed. When the peak demand has passed, the currency not needed for hand to hand exchange finds its way back to the customers' banks and from them to the reserve accounts kept with the federal reserve banks.

The security behind the federal reserve notes accounts for their unquestioned safety. In the first place they are supported dollar for dollar by eligible collateral. From the establishment of the Federal Reserve System in 1914 to June 12, 1945, 40 per cent of the 100 per cent collateral security against the federal reserve notes had to be in gold (gold certificates after the nationalization of gold in 1934), and 60 per cent might be commercial paper. The amendment of 1945 to the Federal Reserve Act lowered this required security in gold certificates to 25 per cent, and specified that the remaining 75 per cent might be commercial paper, gold certificates, or direct obligations of the United States.¹² All such collateral

¹² As a result of the steady inflow of gold to this country during and after the First World War, the gold supplies of the banks were largely increased. Through an amendment of the Federal Reserve Act, approved June 21, 1917, the federal reserve banks received permission to issue federal reserve notes against either commercial paper or gold, without however affecting the required minimum of 40 per cent gold. With the cooperation of member banks gold accumulated in the federal reserve banks. Much of it was later used as a substitute for the commercial paper backing of federal reserve notes, which had the effect of practically making the notes gold certificates. This seemed like a radical departure from the original purpose of the Federal Reserve Act of supplying the country with an elastic currency based upon sound and highly liquid commercial paper. It was a defensible policy during times of slack demand for currency. When business was active and commercial paper abundant, federal reserve notes could readily be based upon larger volumes of commercial paper. (Footnote continues on p. 290.)

is placed in the custody of the federal reserve agent. As the commercial paper matures it may be withdrawn and replaced by equally good paper approved by the Board of Governors. In the second place, federal reserve notes constitute a first and paramount lien on all the assets of the issuing bank. Finally, since the notes are issued in the name of the United States Government they carry the implicit guaranty of payment by the government. Such warranty, however, is subordinate to the primary obligation of the federal reserve banks themselves, and there has never been any doubt about their ability to make good their notes.

If the currency is to be truly elastic it must be able to contract as well as expand in response to changing business needs. A currency that only expands and does not contract would be most unsatisfactory. Certain provisions of the law and banking practices based upon them are designed to promote retirement of the notes when the business demand for additional currency has subsided. As the commercial paper upon which these notes may be based matures, and as the volume of new commercial paper offered for discount and rediscount shrinks with a decline in the activity of business, member banks are apt to return notes that have been deposited with them to the federal reserve banks to apply on their rediscounted loans and in turn to be retired from circulation by the reserve banks. Note contraction is aided by the fact that neither member banks nor reserve banks may count federal reserve notes in their legal reserves. In addition every federal reserve bank is prohibited from putting back into circulation the notes of any other federal reserve bank which it receives in the ordinary course of business, a penalty of 10 per cent per annum of the face of the notes being imposed for any possible infraction. It is the intention of the law that the notes be returned to the bank of issue as promptly as possible when they are no longer needed.

In the years following the Second World War the supporting security of the federal reserve notes has consisted almost wholly of gold certificates and United States Government obligations rather than of self-liquidating commercial paper, as originally intended. In consequence, two-way elas-

The scarcity of commercial paper during the depression of the thirties led to another modification of the permissible security supporting federal reserve notes. The notes were heavily supported by gold due to the lack of sufficient eligible paper. For a time there was an extraordinary demand for gold due to foreign withdrawals of gold held in the United States and to domestic hoarding. To increase the amount of "free gold" in this country—that is, gold not required as a reserve for deposits and notes—the Glass-Steagall Act was passed February 27, 1932. This permitted federal reserve banks with the approval of the Federal Reserve Board to substitute United States bonds for commercial paper as all or part of the 60 per cent non-gold security for federal reserve notes. Although originally granted as an emergency power limited to one year, the right was renewed from time to time, until in 1945 Congress extended the authority for the use of direct obligations of the United States as collateral security for federal reserve notes indefinitely.

ticity is not being achieved. Expansion of the currency is easy with the plentiful supply of United States Government obligations but there is no provision for automatic contraction, such as short-term, self-liquidating commercial paper as the underlying security provided. But even so the volume of federal reserve notes does vary somewhat with changing business activities. The federal reserve note is the only elastic element in our currency, and the only one the United States has ever had.¹³

Conducting clearings. A function of federal reserve banks that is of great practical importance to individual depositors is the nation-wide clear-

¹³ For certain special reasons, including emergency conditions, federal reserve banks had the power to issue still another form of currency—the federal reserve bank-notes. This power was terminated under the amendment of June 12, 1945. These bank-notes were the direct and exclusive promises to pay of the federal reserve banks themselves. The original reason for authorizing them was to provide a substitute currency for national bank-notes, the possible retirement of which had been anticipated in the Federal Reserve Act. At the time when the Federal Reserve Act was enacted, it was thought that national banks might wish to give up their inelastic bond-secured note issues. Nothing in the act compelled them to do so or prevented them from issuing additional notes in the future. To facilitate retirement of the national bank-notes the act provided that the federal reserve banks might purchase in any one year a maximum of \$25,000,000 worth of the bonds held by national banks as support for their notes and then issue their own federal reserve bank-notes against such bonds. The national banks, however, did not see fit to give up their circulating notes, and they remained in circulation until 1935 when the circulation privilege was in effect withdrawn. In this respect the proposed use of federal reserve bank-notes proved negligible. Considerable use, however, was made of them during the First World War. Congress in 1918 passed the Pittman Act, which authorized the temporary withdrawal of silver certificates from circulation and the melting and sale as silver bullion of silver dollars in the amount of \$350,000,000. The silver was sold to Great Britain to settle adverse balances with the Orient and helped to conserve the use of gold. In place of the silver certificates so withdrawn, federal reserve bank-notes were issued, secured by short-term obligations of the United States Government. These in turn were later withdrawn when the Treasury repurchased silver and issued certificates against it. The federal reserve bank-notes functioned as "pinch hitters" to keep up the volume of our currency. Again in the banking crisis of 1933 federal reserve bank-notes were requisitioned for emergency service. When through waning confidence in the banks depositors attempted to convert a large percentage of more than forty billions of dollars of deposits into cash, the total volume of which did not much exceed seven billions, our banking system broke down. By presidential proclamation on March 6, 1933, all banks in the country were temporarily closed. A special session of the newly elected Congress passed the Emergency Bank Act of 1933. Among other things this provided for the easier issue of federal reserve bank-notes in order to supply currency for an extraordinary situation. Paper and securities, some of which were not eligible as backing for federal reserve notes, were made acceptable as security for federal reserve bank-notes. This enabled the federal reserve banks to supply the banks of the country with currency on the basis of almost any sound assets. What is more, there was no gold reserve behind the federal reserve bank-notes, which put them in sharp contrast to the federal reserve notes with the mandatory 40 per cent gold reserve. While the federal reserve bank-notes proved most useful during the banking emergency, no such extensive use of them was made as at one time seemed probable because confidence in the banks and the "deposit dollar" was soon restored. Their career was that of emergency currency.

ance of checks which these banks conduct. When an individual depositor draws a check upon his bank, the recipient may deposit it in the same bank, in another bank of the same city, or in an out-of-town bank. If the check is deposited in the bank on which it is drawn, the transaction is simple: the account of the maker is debited and the account of the payee is credited, unless the amount of the check is paid him in cash. If the check is deposited in another bank of the same city, it must be "cleared." The receiving bank may present the check for payment, along with others it has taken in during the day's business, to the bank upon which it is drawn. If the banks are located in a city of some size, the chances are that the transaction will be handled through a clearing-house. Every day a representative of each of the banks that are members of the clearing-house association will bring to the place of meeting all checks, drawn against other banks in the association, received since the last clearing by his bank. The total claims and obligations of each bank to the clearing-house can thus readily be ascertained, and only the net amounts payable to or receivable from the clearing-house need be settled in cash or in some other way acceptable to the banks in the association.

. If the check drawn by a depositor against his bank is deposited in an out-of-town bank, the chances are that the federal reserve banking system will be the agency through which it is cleared. What the clearing-house does for the banks of a city each federal reserve bank does for the banks of its district. It functions as a clearing-house not only for member banks but also for qualified non-member banks. The latter, known as non-member clearing banks, exceed the former. If the First National Bank of Chicago, for example, receives on deposit checks drawn on banks in Detroit, Indianapolis, Milwaukee, and Des Moines—all located in the seventh federal reserve district—it will send them to the Federal Reserve Bank of Chicago for collection. Banks in these other cities will do the same with the out-of-town checks which they receive, though they may act through a correspondent bank. The federal reserve banks, by debiting the accounts of banks on which the checks are drawn and crediting the accounts of banks presenting them for payment, clear the checks without the use of any currency for the settlement of adverse balances. To participate in the reserve bank clearance system non-member clearing banks maintain deposits with the federal reserve banks and agree to pay at par, without any fee for remittances, all checks drawn upon them.¹⁴ Member banks are legally required to remit at par. Approximately 80 per cent of the country's banks doing a checking business are on the federal reserve par collection list.

¹⁴ Banks drawn upon customarily made an exchange charge when cashing checks presented by holders in distant places, if the payment involved ultimate expense in shipping currency or in otherwise providing funds to pay the check.

Clearings among the twelve different federal reserve banks are made through a special device known as the "inter-district settlement fund." Even prior to the time when all gold stocks were nationalized and requisitioned for deposit in the United States Treasury, each federal reserve bank had carried part of its gold funds in a "gold settlement fund" which was kept in the United States treasury but subject to the control of the Federal Reserve Board. This was for the purpose of settling adverse clearing balances among the twelve federal reserve banks. Settlements continue to be made in this way, the only change being that the federal reserve banks now own gold certificates instead of the gold itself. Every day each of the federal reserve banks wires the Board of Governors in Washington the amount of its claims against each of the other federal reserve banks including chiefly the checks and drafts it has received for collection drawn against banks in other districts. If the obligations of the Federal Reserve Bank of Chicago to the Federal Reserve Bank of New York, for example, exceed the obligations of the latter to the former, it is a simple matter for the Board of Governors to debit the account of the Federal Reserve Bank of Chicago for the difference on the books of the "inter-district settlement fund" and to credit the account of the Federal Reserve Bank of New York. The equity of the latter in the fund has been increased at the expense of the former.

The economy and convenience of such a nation-wide system of clearings is self-evident. It has largely eliminated the wasteful shipments of currency between banks. It would be highly desirable if all banks doing a demand deposit business were at least members of the federal reserve check clearing and collection system so that the country's check transactions, which are not settled locally, could be cleared through the marvelously efficient mechanism of the "inter-district settlement fund."

Acting as fiscal agent and depository for the government. Federal reserve banks function not only as "bankers' banks" but also as banks for the United States Government. The federal reserve banks do an enormous deposit and checking account business with the federal government which does not differ in any essential respect from the business an ordinary bank does with an individual or corporate depositor. Governmental revenues may be deposited in, and checks drawn against, the federal reserve banks. The Independent Treasury System, through which the government had sought to handle its own receipts and disbursements independently of the banks and which it had maintained for approximately seventy-five years, was abolished in 1920. It was unnecessary with the federal reserve banks in successful operation. During both World Wars the various government bond issues were all issued through the reserve banks and interest coupons paid by them. It is difficult to imagine how the large-scale financing of the government during both the war and the post-war periods could possibly

have been carried on if we had not had the federal reserve banking system. The system renders indispensable service to the government in connection with financing the public debt. New government securities are handled by the federal reserve banks, who receive the applications of prospective buyers, allot them in accordance with the instructions of the Treasury, deliver them, and credit the purchase price to the account of the Treasury. This financing has led to close coöperation between the United States Treasury and the reserve banks—coöperation which at times, in the opinion of some critics, has closely resembled domination by the Treasury.

Duties of the Federal Advisory Council. The Federal Advisory Council—the third structural unit in the federal reserve banking system—is composed of twelve members, one appointed by each of the reserve banks, who usually select prominent bankers to represent their districts. The duties of the council, as suggested by its name, are purely advisory. The law provides that it shall meet in Washington at least four times each year, and may be called oftener by the Board of Governors. It may confer with, call for information from, and make recommendations to the Board of Governors. The real power of the council depends on whatever influence it can exert upon the board. It is a useful agency in bringing to the board the points of view and judgments of the bankers of the country. At various times some of the most prominent bankers of the country have served on the council.

Powers of the Board of Governors. The Board of Governors, which is the head of our banking system, functions in general in a supervisory and coördinating capacity. Its function is not to operate the reserve banks and their branches, which is the duty of their own respective boards and officers, but to supervise and integrate their operations. Unified control by the board provides the system which was lacking in our banking organization prior to 1914.

Among the more important specific powers of the board is the power of examination. Certainly most readers of this book do not need to be told that anyone who has the power to examine has far-reaching powers indeed. The board may examine federal reserve banks and also member banks. It may require the reserve banks to write off doubtful assets. It publishes a weekly consolidated statement of the condition of the federal reserve banks. In the second place, upon the affirmative vote of at least four of its seven members, in order to prevent injurious credit expansion or contraction, the board may change the reserve requirements to be maintained by member banks against their time or demand deposits. The board may not reduce the original reserve requirements of 3, 7, 10, or 13 per cent, but may raise them to a maximum of twice these amounts. Third, the board has the power to permit or to require reserve banks to rediscount the discounted paper of other reserve banks. Through the exercise of this power

the funds of the twelve federal reserve banks are practically consolidated into a single fund and the utmost possible use of it made. Such borrowing has taken place during times of both prosperity and depression, notably in 1920 and again in 1933. In the latter year it was chiefly motivated by the desire to convert assets into cash in order to meet the extraordinary demands of frightened depositors. Fourth, and perhaps most important of all, the board determines what classes of commercial paper shall be eligible for rediscount and has ultimate control over the rediscount rates. Discount rates must be established by the reserve banks for their own districts every fourteen days (oftener if required by the board) but are subject to the approval or disapproval of the board. Although the board itself has power to initiate a change in rates, such power has rarely been exercised. Fifth, supervision of open market operations rests with the board and no federal reserve bank can engage in such operations except in accordance with regulations adopted by the board. "The time, character and volume of all purchases and sales of paper in the open market shall be governed with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country."¹⁵ Finally the board supervises both the issue and the retirement of the principal element in our currency, the federal reserve notes.

Service of the federal reserve system. The activities of the federal reserve banking system have proved invaluable to both American business and the American government. During the early years of its life its outstanding service was to the government in providing the centralized banking organization through which billions of dollars' worth of government securities could be taken by the banks and gradually absorbed by the investing public. Federal reserve credit was heavily extended for the purpose. It is difficult to imagine how the United States could have functioned as the Allied nations' banker and itself participated effectively in both world wars without the federal reserve system. The service of the system to the government has been equally indispensable in financing the enormous expenditures involved in fighting the great depression of the nineteen thirties.

To American business and commercial banking it has given centralized reservoirs of cash reserves, which make possible their most effective use; rediscounts and open market operations, which provide desirable elasticity in commercial credit; a more flexible currency through the use of federal reserve notes; and an economical nation-wide system of clearings. Tested by the commercial and governmental services it has rendered, as well as by the ordinary material criteria of assets and necessary earnings, the federal reserve system has proved a highly successful venture in banking.

But the system is not a finished product. How to control reserves and to

¹⁵ The Banking Act of 1933, Section 8, Banking Act of 1935, Section 205.

carry on open market operations so to affect the supply of credit as to help business remain more stable is still an unsolved, perhaps insoluble problem. The mandatory use of the facilities and powers of the system (open market operations, changing discount rates, and within prescribed limits raising or lowering reserve requirements) in an attempt, which many critics think would prove futile, to control the price level is one of the most controversial issues of the day. How to induce thousands of state commercial banks still outside the system to become member banks and so to help make central banking policies more effective is still another troublesome problem. How to prevent the intrusion of partisan politics and how constantly to attract strong, able men to the system are perennial problems upon the solution of which the efficiency of the system largely depends.

FEDERAL DEPOSIT INSURANCE CORPORATION

One important by-product of the banking crisis of 1933, in which for a few days at least every bank in the country was closed due to the demand of frightened depositors for their money, was an irresistible political movement looking to the "insurance" of bank deposits. This took temporary legislative form in certain provisions of the Banking Act of 1933 and was made permanent in the Banking Act of 1935. The Act of 1933 created the Federal Deposit Insurance Corporation for the purpose of insuring bank deposits.

The management of the corporation is provided by a board of three directors, including the Comptroller of the Currency and two other members appointed by the President subject to the approval of the Senate. One of these appointive members is designated as chairman. The term of office is six years. Not more than two of the members of the board may belong to the same political party.

The capital stock of the Federal Deposit Insurance Corporation was all subscribed by the United States Treasury and by the federal reserve banks. The United States Government subscribed for \$150,000,000 through a direct appropriation. The federal reserve banks were required by law to contribute one half of their surplus as of January 1, 1933, to the capital of the corporation. The amount so subscribed amounted to \$139,299,566.99. As a partial offset to the loss of 50 per cent of their surplus, federal reserve banks were relieved of the legal obligation of paying the major part of their future surplus earnings, if any, to the government as a franchise tax. No dividends are payable on the stock. The Secretary of the Treasury, moreover, is authorized and directed to buy obligations of the corporation amounting to \$250,000,000 more, if in the judgment of the board of directors of the corporation such additional funds are needed for insurance.

The insurance of deposits was made mandatory for members of the

federal reserve system and optional for sound non-member banks. Insured banks are required to pay an annual assessment of 0.085 per cent upon their average deposit liability. The payment of such annual assessments provides the principal insurance fund out of which losses can be paid as they arise. Funds of the corporation must be invested in obligations of the United States or those guaranteed by the United States.

Deposits in insured banks are fully protected up to \$10,000 for each depositor. This provides 100 per cent insurance coverage to the vast majority of all the depositors in the insured banks of the country.

In the event of the failure of an insured bank, the Federal Deposit Insurance Corporation serves as receiver, if the bank is a national bank, and will also serve as receiver for a failed state bank, if state law and authorities permit. In the liquidation of the bank that has failed the corporation at once sets up a new national bank which can do a limited business, consisting principally in receiving and paying out deposits. The insurance due depositors is paid to this new bank and placed to their credit. Thus they are subject to the least possible inconvenience, and if the failed bank was an isolated institution the community likewise is not deprived of all banking facilities. The final decision in regard to the permanency of the new bank depends upon local banking conditions.

The Federal Deposit Insurance Corporation in reality sets up a cooperative system for the limited guaranty of bank deposits. The guaranty is furnished by the banks themselves and not by the government, except for the initial subscription of the government to the capital stock.

The plan of guaranteeing bank deposits is not new in our banking history. After the financial panic of 1907 eight states experimented with various plans of guaranteeing deposits.¹⁶ By 1931, the last of these state plans had been abandoned. Their failure was largely attributable to the lack of diversification of risk, since the states guaranteeing bank deposits were predominantly agricultural in their economic life; to the fact that unsound banks were taken into the state guaranty systems; and to bad management in the making of loans and investments. While the results of the state experiments of course are not conclusive as far as the federal system is concerned, they revealed certain obvious dangers which must be avoided if the federal plan is to succeed.

At the close of its first fifteen years of operations, December 31, 1948, the Federal Deposit Insurance Corporation was protecting the deposits of 13,419 commercial banks and 193 mutual savings-banks, or a total of 13,612 banks out of a total of 14,753 banks in the country.¹⁷

¹⁶ Kansas, Mississippi, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, and Washington.

¹⁷ *Annual Report of the Federal Deposit Insurance Corporation for the Year Ended December 31, 1948* (Washington, D. C., 1949), p. 72.

With reference to its first fifteen years of operations the Federal Deposit Insurance Corporation states:

At the close of 1948, more than 92 per cent of the 14,753 banks operating in the United States and possessions were insured, and almost 95 per cent of all bank deposits were liabilities of insured banks.¹⁸

In 15 years of operation, the Corporation has disbursed \$311 million in aid to 307 insured banks in difficulty. It is estimated that all but \$25 million of this amount will be recovered.¹⁹

All the banks which the Corporation has aided during the past four years have been merged with other banks and there has been no loss to depositors in these banks.²⁰

During 1948 the Federal Deposit Insurance Corporation completed the retirement of its original capital. The surplus of the Corporation is now a mutual fund which has been created through assessments paid by banks supplemented by income from the Corporation's investments. The surplus of the Corporation is the most mobile and potent part of the capital of the banking system. It is available for the defense of deposits at any insured bank in which the bank's own capital may prove inadequate to meet the stresses impinging upon that institution. This surplus is now more than \$1 billion, but because of the growth of deposits this amount is not as adequate as was formerly expected. The surplus at the end of 1948 was 7/10 of 1 per cent of the deposits in insured banks. . . . Improvements in the quality of bank assets represents one of the most significant changes that has occurred in the nation's banking system during the 15 years' existence of the Federal Deposit Insurance Corporation. In 1939, insured commercial banks owned substandard assets amounting to one-half of their capital accounts and over 5% of their deposits; in 1948 their substandard assets were about one-twelfth of capital accounts and 1/2 of 1 per cent of their assets.²¹

The federal plan of insuring bank deposits was the aftermath of the "bank holiday" of February-March, 1933, as a result of which public confidence in the banks was severely shaken. Its continued success will depend upon the admission of none but sound banks to the system, sound banking practices in the making of loans and investments, and adequate and thorough examinations by the federal authorities.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Credit is indispensable to an economic system characterized by speculative production.
2. Since the trade acceptance and promissory note are both legal obligations of a debtor, there is no essential difference between them.

¹⁸ *Ibid.*, p. 29.

¹⁹ *Ibid.*, p. xvii.

²⁰ *Ibid.*, p. 10.

²¹ *Ibid.*, p. xvii.

3. The use of bank credit in our economy enables buyers to do business with many sellers without establishing credit standing with each individual seller.
4. In shaping its credit policy, a bank is guided solely by the necessity of ensuring the safety of its deposits.
5. The only way in which the deposits of a bank can expand is through the actual deposit of cash and credit instruments by its depositors.
6. Since a bank, when it extends loans, usually increases both its liabilities and its assets, there is no limit to the lending power of banks.
7. No bank need suspend payments to its depositors so long as the total value of its assets equals the total value of its liabilities.
8. A bank can fail even though its assets exceed its liabilities.
9. When a member bank establishes reserves with a federal reserve bank, it makes possible elasticity of credit for meeting business needs.
10. A long-time loan, made by a bank to enable a business firm to enlarge its buildings, is evidenced by a credit instrument known as commercial paper and acceptable for rediscount by the federal reserve system.
11. Open-market operations of the federal reserve banks mean that any federal reserve bank may buy any stock listed on the New York Stock Exchange.
12. Federal reserve notes provide the one really elastic element in the monetary currency of our country.
13. The federal reserve system may tighten credit by selling securities on the open market.
14. If a federal reserve bank wishes to discourage lending on the part of its member banks, it may either increase its own discount rate or increase the reserves required against time and demand deposits.
15. The Federal Deposit Insurance Corporation provides 100 per cent insurance coverage for every deposit account in an insured bank.

B

1. Suppose that the following transactions are financed through credit. Show which call for investment credit and which require commercial credit.
 - a. A rubber tire manufacturer purchases raw materials amounting to \$2,000,000.
 - b. The same manufacturer hires more labor, adding \$10,000 per week to his payroll.
 - c. A textile manufacturer purchases new machinery worth \$50,000 to increase his productive capacity.
 - d. A firm conducting a department store constructs an addition to its building which necessitates an expenditure of \$100,000.
 - e. The same firm places an order for certain kinds of merchandise amounting to \$50,000 needed for the Christmas trade.
2. On the basis of \$100,000 in cash deposits, how much credit may be extended by:
 - a. a single bank?
 - b. the banking system without the federal reserve system?
 - c. the banking system with the federal reserve system?
3. a. Construct a bank balance sheet from the following data:

Cash	\$800,000
Undivided profits	550,000
Demand deposits	11,850,000
Due from other banks	3,250,000
Loans and discounts	5,000,000
Banking house and equipment	695,000
Bonds owned	9,000,000
Capital stock	2,500,000
Balance with federal reserve bank ..	2,705,000
Time deposits	5,550,000
Surplus	1,000,000

Reserve requirements for this federal reserve member bank are 18% against demand deposits and 5% against time deposits.

- b. A business man discounts a note at this bank for \$20,000 at 4 per cent for 90 days. He takes \$500 in cash, a \$1500 draft on an out-of-town bank, and the remainder in deposit credit. What changes would take place in the balance sheet if a new one were drawn up immediately after this transaction?
 - c. Can the bank make a \$100,000 loan, the proceeds of which are left on demand deposit? If not, what steps can the bank take to be able to accommodate its customers?
4. a. A federal reserve member bank discounts a trade acceptance for a commercial customer in the amount of \$40,000 for a term of 90 days at 4 per cent. The customer withdraws \$10,000 in cash and takes the balance as a deposit credit. What changes would be made in the financial statement of this member bank if a new statement were drawn up immediately after this transaction?
 - b. After the bank has held the acceptance 30 days, it rediscounts it with the Federal Reserve Bank of Chicago at 3 per cent. The member bank takes \$20,000 of the proceeds in currency (federal reserve notes) and the balance is used to build up its legal reserves. What changes would be made in the financial statement of this member bank if a new statement were drawn up immediately after this transaction?
 - c. Would the lending power of the member bank be increased by this operation?

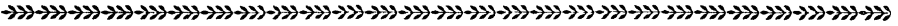
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CHAPTER XI

International Trade and Exchange



SIGNIFICANCE OF FOREIGN TRADE TO THE UNITED STATES

THE UNITED STATES, by virtue of its three million square miles of territory of unsurpassed diversity and richness and its large population of 150 millions efficient as producers and constituting the prize market of the world, could, had it chosen to do so, live a self-contained economic life more easily than any other nation. To have done so, however, would have meant to sacrifice the full advantages of specialization in production and to be content with a much lower standard of living. Except under the most primitive conditions no individual, community, or nation is really self-sufficient. Indeed the higher the standards of living and the greater the prosperity of all, the greater is their economic interdependence. Like every other people we have chosen to specialize in production and to create huge surpluses beyond our domestic ability to consume and accordingly have made ourselves dependent upon the rest of the world for markets. The development of modern methods of rapid communication and transportation has extended and intensified this drift toward productive specialization and trade. The nations of the world have wisely chosen to specialize in production and to exchange their surplus products, because such coöperation in production and trade makes possible a higher standard of living for all. But they have not been equally wise in the logic by which they have shaped their tariff policies, for tariffs are designed to hinder rather than to promote international trade.

Although our foreign trade represents only about 10 per cent of the total volume of our trade, its significance to our economic life is very much greater than this percentage indicates. In the 1920's before either the great depression of the thirties or the Second World War disturbed our economy, about one half of our cotton, one fifth of our wheat, and one third of our tobacco and pork products were exported. These exports helped to maintain our domestic prices at a profitable level and gave our cotton, wheat, tobacco, and pork producers the buying power needed to support the demand for manufactured goods. Similarly, prior to the depression of the thirties we were exporting substantial percentages of certain types of American manufactures, such as two fifths of our typewriters,

one third of our kerosene and lubricating oil, one fourth of our printing and agricultural machinery, one fifth of our locomotives, one sixth of our cash registers, and one tenth of our automobiles. The percentage of the output of an industry that is exported has a highly disproportionate effect upon the domestic prices of its products and the profits of the industry. The exported surplus prevents a glut in the home market and may spell the difference between operating at a profit or a loss. Indirectly both agricultural and manufacturing exports affect most of the rest of our economic life, because, in these days of the interdependence of all economic activities, major increases or decreases in the buying power of those engaged in agriculture and manufacturing are bound to stimulate or depress business as a whole.

Any nation that expects regularly to sell its surplus products abroad must be willing to buy commodities and services from foreign countries in exchange. Such an advantageous exchange of exports and imports makes possible a higher standard of living for the trading nation. The United States, for example, buys its entire supply of coffee and tea abroad. As a supplement to its own production of both beet- and cane-sugar it imports enormous supplies of cane-sugar, since the American people have the highest per capita consumption of sugar in the world. Fruits and spices, nuts and vegetable oils from tropical lands lend variety to the American table. Long-staple cotton from Egypt, fine wool from Australia, and silk from China and Japan add much to the quality of American clothing. The country imports all its natural rubber and a large part of its paper and materials for the manufacture of paper products.

Some idea of the growth and decline in the foreign commerce of the United States may be gathered from the first table on p. 304 showing the value of the merchandise exports and imports of the United States since 1900. To be properly comparable, of course, such figures should be corrected for changes that have taken place in the general level of prices by reducing them all to a common base such as prices obtaining in 1913 or 1926, which are now commonly taken as standard years of comparison. The high figures for 1920, for example, are partly accounted for by the fact that prices were more than twice as high as they had been a decade earlier. The high figures of the forties are of course attributable to the Second World War.

The changing composition of the foreign trade of the United States is indicated by the second table on the following page which shows the percentage distribution of the exports and imports, for selected years classified into the major commodity groups.

One striking fact brought out by the first table is the relative decline in importance of our agricultural exports and the relative increase in our exports of finished manufactured goods. With the growth in the

MERCHANDISE EXPORTS AND IMPORTS OF THE UNITED STATES EXCLUSIVE OF
RE-EXPORTS

(In thousands of dollars)

Year	Exports	Imports	Year	Exports	Imports
1900	\$ 1,453,010	\$ 829,150	1941	\$ 5,019,877	\$ 3,345,005
1905	1,599,423	1,179,145	1942	8,003,113	2,742,974
1910	1,829,023	1,562,904	1943	12,841,542	3,381,349
1915	3,493,231	1,778,597	1944	14,161,544	3,919,270
1920	8,080,481	5,278,481	1945	9,584,684	4,147,054
1925	4,818,722	4,226,589	1946	9,502,513	4,908,895
1930	3,781,172	3,060,908	1947	14,252,285	5,733,351
1935	2,243,081	2,047,485	1948	12,494,175	7,124,252
1940	3,934,181	2,625,379	1949	11,888,000	6,623,903

Statistical Abstract of the United States, 1943, p. 511 for 1900-1915, p. 509 for later years. "Values stated are in United States dollars without reference to changes in the gold content of the dollar." Idem, 1949, p. 854 for 1942-1948. Data for 1949 are from the Survey of Current Business, February, 1950, pp. S-21-22.

PERCENTAGE DISTRIBUTION OF EXPORTS AND IMPORTS OF MERCHANDISE, BY
ECONOMIC CLASSES

Commodity Groups	Per Cent of Total Exports							
	1900	1910	1920	1930	1935	1940	1945	1948
Crude materials	24.81	33.57	23.30	21.93	30.45	11.79	9.08	11.91
Crude foodstuffs	16.48	6.42	11.36	4.72	2.62	1.88	4.51	10.12
Manufactured foodstuffs ..	23.32	15.16	13.82	9.59	7.01	4.24	13.00	10.54
Semi-manufactures	11.18	15.66	11.86	13.56	15.60	22.88	8.13	10.94
Finished manufactures	24.20	29.19	39.66	50.20	44.33	59.21	65.28	56.48
Commodity Groups	Per Cent of Total Imports							
	1900	1910	1920	1930	1935	1940	1945	1948
Crude materials	33.14	37.11	33.79	32.74	28.57	39.79	28.66	30.27
Crude foodstuffs	11.52	9.30	10.94	13.07	15.81	11.22	16.97	17.93
Manufactured foodstuffs ..	15.65	11.66	23.46	9.59	15.64	10.92	11.30	10.31
Semi-manufactures	15.79	18.31	15.20	19.87	20.09	21.99	22.72	23.02
Finished manufactures	23.90	23.62	16.61	24.73	19.89	16.09	20.36	18.46

Statistical Abstract of the United States, 1943, p. 526; idem, 1941, p. 859.

American population a larger percentage of the country's agricultural products was consumed at home, and with the urbanization of the population the volume of exportable manufactures grew. The relative importance of agricultural exports and imports in the total volume of American exports and imports for selected years is set forth in the following table.

IMPORTANCE OF AGRICULTURAL PRODUCTS BY PERCENTAGES IN THE TOTAL EXPORTS AND IMPORTS OF THE UNITED STATES

<i>Yearly Average or Year Ended June 30</i>	<i>Per Cent Agricultural Exports of All Exports</i>	<i>Per Cent Agricultural Imports of All Imports</i>
1857-1861	80.4	37.1
1877-1881	80.1	51.4
1897-1901	65.8	53.4
1907-1911	53.8	49.9
1917-1921	42.6	61.5
1927-1931	35.9	51.2
1930	32.4	49.4
1931	34.2	47.8
1932	39.4	48.2
1933	41.8	52.6
1934	39.2	50.1
1935	32.1	52.2
1936	32.3	51.7
1937	26.2	53.1
1938	26.5	49.6
1939	23.7	48.0
1940	19.7	50.6
1941	8.8	52.5
1942	16.0	49.0
1943	14.8	44.7
1944	15.4	46.5
1945	17.1	43.6
1946	33.4	44.9
1947	28.1	50.6
1948	24.9	45.6

Statistical Abstract of the United States, 1943, p. 625; idem, 1949, p. 663

BASIS AND ADVANTAGES OF INTERNATIONAL TRADE

Trade whether domestic or international is of reciprocal advantage. Trade is not a transaction in which one party gains and the other party loses, but a transaction in which both parties gain, because each gives what he wants less for something that he wants more. Trade makes specialization in production both possible and profitable. If maximum productivity is to be achieved, not only individuals and communities but nations must specialize in production. But without the sequel of trade such productive specialization would be futile.

Why do nations trade with one another? One obvious reason is that no nation is really self-sufficing; international trade enables it to procure goods which it cannot produce domestically and thus makes possible a more diversified standard of living. Holland has no building stone; Ger-

many raises no silk; Switzerland has little coal or iron; the United States grows no coffee, tea, or rubber. Nations are eager to exchange their surplus products. Another almost irresistible reason for international trade is the opportunity of buying some goods more cheaply abroad than they can be obtained at home. If Great Britain, for example, has a distinct advantage in the production of fine woollens and the United States has marked superiority in the production of foodstuffs, the exchange of woollens and foodstuffs between these countries will be mutually advantageous and international trade will develop unless prohibitive tariff barriers are erected.

The basis of international trade is found in differences in the price structures of the countries concerned. If there were no differences in prices there would be no motive to trade. Differences in prices may be traced back to differences in the costs of producing the goods concerned. And differences in costs are largely attributable to the distribution, development, and allocation of resources, both material and human. *Prima facie* there is a strong case for the contention that countries should devote themselves to those industries in which their productive energies can be most effectively applied, provided the opportunities for trade are open. Departures from such an economic policy there are and always will be, but they must be justified on other than economic grounds.

The reasons for the superior effectiveness of countries in given industries are diverse. It may be a matter of climatic advantage. The climate of Brazil is more conducive to the growth of coffee than is that of the United States. It may be a matter of superior natural resources. The high-grade manganese iron ores of Russia and Brazil make these countries the leading exporters of manganese; the steel industry of the United States until recently drew virtually its entire supply of manganese from abroad. The rich natural resources of the United States enable this country to compete successfully on a cost basis for world trade in the products of the various extractive industries. Sometimes superior methods of production including up-to-date capital equipment give a country an advantage over its rivals. The long-time preeminence of Great Britain in textile manufacturing was partly due to the earlier revolutionizing of her industries through the introduction of the steam-engine and the power loom. Her early start proved a handicap to her competitors. What advantage the United States has in manufacturing is largely due to the economies of standardized mass production, such as we have in automobile manufacturing, made possible by highly efficient machine industry. Again the superior productive effectiveness of a country may be due either to cheap labor or more efficient labor. China in certain handicraft industries has an undeniable advantage in competing with other countries due to a superabundant supply of cheap labor. Her advantage is purchased, however, at the expense of the Chinese worker's standard of living. Germany long had a marked advantage in the

dyestuffs and chemical industries largely on account of the great number of highly trained chemists she had developed. For one reason or another, then, labor and capital are more effectively applied in some industries than in others, and in this fact the comparative advantage of an exporting country lies.

The classical contention that international trade is based on the law of comparative costs. The so-called classical economists, notably David Ricardo, and some economists of our own time who follow in this tradition, held that the basis and advantage of international trade lay in observance of the law of comparative costs. A country observes the principle of comparative costs in the development of its industries if it applies its labor and capital to the production of those goods in which it has the *greatest comparative advantage* or the *least comparative disadvantage* in competition with other countries. Even though a people may be able to produce a number of commodities more cheaply than these commodities can be produced in another country, it will still pay the lower-cost country to concentrate on those commodities in which it has the greatest advantage and to import the others. This principle is sometimes difficult to understand but it is illustrated constantly in daily life. A professional man may be an expert typist, even more proficient in all departments, including orthography and punctuation, than the stenographer he employs, but this is not a sufficient reason why he should divide his energies between his professional work and stenography. The presumption is that he is more productive in his profession than he would be in stenography. In their internal or regional economies nations unhesitatingly apportion their productive energies in reasonable accordance with the principle; communities specialize in the production of whatever they can produce most profitably and buy wherever they can buy most advantageously. The principle, said the classicists, is also applicable to the economies of nations. But nations are loath to apply the principle consistently for fear that they may become too dependent upon the industries of other countries, which might weaken them in the event of war. They feel safer also in developing as diversified a domestic economic life as possible because sudden and sweeping changes in tariff policies may ruin the markets for their highly specialized industries.

Perhaps the principle of comparative costs in international trade can be clarified by using a contemporary illustration in applying it to the United States and Canada, who have long been each other's best customers and in normal times have enjoyed much the same relatively high standard of living. Suppose for the sake of simplicity that we consider only two commodities, steel and newsprint paper, both of which can be produced in the two countries. Let us further assume that prices are controlled by costs and that the costs are measured and expressed in a common unit.

This common unit some of the classicists made labor costs or labor time; others spoke in terms of the real costs experienced in supplying the necessary labor and capital. Let us use the neutral (and colorless) term "units of cost or unit costs." Suppose that a ton of newsprint and a ton of steel can be produced in the United States and Canada with the expenditure of the following unit costs.

	<i>Ton of Newsprint</i>	<i>Ton of Steel</i>
Unit costs in United States	60	30
Unit costs in Canada	50	40

Under these conditions it is apparent that it costs the United States six-fifths as much to produce a ton of newsprint as it does Canada and only three-fourths as much to produce a ton of steel. On the other hand it costs Canada only five-sixths as much to produce a ton of newsprint as it does the United States but four-thirds as much to produce a ton of steel. It will therefore pay the United States to specialize in the production of steel, importing her newsprint from Canada; and it will be to the advantage of Canada to specialize in the production of newsprint, importing her steel from the United States. Of course this is upon the assumption that transportation costs and trade barriers are not prohibitive and that there is a ready market in the two countries for the steel and newsprint they regularly produce.

It is obvious, if prices follow costs, that in the United States 1 ton of newsprint will tend to sell for as much as 2 tons of steel, while in Canada 1 ton of newsprint will command only as much as $1\frac{1}{4}$ tons of steel. Canada can afford to trade 1 ton of newsprint for American steel provided she can get more than $1\frac{1}{4}$ tons of steel for it. The United States, on the other hand, can afford to pay up to 2 tons of steel for 1 ton of newsprint, because in terms of steel it would cost her that much to produce a ton of newsprint. The exchange of Canadian newsprint for American steel at a price in excess of $1\frac{1}{4}$ tons of steel and less than 2 tons of steel would be mutually advantageous.

The case just discussed presents an international trade situation in which the absolute cost of producing newsprint was lower in Canada than in the United States, and the absolute cost of producing steel was lower in the United States than in Canada. Let us now suppose that the absolute costs are both lower in the United States than in Canada as shown below. Is trade still mutually advantageous?

	<i>Ton of Newsprint</i>	<i>Ton of Steel</i>
Unit costs in United States	45	30
Unit costs in Canada	50	40

Under these changed circumstances it now costs the United States nine-tenths as much to produce a ton of newsprint as it does Canada, and three-fourths as much to produce a ton of steel, while the converse ratios hold for Canada. The United States still has the greater relative or comparative advantage in the production of steel, and Canada suffers the lesser comparative disadvantage in the production of newsprint. In the United States 1 ton of newsprint will now tend to equal in price $1\frac{1}{2}$ tons of steel and in Canada 1 ton of newsprint still tends to be worth as much as $1\frac{1}{4}$ tons of steel. Canada can still best afford to trade 1 ton of newsprint for American steel provided she can get more than $1\frac{1}{4}$ tons of steel for it, because the productive energy that went into the production of 1 ton of newsprint in Canada could also produce $1\frac{1}{4}$ tons of steel. The United States under the changed conditions can afford to pay up to $1\frac{1}{2}$ tons of steel for 1 ton of newsprint, because in terms of steel this is the American cost of producing 1 ton of newsprint. Although the United States has an absolute advantage in the production of both steel and newsprint, her comparative advantage over Canada is greater in the production of steel than of newsprint, and so it is more profitable to export the steel and import the newsprint. Canada's disadvantage is less in newsprint production than in steel, and so if the situation be confined to these two industries, she would produce the newsprint to supply her own needs and to pay for her steel imports.

The foregoing illustrations, hypothetical as to figures but dealing with two of the important export industries of the United States and Canada, have been severely simplified to show the working of the law of comparative costs or advantages in international trade. Newsprint paper and paper materials do constitute one of our leading imports, and Canada is the chief source of the supply. American iron and steel products are exported to Canada more largely than to any other country. Actual trade relations constantly show the working of the principle of comparative costs even though its application is greatly hampered and restricted.

The modern contention that international trade, like all trade, is based on differences in price structures. The assumptions in the statement of the doctrine of comparative costs, as applied to international trade, impress many modern economic theorists as strained and unrealistic. The doctrine is based upon an out-moded labor-cost theory of value, it is said. When wage levels differ between two countries, as they commonly do, one cannot say that the exchange values of Commodities A and B are directly proportional to the labor-time spent in their production. Commodity A may have been produced in one country with the expenditure of 20 hours of labor costing fifty cents per hour; Commodity B, in the other country with 10 hours of labor costing one dollar per hour. Their money costs are the same, namely, ten dollars, but the labor-time cost

of A is twice that of B. Moreover, real labor-costs and other real costs, such as those in supplying capital, are not properly comparable, unless they can be expressed in money costs. Producers do not usually keep their records in terms of hours of labor spent, but in money outlays. If the real costs of effort and sacrifice are incommensurable, one may as well base the theory of international trade on money costs and prices in the first place. This is what most recent theorists do.

If trade is legally free to move, it is the differences in the money costs and money prices of goods from country to country which determine the direction and volume of that flow. Nations tend to export their relatively low-cost goods because in producing them they have an undeniable advantage, and to import what they themselves cannot produce at all or only produce at relatively high costs. In international trade, as in domestic trade, goods tend to move from points at which they are relatively cheap to points at which they are dearer, if we may assume that the costs of delivery do not wipe out the price differential. To explain why in a given country the prices of some goods are relatively high and of others are relatively low, and to account for differences in the price structures of nations are principal tasks of international trade theory.¹ But the fact that price differences do exist and persist is what's decisive in the generation of international trade.

The doctrine of comparative costs did mark an important stage in the development of economic thought on international trade. It did furnish some basis for determining what commodities could most advantageously, or least disadvantageously, be produced for international trade. It served as a useful working hypothesis. But when the doctrine rested on differences in labor costs and these in turn were made to include all other real costs, the statement of the principle was cumbersome and its application inexact and unrealistic. Contemporary theory, on the other hand, concerns itself with investigations into the varying supplies of resources throughout the world and the international specialization in production that is based upon them. Its explanation is based on differences in money costs, which are the immediate determinants of the flow of international trade. It offers the same sort of explanation of international trade that it offers for interregional trade within a country, namely, differences in money-costs and money-prices. There is sound basis for this since most goods, in both domestic and foreign trade, are directly exchanged for claims on money rather than against other goods.

¹ For a discussion of the general equilibrium or mutual interdependence theory of international trade, cf. Bertil Ohlin, *Interregional and International Trade* (Cambridge, The Harvard University Press, 1933); P. T. Ellsworth, "A Comparison of International Trade Theories," *American Economic Review*, Vol. 30 (1940), pp. 285-289; P. T. Ellsworth, *The International Economy* (New York, The Macmillan Company, 1950), Part II.

THE INTERNATIONAL BALANCE OF PAYMENTS

Although merchandise exports and imports constitute the largest entry in our international balance of accounts, there are many others. The exportation and importation of commodities make up the so-called "visible" items in international exchange, and in ordinary speech preëempt the term "trade" for themselves. But in addition to commodities, nations exchange services, which give rise to so-called "invisible" claims against one another. Chief among these are the expenditures of foreign tourists, freight and passenger traffic charges, and interest and dividends on foreign investments. Capital movements both for short-term deposit and long-term investment constitute a third major item in the international balance of accounts. The final and balancing item in the settlement of international accounts is furnished by gold shipments, supplemented by silver and a small amount of paper currency.

Every year the Finance Division of the Bureau of Foreign and Domestic Commerce in the United States Department of Commerce issues one of the most interesting and informative reports published by the government. It is called "The Balance of International Payments of the United States." A summary of the report for 1938 follows—the last full and normal year before the outbreak of the Second World War.

SUMMARY OF UNITED STATES FOREIGN TRADE AND FINANCIAL TRANSACTIONS WITH THE WORLD, 1938

Commodity and Service Items

Merchandise trade (as reported):	
Exports (credit)	\$3,094,000,000
Imports (debit)	1,961,000,000
Balance	<u>+1,133,000,000</u>
Shipping and freight services:	
By Americans to foreigners (credit)	113,000,000
By foreigners to Americans (debit)	155,000,000
Balance	<u>— 42,000,000</u>
Tourist expenditures:	
By foreigners in United States (credit)	159,000,000
By Americans abroad (debit)	516,000,000
Balance	<u>— 357,000,000</u>
Immigrant remittances, charity, etc.:	
By foreigners to United States (credit)	35,000,000
By Americans to persons abroad (debit)	190,000,000
Balance	<u>— 155,000,000</u>

SUMMARY OF UNITED STATES FOREIGN TRADE AND FINANCIAL TRANSACTIONS
WITH THE WORLD, 1938 (*Continued*)

Commodity and Service Items

Interest and dividends:

Paid by foreigners to United States investors (credit)	\$549,000,000
Paid to foreigners investing in United States (debit)	216,000,000
Balance	+ 333,000,000

War debt receipts	+ 1,000,000
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Government transactions:

Expenses and remittances by foreign governments in United States (credit)	33,000,000
Expenses and remittances by U.S. Government abroad (debit)	98,000,000
Balance	- 65,000,000

Miscellaneous commodity and service items (net)	+ 178,000,000
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Balance on commodity and service account	+1,026,000,000
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Gold and Currency Movements

Net gold movements	-1,640,000,000
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Net silver movements	- 224,000,000
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Net currency movements	+ 15,000,000
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Balance, gold, silver, and currency movements	-1,849,000,000
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Capital Movements

Private long-term capital movements:

Credit	1,724,000,000
Debit	1,701,000,000

Balance	+ 23,000,000
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Net short-term capital movement (deposits in banks)	+ 292,000,000
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Balance on capital account	+ 315,000,000
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Residual item	+ 508,000,000
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The balance of international payments of the United States for any year is merely the best available summary of the business transactions, not of the government but of the people of the United States, with all the rest of the world. It is obvious that whatever merchandise or services the United States sells abroad must be paid for by foreign nations. What we import we must pay for. If our exports of merchandise and services to the rest of the world are not completely offset by imports, our debtors must send us gold or we must lend them the money with which to pay. What this means is that some of our residents or institutions extend short-term or long-term credit to foreigners upon the strength of which they can do business with some of the rest of our people. The exchange transactions of the United States with the rest of the world must always be

balanced in some way. Since the government does not have a record of all the business transactions of its residents with foreigners (tourists' expenditures as well as other items must be estimated) it is impossible to draw up an accurate summary of international debits and credits. Statistically, the international balance of payments of the United States for any designated period of time is a summarized list of transactions, some of which give rise to *receipts from foreigners*, while others involve *payments to foreigners*. "Since the former relate to the international income of a country, they are called 'credits'; and, since the latter relate to international outgo, they are labeled 'debits.'" ²

Examination of the preceding "Balance of International Payments of the United States in 1938" shows that our merchandise exports were 1,133 millions of dollars in excess of the merchandise imports. That made the world our debtor on the merchandise account and, unless offset by other items, called for the flow of funds to the United States. But this movement of funds was further accentuated by the fact that we collected 333 millions of dollars more in interest and dividends on private American investments abroad than we remitted to foreign investors in American securities. Likewise long-term capital transactions, such as the purchase and sale of securities and the making of direct investments in other forms of property, resulted in a net increase of 23 million dollars in the indebtedness of foreign countries to the United States. Finally, net short-term capital movements, largely in the form of deposits in our banks by foreigners for which we issued "evidences of indebtedness," further increased the credit side of our international account by 292 million dollars.

But fortunately for the world, and for us, there were also substantial debits of the United States to other nations. The expenditures of American tourists abroad, as usual, exceeded the expenditures of foreign tourists in the United States. These excess expenditures created a net obligation of the United States to the rest of the world, which in 1938 amounted to 357 millions of dollars. American residents sent a considerable sum of money to relatives and friends in foreign lands and made contributions to foreign institutions and philanthropies. This outflow of funds amounted to 155 millions of dollars more than similar remittances by foreigners to the United States. The excess payments of the United States for freight and shipping charges over the amounts received on the same account apparently amounted to about 42 millions of dollars.

It is obvious, as far as the commodity and service items in the international balance of accounts are concerned, that the credits of the people of the United States in 1938 (the sums payable to us) greatly exceeded our debits (our obligations to other people). To settle the account foreign

² United States Department of Commerce, *The Balance of International Payments of the United States in 1938*, p. 1.

nations had to draw upon their gold reserves. They did so to the net amount of 1,640 million dollars. In addition payment was made through net imports of silver by the United States amounting to 224 millions of dollars. The most striking fact about the "Balance of International Payments of the United States in 1938" is this huge importation of gold. There is not enough gold in existence in the world, nor is enough new gold being produced, to permit foreign nations long to settle their adverse balances with the United States by the transfer of so much gold. To sell more goods abroad, which is in the interests of our agriculture and industry, it will also be necessary for the United States to import more commodities and services from foreign nations. Temporarily, an excess of exports can be counterbalanced by making loans and investments abroad, but ultimately such export of capital also calls for payment through the importation of goods. Moreover, if a nation has adequate gold reserves as anchorage for its currency and credit, there is nothing desirable about the continued inflow of gold. It is a people's command over commodities and services of want-satisfying power that determines its favorable or unfavorable economic status. Gold is merely a convenient means of settling international accounts. Like the lubricating oil of a motor, it renders its highest service when it circulates. It fails to render its intended service when the circulation is clogged or stopped.

The large residual item of 508 million dollars merely represents the difference between the recorded and estimated credits and debits in the transactions of the United States with the rest of the world. It may more completely be described as "net discrepancy as a result of errors, omissions, duplications, unestimated items, and unreported transactions. Aside from indicating that the limitations of available statistical data make impossible the identification and accurate estimation of all balance-of-payments transaction, the residual item is without significance."³

It is instructive to compare the "Balance of International Payments of the United States for 1948"—a decade later—with the preceding 1938 statement. One thing that is at once apparent is that all groups of transactions were on a much larger scale, indicating the enhanced position of the United States in international trade and finance. While the higher figures are in part attributable to a higher price level (there had been an increase in wholesale commodity prices of 110 per cent in 1948 over prices in 1938), this is only part of the story. The dollar volume of merchandise trade in 1948, for example, was more than four times as great as it had been in 1938. The economic effects of the war are also plainly to be seen in some of the items. The heavy preponderance of American investments abroad, both private and governmental, over the reverse flow of foreign capital

³ United States Department of Commerce, *The Balance of International Payments of the United States in 1938*, p. 9.

to this country is largely responsible for the large excess of American credits over debits in the 1948 statement.

SUMMARY OF UNITED STATES FOREIGN TRADE AND FINANCIAL TRANSACTIONS
WITH THE WORLD, 1948

Commodity and Service Items

Merchandise trade:	
Exports (credit)	\$13,445,000,000
Imports (debit)	7,697,000,000
Balance	+5,748,000,000
Shipping and freight services:	
By Americans to foreigners (credit)	1,233,000,000
By foreigners to Americans (debit)	839,000,000
Balance	+ 394,000,000
Tourist expenditures:	
By foreigners in United States (credit)	307,400,000
By Americans abroad (debit)	600,500,000
	— 293,100,000
Immigrant remittances, charity, government aid, etc.:	
By foreigners to United States (credit)	small, but no figures avail- able
By Americans to persons abroad (debit)	710,000,000
By U.S. Government receipts (credit)	389,000,000
(This includes reverse Lend-Lease and Lend-Lease Settle- ments, etc.)	
By U.S. Government gifts and other unilateral transfers (debit)	4,150,000,000
(European Recovery Program, Post-UNRRA Aid, Interna- tional Refugee Organization, Aid to China, Interna- tional Children's Emergency Fund, etc.)	
Balance	—4,471,000,000
Interest and dividends:	
Paid by foreigners to United States investors (credit)	1,262,800,000
Paid to foreigners investing in United States (debit)	291,000,000
Balance	+ 971,800,000
Government miscellaneous services:	
Services rendered (credit)	110,000,000
Services received (debit)	856,000,000
Balance	— 746,000,000
Balance on commodity and service account	+1,603,700,000
<i>Gold Movements</i>	
Net gold movements	—1,523,000,000

SUMMARY OF UNITED STATES FOREIGN TRADE AND FINANCIAL TRANSACTIONS
WITH THE WORLD, 1948 (*Continued*)

Capital Movements

Private long-term capital movements:

Credit	\$16,762,000,000
Debit	7,336,000,000
Balance	<u>+9,426,000,000</u>

Private short-term capital movements:

Credit (deposits in American banks by foreigners)	1,669,000,000
Debit (deposits in foreign banks by Americans)	5,671,000,000
Balance	<u>-4,002,000,000</u>

United States Government investments abroad (credit)	13,052,000,000
Investments by foreigners in U.S. Government obligations (debit)	3,858,000,000
Balance	<u>+9,194,000,000</u>

United States Department of Commerce, Office of Business Economics, International Economics Division, *The Balance of International Payments of the United States, 1946-1948* (U.S. Government Printing Office, Washington, D.C., 1950) Compiled in above form from tables and charts throughout the book

**THE MECHANISM OF FOREIGN EXCHANGE FACILITATING
INTERNATIONAL TRADE AND INVESTMENTS**

International trade in commodities, the exchange of services, and capital movements for short-term and long-term investment are commonly financed through the purchase and sale of foreign bills of exchange. The process is analogous to the settlement of domestic obligations. A Chicago debtor may send his New York creditor his personal check drawn upon a Chicago bank, or possibly may purchase from his Chicago bank a draft upon a New York bank. If the creditor happens to be located in London, however, instead of New York, there is the additional complication of first converting American currency or bank credit into the amount of English pounds sterling necessary to discharge the obligation. This is accomplished through the purchase in the United States of sterling bills of exchange.

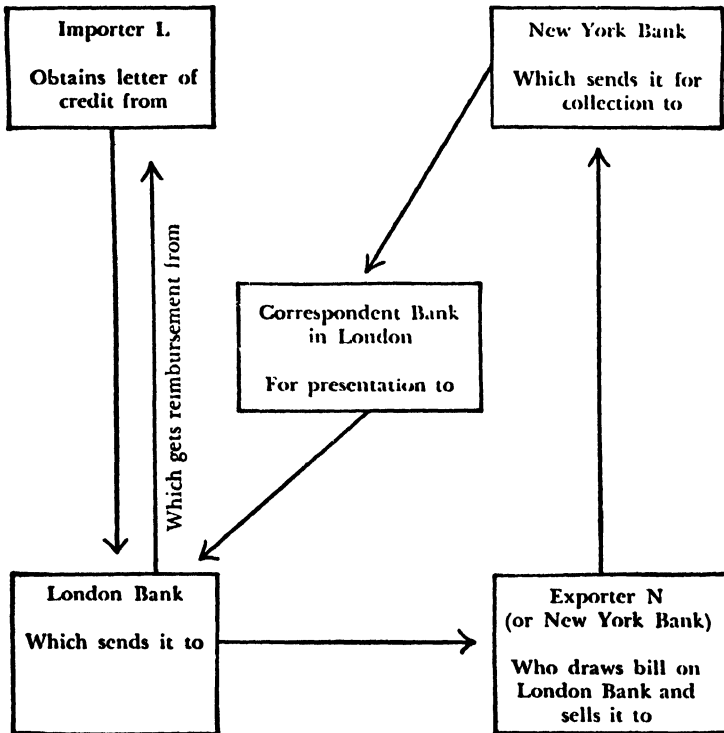
Buying and selling of foreign exchange. When we speak of buying and selling foreign exchange we mean the negotiation of such credit instruments as are used in making payments between different countries. A foreign bill of exchange is an unconditional written order addressed by one person, called the drawer, to another person, called the drawee, living in a foreign land, to pay a third person, the payee, a specified sum of money. The bill of exchange may be payable either at sight or on some definite future date. An American business house that has bought goods from a British exporter must ordinarily pay the latter in pounds, not in dollars. Accounts are payable in the currency of either the exporting or

the importing country as specified. It is incumbent upon the debtor to deliver the purchase price. The object of dealing in foreign bills of exchange for the settlement of international obligations is to avoid the necessity of shipping gold, which is costly and time-consuming. American obligations to Great Britain may be more than counterbalanced by British obligations to the United States. American debits may be canceled by British debits, and only the difference need be settled with gold, the long-time international medium of exchange.

In the financing of foreign trade and the transfer of payments there are a number of practical methods of settlement. Initiative in effecting payments may be taken by either the importer or the exporter. Let us suppose that L, an importer in London, has ordered a consignment of goods from N, an exporter in New York, and that L's credit standing is so good and his business patronage so desirable that N is willing to send him the goods "on open account." N delivers the goods to a steamship company and obtains a bill of lading as receipt. This he sends to L in order that upon its presentation to the steamship company in London, L may obtain possession of the goods. At his early convenience L goes to his London bank and procures a draft of the London bank upon its New York correspondent, in which the latter is ordered to pay N a specified amount in dollars. L sends the bank draft to N, who presents it to the New York bank for payment. L has settled the account by buying "dollar exchange" in London. It is apparent that in this transaction the credit risk was taken by the exporter. He lost control of the goods when he sent the bill of lading to L; he assumed that L was good as a credit risk; and he waited for payment. Foreign trade is not commonly financed in this way.

Since the credit standing of the importer L may not be intimately enough known by exporter N to warrant him in shipping the goods on open account, L may go to his London bank and obtain a commercial letter of credit. In this letter the London bank, whose standing is either well known or easily ascertained, authorizes the exporter either directly or through a New York bank to draw his draft, within the sum specified in the letter, upon the London bank. The letter of credit may be sent directly to the New York bank rather than to the exporter, in which case the New York bank informs N of the credit established in his favor. Although there are many details in the administration of such foreign credits, ultimately either N or his New York bank draws a bill of exchange (draft) upon the London bank for a sum in pounds sterling which equals at the prevailing rate of sterling exchange the dollar indebtedness incurred by importer L. Shipping documents must be delivered by N to the New York bank that pays him for his goods. The New York bank, having acquired the bill of exchange from N at the current rate of sterling exchange, proceeds to collect it. It is sent to the London correspondent of the New York

bank for presentation to the London bank that had issued the letter of credit to L in the first place. When presented, it may be paid on sight or may be "accepted," depending upon the instructions under which the transaction was conducted. Finally, L must reimburse his London bank for the sum advanced on his account in the importation of the American goods. The financing of imports through the use of letters of credit and the resulting issue of bankers' bills may be illustrated by the following diagram.



USE OF BANKER'S BILL AUTHORIZED BY LETTER OF CREDIT FOR FOREIGN TRADE.

Bankers' bills authorized by commercial letters of credit are widely used in the financing of foreign trade. To the exporter they have the advantage that he can get immediate payment for his goods; to the importer, that he can conveniently finance the shipment of the goods he wants. The credit risk is carried by the banks, who are compensated for carrying it and find profitable employment for their funds.

In both of the methods so far considered for settling an international trade transaction bank credit was employed, and the initiative for procuring it was taken by the importer. Bankers' bills were the medium of payment. Still another way, though not as frequently used as formerly, is

provided when the exporter draws a documentary bill of exchange directly upon the importer and sells it to a bank or other agency in his own home market. British merchants, for example, who imported American cotton and wheat, commonly authorized the exporters to draw upon them for the amount of the purchase price. When the importing houses have well-known and unquestioned credit standing, and are located, as British merchants are, in an important financial center, such an arrangement is simple and has much to commend it.

The steps in the process of drawing a documentary trade bill, in the main, are as follows. N, a New York exporter of cotton, ships 100 bales of cotton to L, a London importing house. N delivers the cotton to the steamship company, obtains a bill of lading, buys a marine insurance policy to cover the risk in transit, and executes or obtains certain other necessary documents, such as invoices and inspection certificates. He attaches these documents to the trade bill of exchange which he draws upon L. Since N wants payment for his cotton as soon as possible in order to replenish his working capital, he may take the bill of exchange with all documents attached to his New York bank and offer it for sale. If N is in good financial standing, the bank will buy the bill, even though it may not be thoroughly informed in regard to the credit standing of L. The New York bank looks to L for payment, but N is also liable, and in addition it has title to the cotton. The bank sends the bill to its London correspondent for collection. When L pays the bill of exchange drawn upon him, he obtains the bill of lading which enables him to claim the cotton from the transportation company.

The purchase and sale of bills of exchange, whatever their differences in form and terms, are the conventional means of financing foreign trade, and banks provide the usual market. Since international trade and finance involve the translation of the currency of one country into the currency of other nations, the next point that must be considered is the price or rate of foreign exchange. Two situations confront us: the case of nations whose currencies are on a gold basis, and the case of countries whose currencies are on an inconvertible paper money basis.

Price or rate of foreign exchange on a gold basis. If exporter N in New York has a foreign bill of exchange calling for the payment of pounds sterling arising out of a cotton transaction, what price in dollars will he be able to get for this sterling bill? The price of foreign exchange, like the market price of anything else, is an expression of the interaction of the demand for and supply of the good in question—in the present case, bills of foreign exchange. The price payable in a given country, such as the United States, for any unit of foreign currency payable in the foreign country concerned, is the rate of exchange between the two countries. Into the price of foreign exchange, if the countries concerned are on a

gold basis, there normally enter three factors: the amount of pure gold in the monetary units to be exchanged; the cost of shipping gold between the countries concerned; and the general credit conditions between the countries prevailing at the time the foreign exchange transaction takes place.

Par of exchange. The par of exchange of the dollar with the currency of any gold-standard country is found by comparing the amounts of pure gold in the two monetary units. The gold sovereign officially still contains 113.0016 grains of pure gold; although England suspended redemption in gold in September, 1931, no devaluation of the gold content of the sovereign has as yet occurred. The American dollar prior to January 31, 1934, contained 23.22 grains of pure gold. The old par of exchange between sterling and the dollar—perhaps the best-known par of exchange ratio in the world, because it stood so long and linked the world's two leading currencies—was obtained by dividing 113.0016 by 23.22, which gives as quotient 4.8665. When \$4.8665 had to be paid in New York for one pound sterling payable in London, sterling exchange stood at par. Since the pound sterling is now a paper unit, irredeemable in gold, there is no mint parity of the pound and the dollar, even though the latter has been fixed at 13.71 grains of pure gold.

The par of exchange is not identical with the price or rate of foreign exchange. The market rate of exchange rarely stands at par, and then only because of determining market conditions. Market rates fluctuate about the par of exchange within limits set by the cost of shipping gold.

Cost of shipping gold. The actual price of foreign exchange, in normal times and under the operation of an international gold standard, fluctuated between points, above and below par, determined by adding to or subtracting from the par of exchange the expense of shipping gold. It used to cost between two and three cents to transport one pound sterling in gold between London and New York. Crating charges, freight, insurance, and loss of interest during transit of the gold were the chief items of expense. When a two-cent charge prevailed, therefore, the upper and lower points, technically known as the gold shipping points, were fixed at \$4.8865 and \$4.8465. Sterling exchange in New York fluctuated between these points. The range of fluctuation was extremely narrow.

Why could not the rate of sterling exchange in New York rise above or fall below these points? The rate did not rise above \$4.8865 per pound sterling because if an American debtor had been charged more he could have elected to ship gold in the settlement of his obligation, rather than to send a credit instrument. While individual buyers of foreign exchange for the settlement of their commercial accounts hardly cared to go to this trouble, it was not necessary to do so. Professional dealers in foreign exchange were always alert to take advantage of any temporary fluctuations

in exchange rates which might make it profitable to ship gold. If the price of sterling exchange temporarily rose above \$4.8865, American banks found it profitable to ship gold and to continue to sell bills of exchange on London. Consequently, they could afford to sell sterling exchange at the upper gold point to all that wanted it.

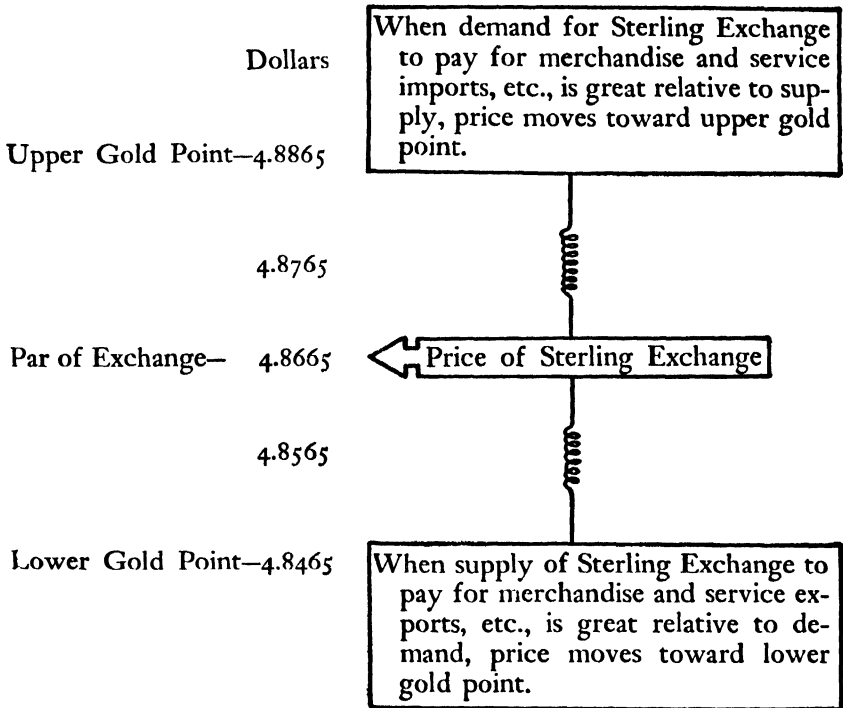
Similarly, the rate of sterling exchange in New York could fall to the lower gold point, but not lower. The supply of sterling exchange in New York arose out of bills drawn upon British debtors by American creditors—to pay for American exports to Britain, for example. In selling sterling exchange in the American market, the American exporter or other creditor did not have to accept less than \$4.8465 per pound sterling of obligation. If he had been offered less, either he or someone acting for him would have found it more profitable to import the gold. When a bank bought proffered sterling exchange (or any other exchange), it did so in the expectation that it would be able also to sell such exchange to others. If there was a long-continued excess of the supply offered over the demand for it, banks buying the exchange that was offered thereby built up their foreign bank balances but without adequate use for them. Consequently, they had to consider bringing the funds home. This involved the cost of shipping gold. Under such circumstances, bankers buying sterling exchange discounted each pound sterling of obligation by the cost of shipping gold pounds from London to New York. At this lower gold shipping or import point bankers could afford to buy whatever sterling exchange was offered.

General credit conditions. The actual rate of exchange between any two countries, within the limits fixed by the cost of shipping gold, was determined by the relation between the demand for and the supply of bills of exchange, which in turn depended upon the trade and credit relations of the two countries. Under normal trade conditions, sterling exchange is bought and sold in New York and in every other important foreign exchange center; dollar exchange, in London and in every other center. When an American buys sterling exchange, he wants to convert some of his own currency or bank deposit credit into an equivalent amount of pounds sterling credit in London with which he can do business there. Similarly, when an American has sterling exchange to sell, he wishes to convert pounds sterling that stand to his credit into equivalent American dollars here. Whatever necessitates the transfer of funds from New York to London⁴ is a source of demand for bills of exchange on London. Whatever necessitates the transfer of funds from London to New York is a

⁴ New York, London, and other foreign exchange centers are used in this entire discussion as convenient illustrations of their respective countries. They are clear-ance centers. The demand for and supply of foreign bills of exchange may originate anywhere in the country.

source of supply of bills of exchange on London, if settlement be made by drawing on British debtors.

Sterling exchange may be wanted for a variety of reasons in New York. Normally the demand springs from the necessity of paying for merchandise imports from Great Britain. It may be due to services rendered Americans by some British business companies engaged in ocean transportation or marine insurance. The exchange may be wanted to pay the ex-



DETERMINATION OF THE PRICE OF STERLING EXCHANGE IN NEW YORK

penditures of American tourists and residents in Great Britain who find London an attractive and easy place in which to spend money. Again it may be wanted to pay the interest and dividends on British capital invested in American enterprise. Or the demand may arise from the need of paying for British securities bought by American investors. Still another reason is that British residents may have deposits in American banks which they seek to withdraw, and sterling exchange is bought in order to effect settlement.

The supply of sterling exchange in the American market of course originates out of the required movement of funds in the opposite direction, that is, from London to New York. Those who have claims on British bank

balances and wish to convert them into dollars supply the sterling exchange in New York. The supply of sterling exchange, for example, may be created out of collections for merchandise exports or for services performed.

Whenever the demand for sterling exchange exceeds the supply, sterling exchange goes above par, but usually not above the upper gold point. Whenever the supply of sterling exchange offered exceeds the demand for it, sterling exchange goes below par, but usually not below the lower gold point. The rise of sterling exchange, or any other foreign exchange, above par is an indication of a net outward flow of funds, just as a fall below par signifies a net inflow of funds. If the fluctuation in exchange rates is wide enough, it will lead to the export or import of gold. The particular rate of foreign exchange, then, in any given market is fundamentally a resultant of the relative strength of the demand for and supply of the bills of exchange in question.

The foregoing diagram may help to visualize the interplay of forces in the determination of the price of sterling exchange in New York.

Price of foreign exchange on an irredeemable paper basis. When two countries are off the gold standard, or one is off and the other is on, and in consequence gold is not free to move in the settlement of international payment balances, there are no fixed limits to the fluctuations of exchange rates between them. The swings in the foreign exchange rates of countries operating on an irredeemable paper basis may be both wide and violent. Such was frequently the case during the depression of the thirties, when almost all nations were forced to abandon the gold standard. When one or both of the currencies to be exchanged are on an irredeemable paper base the problem of determining the rate of exchange between them resolves itself first of all into ascertaining in some way the equivalent value of the currencies. The common denominator of a gold currency parity is not available. What is the gold dollar worth in paper pounds sterling? Or what is the equivalent value of the paper pound in some other paper unit such as the French franc? When an equivalent value of the currencies has been established, the actual exchange rates will still fluctuate about this temporary norm in accordance with the relative strength of the demand for and supply of the bills of exchange of the country under consideration.

One way of ascertaining par of exchange between countries using inconvertible paper currency is to compare the amounts of each paper currency required to buy a given amount of gold in the free gold market or the amounts required to buy a currency that is still on the gold standard. During most of the depression of the thirties the gold dollar served as such a convenient standard of measurement. If the rates at which paper pounds and paper francs will buy gold dollars are known, the ratio of the pound or franc to the dollar can then be calculated as a sort of gold price par. Of

course if all nations are off the gold standard, or if there is no free gold market, even this method of calculating temporary parities breaks down. Moreover, any such parity between paper currencies is momentary, since the paper currency prices of a quantity of gold or of a gold currency unit fluctuate. But it is, nevertheless, useful in the day-by-day transactions in foreign exchange.

If it is impossible to ascertain the comparative value of paper currencies by reference to gold, recourse may be taken to the purchasing power parity method. This method of computation involves a comparison of the domestic or internal purchasing power of the paper currencies—of comparing the purchasing power of money in the countries concerned. It is a matter of ascertaining how much of American money will buy the same quantity of goods at home as the paper pound, for example, will buy in England. The purchasing power of a monetary unit is measured by an index of the general price level. Prices of selected commodities in some base year, such as 1913 or 1926, are taken as 100 per cent. Prices of these same commodities at any other time may then be expressed as a percentage of the prices in the base year; the percentage is the index number of prices. For most of 1933, for example, both the dollar and the pound sterling were paper units. The old gold parity was \$4.86. If the price index of the United States stood at 66 and the comparable price index of England at 75, prices were higher in England than in the United States and the purchasing power of the pound in relation to the dollar was declining. It accordingly should have required fewer dollars to buy a pound than formerly. Mathematically, purchasing power parity may be computed by multiplying the old gold parity (4.86) by the price index of the United States (66) and dividing the product by the price index of England (75). ($\$4.86 \times 66$) $\div 75 = \$4.27$. Actual foreign exchange rates of two irredeemable paper currencies will not approximately equal such purchasing power parity, but will tend to fluctuate about it.

The purchasing power par of his currency does enable an international trader to estimate what the purchasing power of his currency over foreign goods should be. Unfortunately it is neither an accurate nor a steady gauge. There is lack of accuracy because there is no uniformity either in the selection of items for computing the price index or in the statistical treatment of them. There is a margin of error because the index number expressing changes in the general wholesale-price level may fluctuate differently from the changes in the prices of goods that are important in international trade. There is lack of steadiness because the purchasing power par must change with fluctuations in the price levels of the countries whose currencies are being compared. In spite of these limitations the method is useful in explaining the long-term movements of international exchange rates.

Controlling the price of foreign exchange. Foreign exchange rates are usually demoralized during a war, because of the hazards of shipping gold and because nations find it necessary to suspend the operation of the gold standard. During the First World War sterling sold for as high as \$7 for cable transfers (\$5.56 for drafts payable on sight) due to the heavy liquidation of British-owned securities in the American market and the inability of American banks to make the usual gold transfers. It later fell to a low point of \$3.22 due to the inability of British banks to make the necessary supporting gold shipments. Through most of the First World War period Great Britain "pegged" the price of sterling exchange in the United States at \$4.76 by standing ready to buy all offered sterling exchange at this figure. This she was enabled to do by arranging private and governmental loans in the United States. In 1940 when Great Britain was involved in an even more desperate World War, the British government again "pegged" the price of sterling exchange. This was done through an "official" rate established by the Bank of England, under which sterling exchange was bought at \$4.02½ and sold at \$4.03½. In this way the British sought to stabilize the price of sterling exchange and to prevent its decline with resulting handicaps in paying for the importation of goods.

Of greater significance than a "pegging" the price of foreign exchange is the operation of certain funds for the stabilization of foreign exchange rates. The former is a temporary war-time expedient; the latter may become a permanent control-device in international finance. If we cannot have the relatively fixed exchange rates which an international gold standard provides, we may be able to achieve fairly stable exchange rates through the use of stabilization funds. Following the general abandonment of the gold standard in 1931 foreign exchange rates were naturally highly uncertain and unstable. To keep sterling exchange as stable as possible Great Britain in 1932 established a stabilization fund known as the Exchange Equalization Account. By 1941 it amounted to 575 million pounds sterling in the form of gold, foreign exchange, and domestic currency. If the pound sterling is declining in terms of the dollar, below a rate considered desirable, the Exchange Equalization Account can enter the foreign exchange market to support the pound by offering dollars in exchange for pounds at a rate which the British officials are willing to maintain. Similarly, an undesirable rise of the pound in terms of the dollar, which might handicap British exports, may be counteracted by offering pounds in exchange for dollars at a rate considered desirable. To make its influence felt on either the demand or the supply side of the sterling-dollar exchange market, the Account must own dollars or the gold with which to acquire them from the United States Treasury.

The United States established a similar fund, known as the Exchange Stabilization Fund, in 1934. In the Gold Reserve Act of 1934 providing

for the "devaluation of the dollar" and the revaluation of gold, a "profit" of over \$2,800,000,000 was realized by the government. Of this profit \$2,000,000,000 was placed in the Stabilization Fund for the primary purpose of preventing undesirable fluctuations of the dollar in the foreign exchange market.

A number of other nations followed suit. To prevent undesirable competition in the operation of these funds and to promote the maximum possible coöperation, Great Britain, France, and the United States in the fall of 1936 entered into the so-called Tripartite Agreement. Later they were joined by Belgium, the Netherlands, and Switzerland. The funds so created and the accord so reached had a stabilizing influence upon foreign exchange rates. As long as nations continue to be on an irredeemable currency base, stabilization funds will doubtless be necessary, if foreign exchange rates are to prove conducive to international trade and finance.

Sometimes even more drastic steps are necessary to control exchange than are represented by the previously described "pegging" and stabilization operations. If as a result of the dislocations of war or the disturbances of a severe depression there is not enough foreign exchange available with which to pay for current imports, discharge short-term obligations, and service long-term debts, foreign exchange must be rationed. This requires strict government control. To make control effective it is stipulated that exporters must turn over foreign exchange acquired by them to a designated governmental agency in return for domestic currency or credit; that the foreign exchange with which to pay for imports must be arranged for with the central bank or other agency before a license to import will be granted; that import quotas be established for various classes of goods in accordance with their importance to the country concerned; and that official rates of exchange be set by the government. Foreign exchange control exists when there are "state restrictions on the purchase of foreign exchange in the open market."⁵ These restrictions on the purchase and sale of foreign exchange are of course imposed for the purpose of affecting the rates of exchange.

The practices of Germany in the nineteen-thirties furnish a notable example of virtually complete exchange control. Much of Germany's foreign exchange was directed toward acquiring indispensable war materials. This left her short of foreign means of payment with which to discharge other obligations. An elaborate system of exchange control resulted, including export subsidies, import quotas, allotments of exchange, and "blocked marks." Many of Germany's creditors as a result of exports, loans, and direct investments there, found that sums due them were "blocked": they were collectible only in German marks to be spent within Germany rather than collectible in foreign exchange. To facilitate the liquidation of short-

⁵ League of Nations, *Clearing Agreements* (Geneva, 1935), p. 10.

term debts, for example, Germany authorized the sale of "tourists' marks" at a discount of about 40 per cent from the official reichmark. The resulting stimulation of tourist expenditures in Germany provided some of the foreign exchange with which to settle short-term obligations. Similarly, cheaper marks were made available to the foreign purchasers of German goods, which was an indirect way of subsidizing German exports.⁶

Unstabilized currencies and instability in the exchange rates raise havoc with international trade and finance. Stabilization is highly desirable. But it can only come to stay when nations are willing to coöperate as neighbors, to lower tariffs, to repeal embargoes and quota restrictions on trade, and again to permit a reasonable degree of freedom in the international movement of both goods and capital.

GOVERNMENTAL AIDS IN FINANCING INTERNATIONAL TRADE

Inter-governmental loans and aids. The prospect for more effective coöperation in international trade and finance materially brightened for the post-war period as a result of the successful negotiation and adoption of a number of international agreements. Conspicuous among these was a loan in 1946 amounting to \$4,400,000,000 by the United States to Great Britain. This loan provided the British with a dollar credit line in the United States of \$3,750,000,000; the remaining \$650,000,000 was applied in the final settlement of British obligations which arose under the "lend-lease" arrangements of the Second World War, and which represented principally surplus property of the United States left in Great Britain or en route there when the war ended.⁷ After a grace-period of five years Great Britain has fifty years in which to make annual instalment payments on the loan with interest at 2 per cent.⁸ The loan was negotiated as an aid in the rehabilitation of British industry and trade. With it the British recovered more rapidly, because the line of credit enabled them to buy whatever American goods they needed without waiting for the much slower process of building up dollar credits in this country by selling more commodities and services than they bought. Without it the British standard of living would doubtless have been further impaired, as the British sought desperately to build up exports and curtail imports.

As part of the agreement the British promised to coöperate with the

⁶ Germany under the Nazi régime, beginning in 1933, entered into numerous direct barter agreements in order to get the goods she wanted for her militarized economy. She sought in this way to avoid some of the handicaps of the foreign exchange market.

⁷ For discussion of lend-lease aid, cf. pp. 822-824.

⁸ Since no interest at all is payable during the first five years, the actual interest rate for the fifty-five year period is 1.62 per cent.

United States in the reduction of tariffs and the relaxation or elimination of exchange controls. If countries in the so-called sterling area, for example, who had sold goods to Great Britain, wished to convert their pounds sterling into dollars in order to buy in the United States, the British agreed to the conversion of pounds into dollars. The carrying out of this agreement eliminated the irritations associated with blocked currencies.

The International Monetary Fund. More inclusive than the special inter-governmental loans, represented by this huge loan of the United States to Great Britain, were the international financial arrangements which grew out of the United Nations Monetary and Financial Conference at Bretton Woods in July, 1944. Late in 1945 the Bretton Woods agreements were ratified by the necessary number of nations, twenty-nine of the United Nations ratifying the agreement before December 31, 1945. Two credit agencies designed to aid international trade were authorized: the International Monetary Fund and the International Bank for Reconstruction and Development. Both were set up during 1946.

The International Monetary Fund represents a pool of national currencies and gold amounting initially to \$8,800,000,000, contributed by the member nations in accordance with a system of assigned quotas. Each member nation is expected to contribute gold amounting either to 25 per cent of its quota, or to 10 per cent of its net official holding of gold plus United States dollars, whichever is the smaller, and the balance in its national currency. The share of the United States is \$2,750,000,000, of which 25 per cent or approximately \$687,000,000 is in gold. The next largest subscriber to the Fund is the United Kingdom with a quota of \$1,300,000,000. If a member nation's assigned quota contribution to the resources of the Fund is \$100,000,000, it must contribute \$25,000,000 in gold and the rest in its own currency. If its total gold holdings, however, are only \$100,000,000, its gold contribution is cut to \$10,000,000 with the rest payable in its own currency.

The over-all management of the Fund is in the hands of a board of governors, one of whom is appointed by each member nation. The board of governors must elect twelve executive directors, who in turn select the managing director, the operating head of the Fund. The so-called Big Five—the United States, Great Britain, Russia,⁹ China and France—are authorized to name five of the full-time directors; the Latin American member nations to name two; and the other member nations, to select the remaining five directors. Voting power is based upon an arbitrary assignment of 250 votes to each member nation, plus 1 vote for each \$100,000 of its quota subscription to the Fund. This gives the United States a normal voting strength of 28 per cent of the total.

⁹ Russia failed to become one of the original members, because she not only did not ratify by December 31, 1945, but positively postponed ratification early in 1946.

The main purpose of the Fund is to help remove barriers to international trade by making it possible for any member nation to borrow any other member's currency it needs from the Fund, subject to certain quantitative limitations. If a member nation has imported more goods than it has exported, and so needs foreign exchange to settle the adverse trade balance, it can borrow the needed exchange from the Fund. The limitations are that it can borrow no more in any twelve-month period than 25 per cent of its quota contribution to the resources of the Fund, nor can it borrow beyond the point at which its debt to the Fund equals its quota plus its gold subscription. The Fund levies a small service charge on any currencies bought from it, and charges interest on loans in excess of a borrowing country's gold subscription to the Fund.

Member nations in the International Monetary Fund have agreed to abandon exchange controls and also to stabilize their currencies. The par values of their currencies are to be expressed in gold or in United States dollars of present weight and fineness, and are to be based on exchange rates as of November 1, 1945 (the sixtieth day before the agreement went into effect). A member nation, after consultation with the directors of the Fund, may change the parity rate of its currency as much as 10 per cent without the approval of the Fund. Additional changes, however, require the approval of the Fund. Member nations have agreed not to propose changes except to correct a "fundamental disequilibrium." Unauthorized changes in the par value of a country's currency may result in denial of the right to use the Fund.

The Fund is a supplement and not a substitute for the ordinary foreign-exchange market. Foreign exchange will be bought and sold by private traders as usual, loans will be negotiated between private borrowers and lenders, and gold will move between countries in the settlement of obligations. But if the ordinary supplies of foreign exchange and gold prove inadequate, the Fund stands ready to supply its members with a "line of credit" for the settlement of adverse trade balances and thus "to facilitate the expansion and balanced growth of international trade."

International Bank for Reconstruction and Development. The other financial institution sponsored at Bretton Woods, and also set up in 1946, is the International Bank for Reconstruction and Development. The Bank is designed primarily to promote the international lending of private capital. Loans may be made to restore disrupted or destroyed economies, to speed the reconversion of productive facilities from war to peace, and to hasten the development of the resources of less developed countries.

The authorized capital of the Bank is \$10,000,000,000, of which it is expected that \$9,100,000,000 will be subscribed by the nations that signed the Bretton Woods agreements, if and when they all become actual stockholders of the Bank. The capital stock allotment to the United States is

\$3,175,000,000; the next largest is that of the United Kingdom, amounting to \$1,300,000,000. Only 20 per cent of the capital stock must be paid for in advance; the other 80 per cent will be called for as needed. Of the 20 per cent, 2 per cent of the full capital stock subscription is payable in gold or United States dollars, and the other 18 per cent in the member's own currency. If and when the remaining 80 per cent subscription is called for to meet obligations of the Bank, it may be paid in gold, or in United States dollars, or in the national currency in which the Bank's obligation must be met. To be a stockholder of the Bank a nation must also hold membership in the International Monetary Fund.

The direction and management of the Bank follow the same pattern as that described in connection with the Fund. The operating head of the Bank, however, is designated as president.

As an investment institution, the Bank seems soundly built to help meet the financial needs of the post-war world. (It is not a bank receiving deposits.) The lending facilities of the Bank are available only to member nations. The Bank may lend or guarantee loans to any member nation, political subdivision thereof, or to "any business, industrial, or agricultural enterprise in the territories of a member." The Bank may make or participate in direct loans out of its own funds. It may make direct loans out of funds which it borrows itself, or it may restrict its own rôle to guaranteeing the loans made by private investors through customary channels. For direct loans out of its own funds the 20 per cent of subscribed capital is available. In direct loans, however, the country whose currency is being lent must approve the loan. When the Bank borrows funds in one country in order to lend elsewhere, it must have the approval not only of the member nation in whose market it does the borrowing, but also of the member nation in whose currency the loan is expressed. Once the funds are raised, however, the Bank has full authority over their disposition. When the Bank guarantees a private loan, it must satisfy itself that the loan-project is sound, that the borrower has reasonable prospects of making repayment, that the borrower cannot secure the loan in the private capital market under reasonable conditions, and that the government of the member nation in whose territory the project is located will guarantee the loan. Under these conditions the Bank adds its own guarantee and by virtue thereof makes the member nations "joint and several" guarantors of the loan up to the amount of their unpaid subscriptions to the capital stock of the Bank.

On its direct loans the Bank determines the interest rate and the terms of repayment. When the Bank borrows in order to lend, it is provided that the commission of the Bank shall be between 1 and 1½ per cent per annum. Similarly it is provided that when the Bank guarantees private loans it shall be paid a commission of 1 to 1½ per cent per annum for its

risk in the matter. The commissions received on either direct or guaranteed loans are put into a special reserve fund to help meet the Bank's liabilities in case borrowers default.

While the Fund is expected to help make desired foreign currencies available and to promote the stabilization of currencies, the Bank is expected to stimulate foreign trade by providing investment opportunities for nations that have capital to lend and by encouraging private lenders who might otherwise be reluctant to run the risk.

At the close of their fiscal year on June 30, 1950, the Executive Directors of the International Bank for Reconstruction and Development reported that the aggregate number of loans so far made by the Bank was 27 for a total principal amount of \$816,445,000. The operations of the Bank are intended only "to supplement private investment when private capital is not available on reasonable terms."

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. The principle of comparative costs shows that a country suffering a comparative disadvantage in the production of all its important products will have little or no foreign trade.
2. It is sometimes to the general economic advantage of a nation to import from foreign countries commodities which it could produce more cheaply at home.
3. A country with an absolute disadvantage in the production of all commodities can have no exports.
4. It is to the economic advantage of the United States to produce everything it possibly can within its own borders, thereby giving employment to American labor.
5. It is possible for a nation like England to have imports of merchandise far in excess of its exports of merchandise without causing gold to flow out of the country.
6. In view of the large volume of American investments abroad, it seems likely that the United States will have to look forward to an unfavorable balance of trade as a normal condition.
7. Since the total imports of a country must be paid for either by exports of some kind or by the granting of loans, no nation can gain by international trade.
8. It is possible for a country to experience an unfavorable balance of merchandise trade and yet during the same period enjoy a favorable balance of payments from the rest of the world.
9. Creditor countries under normal conditions should expect to have unfavorable balances of trade.
10. The United States cannot long maintain a large export balance and still expect to receive payment of principal and interest on foreign investments.

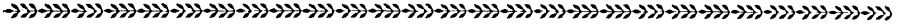
11. When the United States reduced the amount of pure gold in the dollar, the par of exchange between American money and the moneys of other countries on the gold standard was changed.
12. There can be no fluctuations in the rates of exchange between countries which are on the gold standard.
13. If all nations had the same standardized unit of value, there would be no fluctuations in the rates of international exchange.
14. In the absence of the gold standard, stabilization funds are necessary to ensure stability in the foreign exchange market.
15. The stability of the currencies of countries customarily trading with the United States is of importance to the welfare of the United States.
16. If the price of sterling exchange is above par in New York, when Great Britain and the United States are both on the gold standard, it is evident that a favorable American balance of payments exists with Great Britain.
17. A higher interest rate in London than in New York tended to raise the rate of sterling exchange in New York, when both Great Britain and the United States were on the gold standard.
18. The sale of a large part of the American cotton crop each autumn to English manufacturers tends to lower the price of the pound sterling in New York.
19. By traveling in Europe American tourists can help European countries to pay their debts to the United States.
20. Merchandise imports into the United States from Great Britain have the same effect upon the price of sterling exchange as dividend payments on American securities owned by the British.

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CHAPTER XII

The Regulation of International Trade: Protectionism and Free Trade



USE OF TARIFFS TO CONTROL WORLD TRADE

TRADE BETWEEN countries has never been allowed to go on without some measure of government control. In spite of the great economic advantages to be derived from strict adherence to the territorial division of labor, international trade never has been free. It has always been a question of how much or how little restriction should be imposed, and for what purpose this should be exercised. Much trade restriction has been for the purpose of encouraging home industries in the struggle with foreign competitors. A highly diversified economic life is of advantage to a nation in the event of war, when foreign sources of supply may be shut off and foreign markets may be imperiled. Sometimes restrictions placed upon trade with foreign nations serve like a heart stimulant; they quicken the economic pulse of a nation as it strives to develop greater economic independence. Some restriction of trade is prompted by a spirit of reprisal; it is intended as punishment for offensive trade practices and regulations on the part of foreign nations. A good deal of trade restriction is not meant to be completely prohibitive, for it is designed to help raise necessary revenue for the government.

Throughout the mercantilistic era of the sixteenth, seventeenth, and eighteenth centuries trade was minutely regulated by the state for the purpose of promoting national interests. When mercantilism broke down during the latter part of this period under the sheer weight of the burdensome trade restrictions developed during 300 years, Great Britain took the lead in the new policy of *laissez faire*, which included an attempt to establish international free trade. But in the adoption of a trade policy that even approximated free trade most other countries did not follow her example. For one reason or another they preferred to restrict trade among themselves. Furthermore, after the First World War there was a worldwide intensification of protectionism, as the modern restriction of international trade is called. The new states created by the war sought to diversify their economic life as much as possible within the limits set

by their resources. Older states, the industries of which are already highly diversified, were not particularly encouraged to lower their trade barriers by the intense spirit of nationalism which the war bred. Under the leadership of the United States, the years following the close of the Second World War are showing signs of the more liberal trade policies which the interests of the United Nations demand.

The favorite modern means for controlling international trade is through the imposition of tariff duties. As vessels sail through the Strait of Gibraltar into the Mediterranean Sea they pass a small but very strategically located Spanish town called Tarifa. Many years ago its inhabitants are said to have begun the practice of compelling passing merchant vessels to pay tribute. The practice spread, and the name of the old Spanish town has been perpetuated in our word "tariff,"¹ which means now, as it did then, the schedule of charges levied by a country upon the movement of merchandise across its boundaries. Such tariff charges are also known as customs dues or duties. Tariff duties today are usually levied only upon imports of merchandise; the United States Constitution, for example, prohibits export duties. Duties upon exports of merchandise, however, and even transit duties levied upon goods merely passing through a country, were once common.

Tariff duties are levied in accordance with either the ad valorem or the specific duty principle. An ad valorem duty, as its name implies, is a charge based on the value of the imported commodity, such as a 35 per cent duty on silk. Moreover, if the United States levies a 35 per cent ad valorem duty upon the importation of silk, shall this duty be based upon the value of the silk in the exporting country or upon its value in the United States? Both systems have been used, though the former is the more usual practice. Specific duties are charges levied against units of specified goods regardless of their market value, such as a tariff of \$4.50 per pound of cigars and cigarettes imported into the United States. Tariff schedules often present an intricate maze of duties combining the ad valorem and specific principles.

If the primary purpose of the government that imposes the customs duties is to raise revenue, the schedule of tariffs is usually known as a tariff for revenue only. Great Britain and Holland are the outstanding examples of countries which long had tariffs designed for revenue only. In such laws care is exercised to impose duties only upon those commodities that cannot advantageously be produced in the country levying the import duties. Great Britain, for instance, long levied duties chiefly upon tea, coffee, sugar, spices, and various other tropical products which could not profitably be produced in Great Britain. Now Great Britain has also adopted a protectionistic policy and greatly extended the number of duties.

¹ Also in the French *tarif* and the Italian *tariffa*.

But if the chief purpose of the government in imposing tariff duties is to encourage and develop home industries, then the law is described as a protective tariff. In such a law, duties are so fixed as to give the protected home industries a better chance to charge higher prices, and thus to meet their higher costs, than would be possible if international trade were wholly unrestricted. Nowhere has the system of protective tariffs flourished as it has in the United States.

It should be noted at the outset that the revenue and protection principles in a tariff law, if rigorously applied, are mutually exclusive. To the extent that a tariff law yields revenue, it fails to protect; and to the degree that it protects, it fails to yield revenue. Many protective tariff laws have been deliberately designed to shut out only some of the foreign competition, and thus to afford a measure of protection without destroying all revenue. It is by means of protective tariff laws that governments seek to restrict trade and to control it in their own interests.

THE ARGUMENT FOR PROTECTIONISM

What beneficent results do countries expect from the policy of protectionism? Is protectionism a policy equally useful at all times in a given country's history?

Promotion of nationalism. As the preceding introductory discussion has suggested, one of the foremost arguments in favor of a policy of protectionism is the fact that it helps to promote nationalism, which is regarded as essential to both the security and prosperity of any people. In its emphasis upon nationalism present-day protectionism is akin to mercantilism. The erection of a tariff wall about a country, it is claimed, does two things: it helps to create a unified economic life within a country, and it helps to keep the foreign competitor out while this is being done. The economic unity of a people is a *sine qua non* for the development of a strong sense of political solidarity. Our federal Constitution, for example, prohibits the states from imposing any tariff duties upon goods moving from state to state. In recent years our states have discovered some ingenious ways, largely through taxation, of erecting trade barriers which they deem in their own interest. The first law passed by our First Congress was a tariff law imposing duties upon the importation of goods from foreign countries.² Is it reasonable to suppose, asks the protectionist, that America's preeminent economic position could have been attained without such free trade within the country protected against foreign competition?

This patriotism-evoking argument for protection, based on the desir-

² Actually the tariff law is Chap. II of the Acts of Congress, but Chap. I is a purely administrative law entitled, "An Act to regulate the time and manner of administering certain oaths."

ability of nationalism, has something to commend it when applied to nations in their youth. It loses most of its effectiveness, however, when applied to a nation in full maturity of its economic life. The opponent of protection today is fond of pointing to the forty-eight states composing our Union as the greatest free trade area in the world, and contending that what is good for interstate trade would also be good for international trade.

Protection of infant industries. Further amplifications of the nationalistic philosophy of protectionism are the three arguments that follow: the protection of infant industries, the diversification of industries which is so desirable in the event of war, and the development of the home market. The protectionist argues that a high tariff is needed to foster infant industries. He asserts that if the material resources of a country are adapted to certain industries, such industries may be called into life earlier, through the fructifying influence of a protective tariff, than would otherwise be the case. He contends that the protective system merely speeds up the natural order of development. Implicit in his argument is the assumption that the industries to be protected are true children and not adopted infants of the mother country. Protection furnishes the ultra-violet rays essential to their growth. A striking example is furnished by the coal-tar products industry of the United States, which was negligible prior to the First World War. Medicines derived from coal-tar were expensive in the United States. "Aspirin" produced in Germany was selling for about \$10 per pound. A tariff protecting this infant industry resulted in the development of an industry for which our country is so well adapted that American "aspirin" (acetyl-salicylic acid) soon sold for \$1 per pound. Prior to the war we depended entirely upon Germany for our dyestuffs. The war made it necessary for us to supply our own needs. When the war was over, German competition, due to lower costs, could have crushed the dyestuffs industry. A protective tariff law enabled it to survive and gave it a chance to develop strength to stand on its own feet.

There is no question that this protection-of-infant-industries argument carried great weight in tariff controversies in the United States. Its strongest appeal has been made during periods of war, and of adjustment to the changed conditions following war. It was used with telling effect, as just suggested, to secure protection for the dyestuffs industry after the First World War. But the argument is a time-honored offering in American tariff debates. It was convincingly used in the tariff discussions following the War of 1812, when many new American industries, born during the war, were seeking protection against European competitors bent upon recovering their American markets. It must be admitted that a protective tariff can greatly help a new industry through its early growing period. The cost of such protection, however, is usually higher prices to all con-

sumers living within the tariff walls. The coal-tar products industry just cited is a notable exception. Whether the results justify the cost depends largely on this consideration: if the protected industry can soon hold its own in competition with foreign producers without the aid of further protection, the diversification of industries thus brought about may justify the higher prices temporarily paid by domestic consumers. But if after having benefited by protection during the years necessary for an infant industry to become a "going concern," this industry is still unable to meet foreign competition without the aid of a protective tariff, there is reasonable doubt as to the economic wisdom of the policy.

In computing the cost of protection to a nation, it must not be forgotten that not only does the consumer pay higher prices for the products of protected industries, but some producers are adversely affected as well. Whenever any nation makes it difficult for foreigners to sell goods in its markets, that nation makes it just as difficult for foreigners to buy in its markets. Since some of its own industries may be partly dependent upon foreign exports, the policy of protection may work to the disadvantage of such producers, because their prospective foreign buyers may have no means of payment. To the extent, also, that any unprotected producer must buy goods the tariff-protected price of which is higher than it would be in a free-trade market, protectionism may be said to work to the disadvantage of the producer.

Desirability of industrial independence in the event of war. Resting over the whole protectionistic argument are the clouds of war. In the event of war, it is highly desirable that a nation should be as independent economically as possible. Protectionism by diversifying industries helps to create greater independence than the specialization which a policy of free trade inspires. The desire for the greatest possible economic independence was the clue to Germany's protection of her agriculture. To levy duties upon the importation of foodstuffs meant to raise prices for the consumer. But who that remembers the effective blockade of the Allied powers during the World Wars will say that the policy lacked justification from the German point of view? Because the people of Great Britain realize that their specialization in manufacturing and their neglect of agriculture would put them at serious disadvantage in the event of war, they have maintained supremacy on the seas over all except the United States. By defending their sea lanes they have accomplished the same purpose as the German policy of protection. Both policies are expensive, but whenever they are considered vital no nation will consider the cost. As long as war remains a possibility, this argument for protection will appeal to young nations with undiversified industries, as well as to old nations some of whose important industries cannot survive without a protective tariff.

Only effective international agreements with reference to the prevention of war and the establishment of permanent peace can clear the way for freer trade among the nations of the world. A thoroughgoing free trader, on the other hand, counters by saying that there can be no permanent peace until tariff restrictions are removed and the resulting economic interdependence shows the futility of war. Protectionism makes for nationalism; free trade is essential to the fullest development of internationalism. It looks as if we were hopelessly caught in a circle: the risk of war necessitates protective tariffs, so that a nation may have diversified industries; and the tariff barriers restricting international trade are themselves provocative of war. Is there no way out? The free trader says: Let nations have reasonable assurances as to their security and tariffs will come down. But low tariffs, and even more so free trade, will stimulate international business. Bigger and better business will increase the prosperity of all. If protective tariffs are not really good business, but a price paid for temporary security, it is clear, argues the internationalist and free trader, that some form of international association to prevent war and to promote trade is highly desirable. The functioning of the United Nations will, it is hoped, substantiate the argument.

Development of the home market. The same nationalistic philosophy that inspired the three arguments just considered also underlies a fourth: the argument that protectionism helps to develop the home market. Part of this argument is based upon the assumption that home markets are better than foreign markets. If the producers of a country have home markets for their goods, neither war nor political changes in tariff policies will deprive them of a steady outlet for their products. Protectionism tends to force the citizens of a country to deal with one another rather than with foreigners. In American tariff history the argument was used very effectively by Henry Clay as a means of reconciling the agricultural South and West with the manufacturing North. He pointed out the advantages to the farming interests of the country in having near-by consumers of agricultural products. Develop a large industrial population, the argument ran, and agriculture will never lack for buyers of its products.

Part of the argument rests upon the assumption that tariffs are needed to offset differences in costs of production at home and abroad in order to preserve the home market for the home producer. Senator Nelson Aldrich, a strong advocate of high protection for the United States, once said:

If it costs ten cents to produce a razor in Germany and twenty cents in the United States, it will require one hundred per cent duty to equalize the conditions in the two countries. . . . As far as I am concerned, I shall have no hesitancy in voting for a duty which will equalize conditions. . . . If it was necessary, to equalize the conditions and to give the American

producer a fair chance for competition, other things being equal, of course, I would vote for three hundred per cent as cheerfully as I would for fifty.³

A strict and consistent application of this principle would make international trade impossible.

Whatever validity this argument may once have had in the growing years of a nation's development, it can scarcely be said to apply with equal force, if at all, to a nation that has attained its full economic stature and strength. It should also be noted that a 100 per cent application of this argument by any nation would ultimately close its ports to foreign trade altogether. The protection of some home markets, and not of others, may necessitate material shifts in a nation's foreign trade. If the home market of a given industry, like rayon manufacturing in the United States, is protected through tariff charges that become prohibitive to foreign competitors who previously shared the American market, it means that other American industries will be adversely affected. The American markets of unprotected or less fully protected industries must absorb a correspondingly increased volume of foreign goods if there is not to be a diminution in American foreign trade. Inability of foreigners to sell in our markets means corresponding inability on our part to sell our own surplus goods abroad. The only escape from this dilemma, and the escape is but temporary, is the ability and willingness of a nation's investors to supply fresh credit to the foreigners buying in our markets, and to take the equivalent in foreign securities. Ultimately, however, both interest or dividends and the investments themselves, if paid at all, must be paid in goods bought by the nation extending credit in the form of loans.

Protection of labor against lower wage scales. Of a different type from the four protectionistic arguments just considered are the two that follow: the claim that protective tariffs are needed to safeguard high wage scales and the plea that they are necessary to prevent undesirable foreign "dumping." These arguments represent defensive rather than offensive strategy in the battle for world trade. Of all the claims, arguments, and pleas made for the protective system, perhaps the most popular in political campaigns in the United States has been the contention that protective tariffs are safety measures against low wages. Word pictures and cartoons have been used to depict low-paid foreign labor, often described, in order to heighten the effect, as "pauper labor." In contrast to the low standard of living of most foreign laborers, the American workingman has been portrayed as enjoying a "full dinner pail," and this because he was working and living behind a high and strong protective tariff wall—a wall that shut out competition with goods produced by cheap labor.

³ *Congressional Record* (May 17, 1909), p. 2182; quoted by F. W. Taussig, *Free Trade, The Tariff and Reciprocity* (New York, The Macmillan Company, 1920), p. 136.

In its original form the argument ran something like this: wages are higher in the United States than abroad; consequently, if the American manufacturer is to compete successfully with his foreign rival in the American market, a protective tariff is needed that will equalize the labor costs at home and abroad. Having won the protection and a resulting privileged position in the American market, it was easy for the manufacturer to slip into an argument in which his previous premise and conclusion were reversed. Seemingly forgetful of the earlier contention, he now argued that American wages were high because the tariff was high, and that to raise them even higher more protection was needed.

What validity, if any, is there in the claim that protection raises wages, or at least keeps them high? As shown in the chapter on wages, the immediate cause of high or low wages is the productive efficiency of the worker. In this country labor has had the advantage of working with rich natural resources and a plentiful supply of capital goods. Upon the well-founded assumption that the skill of the American workingman is at least no greater than that of his European competitor, these external conditions alone account for a higher wage scale in this country.

While it is true that the American level of wages is higher than that of other countries, it is false to conclude that American labor costs are necessarily higher. Costs must be figured per unit of output. If American labor is most effectively applied in industries adapted to the country, wages per man may be higher and costs per unit of output may be lower than they are abroad. In such industries the presence or absence of a protective tariff has nothing to do with the existing wage scale.

If labor costs per unit of output, however, are higher in certain American industries than they are abroad, then it is unlikely that such industries would be able to survive without the protective tariff. It is true enough that industries which are wholly dependent upon the protective tariff for their very existence can only afford to pay high wages, or for that matter any wages at all, to the extent that the tariff is continued. Even the most ardent free trader, if he be fair-minded, must admit that in such cases the sudden removal of the tariff would result not only in lower wages but also in unemployment. The real question pertains to the desirability of maintaining such industries, which brings us back again to considerations of infant industries, industrial diversification, and military necessity.

In general, protective tariffs have very little to do with determining wages. Protectionism and high wages do not necessarily go together. There have been times when wages were higher in free-trade England than they were in protectionistic Germany. In the United States under a protective tariff system, they have been as high in unprotected as in protected industries. What is more, there has been a good deal of insincerity in the claim that protection helps the workingman. Some of our most

ardent protectionists, who pleaded the cause of labor most earnestly when it meant procuring tariff duties for themselves, were just as emphatic in their denunciation of any plan to restrict immigration or to put on the free list goods the workingman buys. And yet how can the workingman be helped more effectively than by restricting the number of competitors for his job and by lowering the price of the goods he buys!

Protection of domestic prices against "dumping." The other defensive argument for protection is the claim that protection is needed to prevent the foreign producer from "undercutting" domestic prices. "Dumping" is the term applied to this process of selling goods in foreign countries more cheaply than they are sold at home. The practice may be prompted by the desire of the foreign producer to dispose of a surplus that he cannot sell to advantage at home. It may be encouraged by his government when it pays export bounties to stimulate foreign trade, the bounty perhaps more than offsetting the temporary loss arising from selling abroad at prices that are below cost. More likely than not, the practice is motivated by the desire of the foreign producer to stifle competition by the country in which he "dumps" and thus to retain business for himself.

If the cut in prices could be regarded as permanent, the people of the country affected might congratulate themselves on their good luck. They would profit at the expense of the foreign producer or of his subsidizing government. But there is usually a selfish rather than an altruistic purpose in "dumping." When the price-cutting producer has won or retained the desired market, he almost invariably raises his prices. And for a time at least he is without effective competition.

The protectionist argues that counteracting high customs duties are needed to protect home industry against such unfair trade practices. Most people familiar with the problem would agree with him. In this case, however, the high tariff is not so much a form of ordinary protection for home industries as it is a form of retaliation. "Dumping" is a form of unfair price discrimination, usually designed to eliminate troublesome competition and ultimately intended to raise prices; heavy import duties are the only form of punishment a country can inflict upon the "dumping" foreigner who is outside the jurisdiction of its courts.

Upon the assumption that the foregoing arguments fairly represent the thinking of protectionists, where does the case for protectionism stand? That protectionism fosters nationalism is true of nations in their youth, but this fostering influence is no longer needed when nations have attained economic and political maturity. That protectionism can materially help infant industries through their growing years must be granted. At the same time it must be understood that the protection is charged to consumers in the form of higher prices. The protection may be worth what it costs provided a nation's infant industries soon reach maturity, and then

can dispense with protection. That diversified industries are a source of strength in the event of war, and that protection makes possible earlier and greater industrial diversification, must also be admitted. Only the attainment by a nation of a well-balanced economic life, or confidence in some form of international organization that can help provide security against attack, will deprive this argument of its cogency. That protectionism helps develop the home market is as true as that it helps to develop infant industries, and as inapplicable as an argument for a permanent protective tariff. That protectionism is needed to keep the general level of wages high is fallacious reasoning. And finally that protectionism is sometimes warranted as punitive retaliation for offensive "dumping" must be allowed.

There is no question that, in the United States at least, much of the support of high tariffs has been due to the belief that the policy of protectionism is good business. A strong popular opinion has been built up that prosperity depends upon protection. While it must be admitted that the prosperity of some of our industries is at least partly dependent upon the continuance of protection, it is illogical to conclude that constant association between prosperity and protection is assured or that prosperity is impossible under free trade conditions. Some of the popular support of protection, moreover, is based on the often refuted mercantilistic idea that there is something essentially desirable about a "favorable balance of trade." Protection is presumed to keep home industries busy; exports are thought of as constantly exceeding imports; and the nation is pictured as growing rich through collecting its favorable trade balance in the form of gold. But in fact, a free-trade nation may have a favorable balance of trade as readily as a protectionistic nation. The old argument that a favorable balance of trade is an index of national prosperity dies hard. It is not generally understood that rich creditor nations must as a rule import more goods than they export, no matter what their tariff policies may be, if they are to receive payments on their capital invested abroad.

THE ARGUMENT FOR FREE TRADE

The argument for free trade is simple, and its conclusion inescapable provided its premises be accepted. What the doctrine of free trade does is to apply the principle of specialization to international trade. Just as the introduction of the division of labor into industry effected great economies of production, so it is argued the establishment of an international division of labor will lower costs and, if trade be free, make possible lower prices to the consumer. The whole free-trade argument in its economic aspects rests squarely upon the principle of comparative costs. If a country organizes its productive industries in accordance with the principle of comparative costs, it will produce those goods in the production of which it enjoys

the greatest advantage or suffers the least disadvantage in comparison with other nations.⁴ If the United States can produce both shoes and cutlery more cheaply than England can, but has a much greater advantage over England in shoes than in cutlery, it will still pay us to specialize in the production of shoes and to import our cutlery from England, provided transportation costs do not wipe out the comparative advantage. It is further assumed that the supply of each commodity produced will meet both the American and English demand, and that the demand is great enough to absorb the supply. A given nation may be favorably endowed with rich natural resources, or its people may have the technical skill and equipment that make for superior productive efficiency in certain industries. If a nation devotes itself to those industries in which its labor and material resources can be most effectively applied, three things can be accomplished, provided that international trade be free. In the first instance, there will be maximum productivity for the people so applying itself; secondly, there will be the largest possible surplus of purchasing power with which to buy the goods of foreign nations; and thirdly, the foreigner will be benefited by being able to buy goods produced at the lowest possible cost.

From a strictly economic point of view, the argument for free trade is flawless. And yet protectionism has dominated the trade policies of the world and is still strongly entrenched in public opinion. How can this divergence between sound economic theory and practical political policy be explained? The answer is simple. International trade policy is not based on economic considerations alone. Political considerations, based on nationalism and military needs, are powerful influences today, as they have been in the past, in shaping the trade policies of nations. On economic grounds the presumption is strongly in favor of free trade. If nations, in spite of the obvious advantages of an international division of labor, seek to control foreign trade, it must be for non-commercial purposes that are regarded as being of greater importance. Measured in economic terms the attainment of these objectives is costly. The high duties of a protective tariff are the price paid for the attainment of political objectives. It may be that the price paid is warranted by the state of world politics, but it must be recognized as a cost none the less, and justified only on non-economic grounds.

The cost of protection is indirect and widely diffused. The duty is paid at the outset by the merchant or manufacturer who imports goods. He passes it on, however, to the consumer, who ultimately bears it in the higher prices he must pay for the goods he consumes. But the consumer usually pays it in ignorance of the fact that prices might be lower were it not for the protective tariff. What is more, the additional price he pays may seem unimportant in a single transaction, even if it is large in the

⁴ Cf. Chap. XI, "International Trade and Exchange," pp. 307-310.

aggregate. The result usually is indifference and lethargy on the part of the consumers who pay the bill, unless unusual economic or political conditions arouse them to action. Merchants and manufacturers, on the other hand, who are the immediate beneficiaries of the protective system, are keenly conscious of their special interests and alert to protect their privileges. Perhaps a contributory reason for the persistence of protectionism as a political policy lies in the fact that, while the majority of consumers are uninformed or indifferent as to their interests, the minority of producers are organized to obtain and retain the protection they desire.

THE TARIFF POLICY OF THE UNITED STATES

In a relatively new country such as the United States, it is to be expected that the tariff policy will constitute a major political issue. Throughout the greater part of our history, the products of agriculture and other extractive and genetic industries (principally foodstuffs and raw materials) constituted the bulk of our exports. More recently manufactured products including manufactured foodstuffs, semi-manufactures, and finished manufactures, have come to represent a much larger part of our total exports, in 1944 at the peak accounting for 95.13 per cent. In 1948 they had declined to 77.96 per cent because of an increase in the exports of crude materials and crude foodstuffs in our effort to promote European and Asiatic economic recovery.⁵ The changing character of our economic life, and the resulting changes in the composition of our foreign trade, have not been without their influence upon tariff debates and policies.

Periods in American tariff history. Like Caesar's Gaul, the tariff history of the United States is divided into three parts. The first period lasted from the establishment of our federal government in 1789 to the close of the Napoleonic wars in 1815. What tariff duties we imposed upon imports were for revenue only. Our first tariff law enacted in 1789 levied an average rate of duty of only $8\frac{1}{2}$ per cent.⁶ But the War of 1812 drew us into the Napoleonic strife that was tearing Europe. Prior to our actual participation

⁵ *Statistical Abstract of the United States, 1949*, p. 858.

⁶ Average ad valorem duties for any year are calculated by comparing the amount of duties collected with the value of the dutiable goods. In the case of goods subject to a specific rather than an ad valorem duty, it is necessary to make a similar comparison. It is only by reducing all duties to an ad valorem base that it is possible to compare the average rates of different tariff acts. Since some goods are placed on a free list, it is further necessary, in order to calculate the real burden of tariff charges upon imports, to compare the aggregate duties collected in a given year not only with the value of the dutiable goods but also with the value of the dutiable and non-dutiable goods combined. Even so, average ad valorem rates are sometimes misleading when used to compare the burden of various tariff laws, for high rates may prohibit imports altogether. The average ad valorem rate is in consequence not a true index of the whole burden that the tariff imposes.

in the war, the British Orders in Council (1807) and our own Embargo (1809) and Non-Intercourse (1809) Acts had played havoc with our foreign trade. By act of Congress and subsequently by the fact of war, our usual importation of manufactured goods dwindled. This furnished a tremendous impetus to the development of American manufactures. When at the conclusion of the war European manufacturers sought to recoup the American market through the process of "dumping," an irresistible movement for protection arose. The protection of infant industries and the need of industrial diversification for military purposes proved to be conclusive arguments and resulted in a shift from the revenue only to the protectionistic basis in our tariff policy.

The second period in our tariff history lasted from 1816 to the outbreak of the Civil War in 1861. It was a period of protection, but the scale of duties was low in comparison with the level of duties that has come to prevail since the Civil War. The tariff of 1816 marked the transition from the tariff-for-revenue-only basis of the first period to a low protection base. While as a rule the scale of duties imposed by the Act of 1816 was not as high as it had been during the preceding war years, it was distinctly higher than it had been during the peace years of the first period. The average rate of duty approximated 20 per cent. From the tariff of 1816 to the tariff of 1828, there was a sharp upward tendency in duties. The high point was reached in the Act of 1828, which aroused much vehement criticism and came to be known as the "tariff of abominations." Its scale of duties was singularly high for this period, reaching an average of 48 per cent on dutiable goods and 45 per cent on free and dutiable imports together in 1830. From this time onward to the close of the period in 1860 the level of duties declined. At the close of the period it was about the same as at the beginning: approximately 20 per cent of the value of dutiable imports. Among the causes affecting the downward trend of tariff rates were the maturing of infant industries, making protection less necessary, the increase in governmental revenues from other sources, and the political revolt of the South against high tariffs, which it considered a handicap rather than a help to an agricultural region.

Beginning with the Civil War, the United States entered upon the third period in its tariff history. This in the main has been a period of high protection, which has lasted until the present day. United States Treasury receipts had declined during the years following the panic of 1857. The Civil War required large new revenues. The natural result was a sharp advance in tariff duties. The Morrill Act, passed in 1861, and amended in 1862 and 1864, brought the highest level of duties since the Act of 1828. In the period 1862-1865 the average ad valorem rate on dutiable goods rose to 38 per cent. The peak of Civil War tariff law rates, however, was not reached until 1868, when the average rate on dutiable imports stood

at almost 49 per cent. Contrary to general expectations, the close of the war brought no downward revision of the tariff comparable to rates prevailing prior to the war. Instead high protection became the established policy of the country. Political opposition to high tariffs from the South lost much of its effectiveness as a result of the war. And Northern manufacturers knew what they wanted and how to get it.

Tariff revisions in the seventies and eighties, while conceding something to the popular demand for lower rates, did not disturb the principle of high protection. Whatever reductions were made, moreover, were more than wiped out by the McKinley Act of 1890, which established average rates higher than any in our history up to that time. In the years of its operation the average rates were approximately 49 per cent on dutiable goods.

When the Democratic Party, in the election of 1892, obtained full control of the government for the first time since the outbreak of the Civil War, it took advantage of its power to lower the tariff. The Wilson-Gorman Act of 1894, however, while reducing duties, did not effect nearly so great a change as had been expected. For the three fiscal years (1895-1897) of its operation, the average ad valorem rates on dutiable goods were 41 per cent, and on dutiable and non-dutiable goods together 21 per cent.

The Republicans interpreted their victory in the heated campaign of 1896, fought on the money question, as a solemn mandate immediately to revise the tariff. The Dingley Act of 1897 was the result. It again established a distinctly higher level of protectionistic duties. During one of the early years of its operation, the fiscal year of 1899, the average rate on dutiable goods was 57 per cent. For the twelve years, 1897-1909, that the law was in force (a remarkably long period for an American tariff law), the average rate was 47 per cent on dutiable goods and 26 per cent on dutiable and free list goods combined. One of the reasons for the long life of the Dingley Act was the fact that prosperity began to return to the country, after the severe depression of the nineties, in the year that it was enacted. The Republicans not unnaturally claimed credit for the welcome change and attributed it to the policies for which they stood, including that of a high protective tariff. Working against any tariff change was the absorption of the country in other issues—the Spanish-American War and the movement for railroad regulation, for example. During the latter part of the Dingley tariff period, however, there were frequent and loud demands for a downward revision of the tariff. This time the cry came not as usual only from consumers and farmers, but also from some of the manufacturers themselves. The general level of prices had been rising, with consequent increases in the cost of living. The consumer looked hopefully to tariff reduction as one means of relief. The farmer came to regard with suspicion a protective tariff that offered him no apparent benefit. Some

manufacturers began to feel the pinch of duties collected on raw materials needed in their manufacturing processes. Others realized that the character of the country's foreign trade was changing and that our high tariffs were not the most conciliatory means of winning easy access to foreign markets in which to sell our surplus of manufactured goods. This changing sentiment in regard to the value of high protection again made the tariff an issue in the presidential campaign of 1908, both Republicans and Democrats promising a revision of the tariff.

The ensuing revision of the tariff undertaken by the Republicans was the Payne-Aldrich Act of 1909. In their campaign platform they had yielded to the pressure of public opinion and promised a revision of the tariff, but insisted that protection should be high enough to cover the difference between cost of producing a commodity at home and producing it abroad. This principle appealed to a country steeped in protectionism, even though its general application would have wiped out the advantages of international trade altogether. The actual changes in the tariff law made by the Payne-Aldrich Act resulted during the period of 1909 to 1913 in average rates of 41 per cent on dutiable goods and 19 per cent on all goods imported. This rather small reduction proved a great disappointment and aroused such a storm of criticism that the tariff again became a major issue in the election of 1912.

This time the Democrats were successful and promptly revised the tariff downward by passing the Underwood Act, which became effective in 1913. It brought the first material reductions since the Civil War. Many goods, such as raw wool, raw sugar (beginning May 1, 1916), and boots and shoes were put on the free list. Rates in general on dutiable goods were reduced, an attempt being made especially to lower the duty on goods ordinarily regarded as necessities and to impose the higher duties upon luxuries. During the operation of the Underwood Act (the fiscal years 1914-1921, in which trade was greatly disturbed by the war), the average rate of duty on dutiable goods was 27 per cent, and on all goods imported 9 per cent. Though a Democratic tariff, it retained the protectionistic principle. The First World War effected great changes in our foreign trade; the composition and source of our imports shifted, though their volume increased; and the amount and value of our exports expanded to hitherto unheard-of magnitudes.

The close of the war, and the return of the Republicans to power in the election of 1920, again brought the tariff into the limelight of discussion. There was fear that cheap foreign goods would flood the American market. Our new dyestuffs and chemical industries demanded protection. The depression beginning in the summer of 1920 resulted ultimately in the unemployment of five to six millions of persons. The cumulative effect of all these influences was another upward revision of the tariff. After

a brief experience with a so-called "emergency tariff," the Fordney-McCumber Act of 1922 was passed. Important goods, such as wool, on the free list of the Underwood Act, were again made dutiable. Some of the rates imposed were the highest on record. During the years of its operation, 1922-1930, the average ad valorem rates on dutiable goods amounted to 39 per cent, and on dutiable and free imports together to 14 per cent.

After some public discussion in the presidential campaign of 1928, followed by protracted debates in both the special and the regular session of Congress in 1929, the Fordney-McCumber Act was replaced by the Hawley-Smoot Act of 1930, which distinctly maintained the principle of high protection. For the period 1930-1933 the average rate on dutiable goods was 53 per cent, and on the value of all goods imported 18 per cent. Congress did not see fit to move in the direction of substantially lower duties in spite of the fact that world economic conditions had materially changed when this latest tariff act was passed.

One new feature first incorporated in the Fordney-McCumber Act, and retained in the subsequent tariff legislation, is the flexibility principle. The President of the United States is authorized, if investigation by the Tariff Commission establishes the fact that our duties are more or less than enough to offset differences in costs of production at home and abroad, to decrease or increase the duties by a maximum of 50 per cent of the prevailing duties. If necessary to afford adequate protection, the duty may be figured as a percentage of the American selling price rather than of the cost of the good in the country exporting it. In a number of cases the President has seen fit to exercise his powers under the flexibility provisions of our recent tariff laws. While its sponsors have claimed that this provision for elasticity in our tariff schedules would go far toward making the tariff more "scientific" and "taking it out of politics," it seems unlikely that it will accomplish either. The flexibility principle is based upon equalizing differences between cost of production in the United States and in the principal countries exporting competing goods to us. For a number of reasons the cost equalization principle is exceedingly difficult to apply. The cost of producing some goods, wool for example, cannot be accurately determined. In selecting American costs, whose costs shall be used as a standard of comparison with foreign production costs? Shall it be the low-cost producer of a commodity or the high-cost producer? Moreover, it is often exceedingly difficult for any governmental body to ascertain foreign costs with any degree of accuracy. Altogether these are decided limitations upon the usefulness of the equalization of costs principle.

The flexibility principle in our tariff rates was again recognized in our most recent tariff legislation, the Reciprocal Tariff Act of 1934. This act authorized the President during a period of years to negotiate agreements

with foreign nations for the purpose of effecting trade expansion, and empowered him to change existing tariff rates as much as 50 per cent if he deemed such concession to foreign nations necessary in order to win markets within their territories for American goods. Congress set an expiration date of three years on the original Act, but the Act has been steadily amended and extended, each time for a short period. The present law expires June 12, 1951. The 1945 Amendment of the Act is the last to mention any change of rates. It provides that no rate of duty in force in January, 1945, shall be increased or decreased by more than 50 per cent and that there shall be no transfer of any articles between the dutiable and free lists. Apparently the 50 per cent increase or decrease in rates authorized by the Act of 1945 is permissible even if there had already been increases or decreases under earlier Reciprocal Trade Acts. Such reciprocal trade agreements do not require the usual ratification by the United States Senate.

Reciprocal trade agreements. The reciprocal trade agreements negotiated under the Tariff Act of 1934, through the persistent and vigorous efforts of the then Secretary of State, Cordell Hull, were based upon the idea that the exports and imports of a country are interdependent; that if a nation would sell abroad, it must also be willing to buy abroad. During the early part of the period in which these agreements were negotiated the United States was suffering from a most severe and extensive collapse of its domestic economy, and desperately needed the stimulus afforded by a revival of its foreign trade. This helped to make the country more receptive to changes in its traditional protectionistic policy. By the close of 1949 forty-two such trade agreements had been concluded, including reciprocal trade agreements with Belgium, Brazil, Canada, Cuba, Finland, France, Great Britain, Holland, Sweden, and Switzerland.

In arguing for the continuation of the reciprocal trade-agreement program, Mr. Hull repeatedly pointed out that during the period of these agreements our exports to trade-agreement countries rose very much more than our exports to non-agreement countries, that the countries with which we had concluded trade agreements had generally increased their purchases of American goods more than they had increased their purchases of the products of other countries, and that "a peaceful world is possible only when there exists for it a solid economic foundation, an indispensable part of which is active and mutually beneficial trade among the nations."

While the trade agreements negotiated by the United States are of reciprocal advantage to the countries signing each agreement, they confer no preferential treatment upon the signatory nations over nations with which the United States has "most favored nation" clause treaties. Under the "most favored nation" principle, trade concessions granted to any country are likewise granted to all other countries (with whom the United

States has treaties containing the "most favored nation" clause), who in turn accord the United States similar treatment. It may seem if the trade concessions granted any particular nation are made available to all, that they will be of no special benefit to the nation negotiating them. This is not true, however, because the trade agreements are characteristically based on commodities of which the signatory nations are each others' "chief suppliers." If the commodities on which tariff reductions are granted are either exclusively or principally supplied by the country receiving the tariff concession, such as manganese ore imported from Brazil, the extension of the same concession to other countries will not seriously affect trade in manganese between Brazil and the United States.

In some trade agreements quotas are established on the total amount of a competitively produced commodity that may be imported into the country granting the tariff concessions. If the import quota is small in relation to the domestic output, such as the import quota placed on Canadian cream, it does not seriously affect the price of the domestic product and yet may favorably affect prices in the exporting country to whom the disposition of the marginal part of the supply means so much more.

The trade agreements have of course been vehemently criticized, particularly by those who believe their own economic interests to be adversely affected by them. Such complaints are not usually either false as to facts or imaginary as to results. What they often lack is perspective. Even if a tariff reduction is somewhat injurious to a given class of producers, it does not follow that it is injurious to the country as a whole. Consumers may benefit as a result of lower prices, and thus either be able to buy more goods at the reduced prices or to apply their savings on the purchase of more goods of other kinds. Other producers may also benefit. If foreigners sell more goods in the American market they thereby build up dollar exchange which is customarily used in buying American goods. A possible slight loss to some producers may be more than offset by a greater net gain to the people as a whole.

The American reciprocal trade agreements have not torn down the protectionistic trade structure of this country, but they have opened easier and broader highways to international trade. In a world grown intensely nationalistic they offer the only feasible means of procuring somewhat freer trade, and at the same time allow each participating nation to judge and control the results.

A series of international trade conferences in recent years, in which the United States participated, have promoted the reduction of trade barriers. Among them were the Geneva conference of 1947 whose agreements on the reciprocal lowering of tariffs were signed by the representatives of twenty-three nations, and the Conference at Annecy, France, in 1949 participated in by ten additional nations. Tariff concessions agreed upon in

such conferences are negotiated, as far as the United States is concerned, under our Reciprocal Tariff Act.

The United States Tariff Commission. Since 1916 Congress has recognized the need of having a fact-finding body constantly at work gathering data for its use in making tariff changes. The United States Tariff Commission, created in that year and reorganized under special congressional sanction in 1930, is a permanent, bi-partisan board, composed of six members, appointed for overlapping terms of twelve years each. Its duties are essentially investigative and advisory. Its investigations may be prompted by the demand for tariff changes by interested parties, or upon request of the President, or on resolution of either house of Congress. During its lifetime the Commission has prepared an exhaustive "Tariff Information Catalog." This is an encyclopedia of information concerning every commodity mentioned in our tariff acts, including the amount of imports and exports, volume and costs of production, and competition between domestic and foreign producers. The need of such information is evidenced by the fact that recent American tariff acts list thousands of items. The Tariff Commission, however, has no power of its own over tariff rates. It has nothing to do directly with shaping our tariff policy. Even the recommendation of legislation lies outside its prerogatives. It has wide latitude only in gathering information concerning the operation of our tariff laws and assembling data upon which future tariff laws may, in the discretion of Congress, be based.

One important duty, however, imposed upon the Commission is the duty of recommending changes to the President in connection with the application of the flexibility principle. If the Commission finds that rates are either too high or too low to accomplish the purpose of equalizing the difference between home and foreign costs of production, it may recommend that the President exercise his power to lower or to raise the existing scale of duties within the legal limit of 50 per cent. In the years, however, that have passed since its authorization, this power has been exercised very infrequently. When exercised, moreover, it has usually been to raise rather than to lower rates. The rates on relatively unimportant items, like paint-brush handles and bob-white quail, have been decreased, while the rates on such important commodities as pig-iron and linseed oil have been increased. The Commission's recommendations must be limited to changes in existing rates; it can make no changes in the congressional classification of imports as dutiable and free by recommending the transfer of commodities from one list to the other.

It is obvious that a Commission without power can do little either toward making the tariff more "scientific" or toward "taking it out of politics." Critics of our log-rolling methods of tariff-making have urged that Congress should delegate its tariff powers to the Tariff Commission,

just as the powers over railway rates in interstate commerce have been delegated to the Interstate Commerce Commission. Both tariff schedules and railway rate structures are so complicated that the constant study of experts is essential in order to determine what charges can reasonably be made. It is unlikely, however, that Congress will soon surrender, even to a subordinate body, its powers to levy duties on imports as it sees fit.

Future American tariff policy. While for a hundred years and more the tariff policy of the United States has been protectionistic, the economic situation of the country now permits, and certain new conditions now necessitate, material revision of that policy. The time-honored arguments for protection do not carry as much weight today as they did in the nineteenth century. No mere change in tariff policy will reduce our feeling of national unity. Our numerous infant industries have almost all reached sufficient stature and strength to make their own way in the world, unaided by protection. Nature has endowed us so richly as a country, and our large population is so well trained, that our industries have become highly diversified, which guarantees industrial independence in the unhappy event of war. Few, if any, home markets would now be completely lost as a result of tariff reductions. They would be shared with the foreign producer with gain to the home consumer.

One of the new conditions that is effecting a change in our tariff policy is the relative increase of manufactured goods in our export trade. We are no longer a nation whose exports consist overwhelmingly of foodstuffs and raw materials, which was the case throughout the nineteenth century. As we are confronted with the necessity of importing some raw materials and of finding foreign markets for our surplus manufactured goods, a high protective tariff system operates to the disadvantage of some of our industries. It invites similar high tariff laws on the part of other nations, which partly or wholly closes the doors to our goods.

Of supreme importance in our future tariff policy is the shift in our position from a debtor to a creditor nation. Prior to the First World War we were a debtor nation. Streams of goods flowed to Europe in payment of the annual interest and dividends on European investments here. But the great bulk of European investments in the United States was liquidated during that war. The process was repeated at the opening of the Second World War for much of the European capital invested in the United States during the inter-war period. Today European governments still owe the United States a principal sum of 11 billion dollars resulting from loans made during the First World War, on which a moratorium is in effect. So-called "lend-lease" aid, amounting to 42 billion dollars, was extended our allies during the Second World War. Most of this will be and ought to be "written off" as part of our contribution to the winning of the war, but not all settlements have yet been made. Private American

investments abroad aggregate many billions of dollars. New loans are necessary during the post-war period, and will be made to help restore world prosperity. The annual charges on these enormous foreign obligations can only be paid in goods exported directly or indirectly to us by our debtors. The nation that lends its capital abroad must be willing to receive payment in goods, for surplus goods are the chief means of payment available to debtor nations. High protective tariffs are hurdles which make it difficult, if not impossible, for debtor nations to meet their obligations. If we wish to receive full returns on our foreign investments, not to mention the liquidation of any part of the debts themselves, we must adopt a tariff policy that will permit the foreigner to sell his goods in the American market. We cannot successfully play the rôle of the world's banker and at the same time make it as hard as possible for the world to trade with us.

The need of bigger markets for American manufactured goods, and the necessity of accepting at least the income from our foreign loans and investments, have brought the policy of protection under severe criticism. But even if we accept the trade implications of these new conditions, it does not follow that we should at once abandon the whole of our protectionistic policy. To do so would be to disrupt industries that have long been the beneficiaries of the protective system and to imperil both the capital invested in them and the labor employed by them. This would have far-reaching effects throughout the whole of our economic life and would prejudice the whole case for free trade. The free trader must remember that much of the foundation of American business rests on protection. These foundations cannot be completely or quickly changed without precipitating a crash of the whole structure. But if the changes are made gradually, there is no undue risk and the foundations of business may actually be improved.

What the new position of the United States in world economic affairs calls for is recognition of the fact that protectionism cannot be a permanent policy pursued without reference to the changing character of a country's economic life. The good of yesterday is not necessarily the good of today and tomorrow, even in tariff matters. Historically the policy of protection was designed for the weak. Should it be a permanent policy for the strong? Not free trade necessarily, but certainly much freer trade is the direction indicated for the United States under the new world conditions. The interests of certain large and powerful groups, including farmers, investors, manufacturers in search of world markets, and consumers interested in lower prices, all demand substantial reductions of tariff charges. And who will deny that a state of specialized production with freer trade, which makes for the greater prosperity of all, will not also prove a powerful force making for the peace of the world?

PROBLEMS

Comment briefly on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Economic nationalism does not make for the maximum economic well-being of a nation.
2. Since exports constitute a small percentage of American production, they do not contribute greatly to our economic prosperity.
3. A high protective tariff has the desirable result of protecting home industries and yielding a large amount of governmental revenue at the same time.
4. A protective tariff on raw cotton would not raise the price received by the cotton farmers of the South.
5. The economic welfare of the laborer in the United States is better protected by restriction of immigration than by a protective tariff.
6. To the extent that a protective tariff causes labor to change from our naturally most efficient industries to those less efficient, it lowers wages.
7. A wise policy for the United States to follow would be to keep its home market for American producers and to sell our surplus products in foreign markets.
8. A tariff which would equalize costs of production at home and abroad would tend to decrease a country's foreign trade.
9. The case for protection rests upon political, not economic grounds.
10. If we take an American market from a foreign producer by a tariff, we are likely at the same time to take a foreign market from an American producer.
11. American manufacturers probably have more to gain from the gradual extension of free trade than from the continuation of a protective tariff policy.
12. The case for free trade turns very largely on the principle of comparative costs—on an expected increase in real income.
13. A fallacy in the free-trade argument is that it overlooks the possibility of developing new fields of productive enterprise through the protection of infant industries.
14. The maintenance of our high protective tariff system, upon which American prosperity is said so largely to depend, is not inconsistent with insisting that our debtors, public and private, shall pay us every dollar they owe us.
15. Reciprocal trade agreements represent an application of the principle of comparative costs to meet present international conditions.

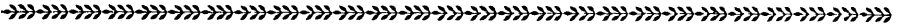
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CHAPTER XIII

Transportation



IMPORTANCE OF TRANSPORTATION IN THE MODERN EXCHANGE SYSTEM

THE DEVELOPMENTS of the past hundred years in rapid transportation and communication have steadily widened the area within which goods can advantageously be bought and sold, and specialization in production practised on an extensive scale. It is this extent of modern markets, some of them nation-wide and others world-wide in scope, which strikingly differentiates modern economic society from earlier forms of economic organization. When railway trains regularly span the American continent in a little more than three days, when ocean liners cross the Atlantic in less than five days, when passenger planes cross the United States in ten hours, and when the human voice can be projected and other messages sent into all parts of the world in incredibly short periods of time, it is obvious that efficient physical facilities for the exchange of goods have been created.¹ The steamship and the railway have been and are the chief means for the mass transportation of commodities. Great as have been the contributions of water transportation, it is the railway more than any other agency that has revolutionized transportation, built markets, and made profitable highly specialized production.

LEADING TRANSPORTATION AGENCIES FACILITATING THE EXCHANGE OF GOODS

The development of transportation in the United States epitomizes what has taken place in most of the world. Sailing vessels brought settlers to the Atlantic seaboard. Rivers enabled their boats to carry them into the interior. They blazed trails through the forests and with the aid of pack animals were able to move their goods. In the course of time roads were

¹ On April 25, 1935, Mr. Walter S. Gifford, president of the American Telephone and Telegraph Company, talked to Mr. T. G. Miller, vice-president, seated in another room fifty feet away, over a wire, cable, and radio circuit of 23,000 miles that went completely around the world. The voice impulses are said to have covered the distance in a quarter of a second. "There are no earthly limits to human speech," said Mr. Gifford in his telephone conversation.

built, rough and impassable though they were during certain seasons of the year. With the growth of the country, and the introduction of steam navigation beginning in 1807, more extensive use was made of rivers. A supplementary system of canals was developed, of which the Erie Canal, opened in 1825 and connecting Lake Erie and the Hudson River, was the most famous. With the invention of the steam locomotive by the Englishman Stephenson in 1829 and its introduction in America soon afterwards for rail transportation by the pioneering Baltimore and Ohio Railway, a marvelous century of railway development began. It did not stop until the United States from coast to coast and from the Canadian border to the Gulf had been covered with a network of railways providing rapid and adequate mass transportation for persons and goods. A human generation ago the coming of the gasoline engine was the harbinger of further far-reaching changes in the field of transportation. It created the automobile, the motor bus, and the motor truck and drove them over a rapidly improving system of surfaced roads. Ultimately it "took to the air" and sent commercial planes roaring through the skies with their loads of passengers, mail, and light commodities. These newer forms of transportation have seriously affected the business of the railways and have at least challenged their supremacy in the field of rapid transportation.

Railway transportation. But railway transportation is still our country's and the world's principal transportation agency. About two thirds of the commercial freight traffic of the United States, measured in ton-miles, is carried over the rails. Nearly one third of the world's railway mileage is found in the United States—225,200 miles at the close of 1948.² The extensive territory of the country, the wide distribution of its resources, the diversification of its industries, and the allegiance of its people to a single central government were particularly favorable to the development of railway transportation.

Whether judged by the number of their employees or the capital invested in them the railways of the United States constitute one of the country's largest industries. Peak employment was reached in 1920, when the number of employees stood at 2,022,832 and the railway pay-roll totaled \$3,681,801,193. In 1948, the number of employees on the average had dropped to 1,326,908 but the pay-roll had increased to \$4,768,000,000.³

² The figures pertain to first main track mileage, "the point-to-point length" of the country's railways. The total mileage of all tracks, including double and quadruple main tracks, yard tracks, and sidings, operated in the United States in 1948 amounted to about 397,000 miles. Cf. Committee on Public Relations of the Eastern Railroads, *Yearbook of Railroad Information*, 1949, pp. 6, 8.

³ Data pertain to the so-called Class I railways, that is, to roads whose operating revenues annually amount to one million dollars or more. Pay-roll figures should of course be adjusted for price-level changes if comparisons are made as to the real wages of railway employees. Cf. Association of American Railroads, Bureau of Railway Economics, *A Review of Railway Operations in 1944* (Washington, 1945),

The railways claimed a total property investment at the close of 1948 amounting to \$30,088,000,904. (The figure is for Class I railways—those roads whose annual operating revenues amount to one million dollars or more.)⁴

The virtual cessation of new railway building since the First World War suggests that the country is reasonably well supplied with necessary railway mileage. Existing lines will be improved as finances permit and traffic warrants. The promising developments of the future lie in the retirement of old and obsolete equipment and the substitution for it of locomotives of greater power, of freight-cars of many special types, of air-conditioned passenger cars more comfortable and luxurious in appointments, of greater speed without sacrifice of safety in the freight as well as the passenger business, and of a door-to-door collection and delivery freight service. The railways, actually and potentially, are equal to any demands that the economic life of the country may make upon them. If demonstration was needed, the Second World War provided it.

Water transportation. The water transportation lanes of the United States follow rivers, canals, and the Great Lakes and run along the Atlantic and Pacific sea-coasts. Prior to the Second World War, the bulk of our trans-oceanic freight traffic was carried in foreign-owned ships. Bulky and non-perishable commodities, for the movement of which speed is not a prime consideration and low transportation costs are, make up the cargoes of shipping on our rivers and canals. When shipment can be made from one point to another on the same river, or on a connecting river or canal, it can be handled very economically. But if the shipment is for an inland point and thus involves extra carriage, loading, and unloading charges, the savings over through-railway costs may be wiped out.

The state governments, and particularly the federal government, have spent enormous sums on the improvement of our inland waterways. Dredging, deepening the channels of rivers, constructing locks and dams, and building canals represent billions of dollars of expenditure for investment and maintenance. In less than a thousand miles on the Ohio River from Pittsburgh to the Mississippi, for example, there are forty-nine locks and dams. Although traffic on our rivers and canals has increased since the First World War, it is not at all clear that the economic results achieved have warranted the outpouring of government funds. River transportation is in effect subsidized by the government.

Transportation on the Great Lakes is of steadily growing importance. The construction of the Sault Ste. Marie Canal, connecting Lake Superior

pp. 8, 9; Committee on Public Relations of the Eastern Railroads, *Yearbook of Railroad Information*, 1949, p. 62.

⁴ *Yearbook of Railroad Information*, 1949, p. 20.

with Lake Huron, of the Welland Canal around Niagara Falls giving access to Lake Ontario and the St. Lawrence River, and of the Erie Canal (now the New York State Barge Canal) providing a waterway from Lake Erie to the Hudson River, has furnished water transportation between the interior of the country and the Atlantic seaboard. Great quantities of iron ore from the iron range of Minnesota, wheat from Minnesota, the Dakotas, and Montana, coal from Pennsylvania, and heavy goods, whether manufactured or raw materials, from many scattered shipping points regularly move across this greatest inland waterway in the world. The Sault Ste. Marie Canal, for example, though not open to shipping more than eight months of the year, has in most years carried a heavier tonnage of traffic than either the Suez or the Panama Canal.

Shipping along both our sea-coasts is under the American flag; foreign-built vessels and vessels under foreign registry are legally excluded from the coastwise and intercoast shipping trade of the United States. Encouragement of an American merchant marine, which is sorely needed in the event of war, is one reason for the restriction of such shipping to American bottoms. The construction and operation of the Panama Canal have stimulated intercoast shipping for bulky goods, such as lumber, the marketing of which is expedited through low transportation costs. In 1947 the net coast-wise traffic amounted to 153,098,204 tons.⁵

Highway transportation. Although highway transportation has always been important in the development of the economic life of the country, even when the highways were nothing more than dirt roads, the coming of the automobile has greatly accentuated its importance. The automobile really created the hard-surfaced road, a network of which now covers the country and is being rapidly extended every year. Over these roads 30,718,852 registered passenger cars and taxicabs traveled in 1947 in addition to 6,641,611 trucks and buses.⁶ Good roads and the automobiles have promoted travel and the exchange of commodities and services. While most of the trucks are privately owned, some are common carriers operating over regular routes. Motor vehicles have developed new territory and taken traffic from the railways. As agencies for the transportation of passenger and freight they have an advantage over the railways in the fact that they neither have to provide nor constantly to maintain an expensive right of way and roadbed. State and federal governments generously provide the public highways. Taxes so far imposed, whether on gasoline or the vehicles themselves, do not begin to compare with the maintenance of way expenditures of the railways and the taxes paid by them.

⁵ *Annual Report of the Chief of Engineers, U. S. Army, 1948, Part II, p. xvi.* For security reasons no figures were released during the war period, 1939-1945.

⁶ Cf. *Statistical Abstract of the United States, 1949, p. 529.*

Pipe-line transportation. For the movement of petroleum and some of its products the pipe-line is an important transportation agency. Crude oil is carried from production fields to refineries, and gasoline from refineries to distribution centers, by means of pipe-lines. Natural gas is also piped from the production wells to great consumption centers like the Chicago area. At the close of 1947 pipe-line carriers reporting to the Interstate Commerce Commission stated that they were operating 119,298 miles of pipe-line for the transportation of petroleum and its products.⁷ Since construction and maintenance costs of pipe-lines are very conservative in relation to the volume of business that can be done, pipe-line systems directly and indirectly compete with the railways. Directly they compete with the tank car; indirectly through the substitution of natural gas for coal they reduce the possible tonnage of the railways.

Air transportation. The infant transportation agency of the country is commercial aviation. But its growth during the Second World War period was fast, and prophetic of transportation changes to come. The following table gives some idea of the progress made by commercial aviation in recent years.

AIR TRANSPORTATION IN THE UNITED STATES ⁸

	1942	1949
Express and freight ton-miles flown	11,901,793	123,001,652
Mail carried (ton miles)	21,162,102	41,418,156
Revenue passenger miles flown	1,418,042,000	6,753,916,000
Revenue miles flown	111,340,622	351,639,948

European countries generally subsidize aviation directly, because like the merchant marine it is indispensable in the event of war. In the United States commercial aviation has not been subsidized except as contracts to haul mail may be regarded as partial subsidies. Where speed in transporting persons and commodities is the first consideration, aviation is of course unrivaled. The territorial expanse of the country, the daily commercial and financial relations of every section of the land with the East particularly, and the wealth and speed-temperament of the American people augur well for the rapid and extensive development of aviation in the United States. Every day Tennyson's prophetic vision comes true as we gaze into the skies:

⁷ *Statistical Abstract of the United States, 1949, p. 794.*

⁸ These data are for domestic operations of scheduled air carrier companies, and not for private flying operations. For 1942 data, cf. Civil Aeronautics Administration, United States Department of Commerce, *Statistical Handbook of Civil Aviation, 1949*, pp. 66-71. For 1949 data, cf. United States Department of Commerce, *Civil Aeronautics Administration Journal*, Vol. 11 (1950), pp. 32-33.

Saw the heavens fill with commerce, Argosies of magic sails
Pilots of the purple twilight, dropping down their costly bales.

The relative importance of railway, water, highway, pipe-line, and air transportation in the interstate traffic of the United States is shown by the following table. The commercial freight traffic in 1948 is distributed both on a ton-mile and a percentage basis among these leading transportation agencies.

DISTRIBUTION OF TRANSPORTATION BUSINESS IN THE UNITED STATES—
COMMERCIAL FREIGHT TRAFFIC, 1948

<i>Agency</i>	<i>Millions of ton-miles</i>	<i>Percentage</i>
Steam railroads, including mail and express.....	647,000	64.3
Great Lakes carriers	105,000	10.4
River and canal carriers	44,000	4.4
Motor trucks	99,000	9.0
Oil pipe-lines	118,900	11.8
Electric railways	1,000	0.1
Air carriers	139	...
Total	1,015,039	100.0

Yearbook of Railroad Information, 1949, p. 5.

DISTINCTIVE ECONOMIC CHARACTERISTICS OF THE RAILWAY BUSINESS

The railway business has certain important economic characteristics which together differentiate it from most other industries. One of these is the relative importance of fixed capital. More than thirty billions of dollars have been invested in the American railway plant; rights of way had to be acquired, roadbeds built, tracks laid, rolling stock and other equipment provided, and terminal facilities constructed. All such capital investments are fixed and largely incapable of any other use than the purpose for which they were intended. Comparatively little railway capital is in constant process of liquidation as is the case with manufacturing industries. The railways sell their services to the traveling and shipping public; in doing so they have to use a plant that represents an exceedingly costly capital investment when compared with the annual operating revenues. Most manufacturing enterprises expect to "turn over" their capital one or more times per year. The operating revenues of railways are only a fraction of their invested capital. In 1948, the gross operating revenues of the Class I railways of the United States amounted to \$9,671,583,471 against a property investment stated by such roads as exceeding thirty

billions of dollars.⁹ The operating revenues of 1948 were the highest on record, exceeding even the peak war year, 1944, when they stood at \$9,436,789,812. The fact that railway service necessitates so heavy a fixed capital investment and that approximately 55 per cent of it is borrowed capital, with its heavy burden of fixed charges, is of major significance in explaining the economic situation and problems of the railways.¹⁰

In consequence of the relative importance of fixed capital and costs in the railway industry and the comparatively low rate of "turnover," it follows that the transportation business conforms to the principle of decreasing costs and increasing returns. Increased traffic can usually be carried with relatively little additional cost per unit of traffic, because the railway plant is not used to capacity. Until the point is reached when increased traffic calls for new outlays of capital for such things as heavier roadbeds, double or quadruple tracking, larger terminal facilities, and more rolling stock, additional business can be accepted at a decreasing cost per unit of traffic. The profitableness of railroading strikingly depends upon the volume of traffic carried.

Another distinctive characteristic of the railway industry grows out of the fact that the costs of rendering railway service are so largely *joint costs*. Joint costs represent outlays which result in the rendition of a number of different services from the same expenditure; how much of the cost is properly chargeable against one service and how much against another it is hard, if not impossible, to tell. The allocation of joint costs among the services rendered must always be somewhat arbitrary. What part of the outlay for the railway plant itself and for the maintenance of way is properly chargeable against the passenger service and what part against the freight service? When a long train of mixed freight, including coal, machinery, dry-goods, foodstuffs, and many other commodities moves into Chicago, how much of the total cost of operating the train can be fairly charged against each of these freight shipments? No one can really say. It is commonly estimated that two thirds of the operating expenses of railways are joint costs.

Finally, the railways are public utilities, which allies them with such businesses as the telephone and electric light and power and sets them apart from ordinary competitive enterprises. Like other public utilities they render services which are more or less essential to the economic life of the people, and they operate most economically and successfully under conditions of monopoly. Most communities are dependent upon a single railway, and the railway is under obligation to serve the community. It has long been recognized that fair rates and efficient service are not to be procured from railways through the universal sway of competition but

⁹ *Yearbook of Railroad Information*, 1949, p. 44.

¹⁰ *Ibid.*, pp. 22-23.

rather through the recognition of these enterprises as public utilities which must be regulated in the public interest. Whenever a number of railways connect important communities, they do compete in service in order to attract traffic, but they no longer compete in rates. Cut-throat competition proved disastrous to the railways and disadvantageous to the public because the railways could not render adequate and efficient service under such conditions.

RAILWAY CHARGES AND THEIR INFLUENCE UPON THE ECONOMIC LIFE OF THE COUNTRY

Whether considered from the point of view of the public or the railways, railroad problems center around the issue of proper railway charges. Railway charges must be low enough to attract traffic and high enough to enable the railways to operate effectively, if a country is to secure the full advantages of a territorial division of labor and of large-scale production.

The revenues of the railways are classified as operating revenues and non-operating income. The former are of course directly derived from the business of transportation and mainly come from the collection of freight charges and passenger fares. The latter comes from investments and activities not directly involved in rendering transportation service. Some railways, such as the Union Pacific, are heavy investors in the securities of other corporations. The Great Northern and the Northern Pacific railroads jointly own the Chicago, Burlington and Quincy. The Canadian Pacific owns resort hotels. The Northern Pacific has derived substantial revenues from extensive landholdings. Income derived from such sources is "other income"—non-operating income. It has proved a "life-saver" for some of the roads during hard years.

The expenses of the roads fall into two great classes: fixed expenses and operating expenses. Fixed expenses remain practically the same regardless of the amount of traffic carried. They include such payments as interest on the funded debt, rents, property taxes, an allowance for depreciation, some of the maintenance expenses, and the costs of operating the general offices, including principally the salaries of officers. They constitute the "overhead" expenses, which are largely the same no matter what the volume of business is. Over the period of the years, good and poor, about 25 per cent of all railroad expenses are fixed or overhead expenses. In good years they are apt to be less because the railway plant is rarely operated at capacity, which means that more traffic can be handled without any increase in fixed or overhead expenses. Operating expenses are expenses incurred in the direct use of the railway plant for the transportation of passengers and freight. They include outlays for wages, fuel and other materials, some maintenance of way, structure, and terminal charges.

About 75 per cent of all railroad expenses are operating expenses. All of the fixed or overhead expenses are constant; they are unaffected by the volume of traffic. Operating expenses, on the other hand, are partly constant and partly variable. It is commonly estimated that about one half of the operating expenses is constant, remaining practically the same whether little or much traffic is carried, and the other half varies with the volume of traffic carried. The classification of railway revenues and expenses may be conveniently summarized in the following tables showing the condensed income account for Class I railways of the United States in 1948, and the percentage distribution of classified railway expenses.

CONDENSED INCOME ACCOUNT, CLASS I RAILWAYS, UNITED STATES, 1948
(In millions of dollars)

Operating revenues	\$9,672	
Operating expenses .....	....	\$7,472
Taxes .....	....	1,029
Equipment and joint facility rents .....	....	169
Total expenses, taxes, and rentals		8,670
Net railway operating income	1,002	....
Other income	235	....
Total income	1,237	....
Rent for leased roads and equipment .....	....	131
Interest on funded debt—fixed .....	....	284
Interest on funded debt—contingent .....	....	32
Interest on unfunded debt .....	....	8
Other deductions .....	....	84
Total deductions from income		539
Net income	\$ 698	

Yearbook of Railroad Information, 1949, p. 42. Some items were combined, and the form of the table was rearranged.

CLASSIFICATION OF RAILWAY EXPENSES ESTIMATED ON A PERCENTAGE BASIS

	Constant	Variable	Total
Fixed (overhead) expenses	25.0	....	25
Operating expenses	37.5	37.5	75
	62.5	37.5	100

Since the fixed or overhead expenses are all constant and one half of the operating expenses is also constant (nearly two thirds of all costs are constant), it is easily seen why the railway business is an industry of decreasing costs and increasing returns as the volume of traffic increases. Fifty million dollars' worth of additional business, for example, would

lighten the burden of constant expenses on each unit of traffic. If the existing business is large enough to cover the constant costs, new business amounting to fifty millions of dollars would sharply increase the net earnings of a road, provided existing rates are not disturbed.

The economic life of the country is greatly affected by the service which the railways render and the rates that they charge, since both affect the marketing of goods. It is obvious that both the railways and the public have large stakes in the economical utilization of the railway plant.

SPECIFIC RATES BASED ON THE PRINCIPLE OF CHARGING WHAT THE TRAFFIC WILL BEAR

Since the operating expenses of railways are predominantly joint costs, incurred in the rendition of a number of different services from the same expenditure, it follows that railway charges cannot closely conform to the cost of rendering the service. It is impossible to determine the costs with any degree of accuracy, although much progress has been made in railway cost accounting. Railway managers can readily enough estimate the additional costs of rendering a specific service, if they may assume that a given train is in operation anyway. This is a very different matter, however, from allocating the constant and variable costs to all the different services which they perform. What railway managers are interested in is procuring total revenues from all services large enough to cover total expenses with some profits that will show a return on the investment of the stockholders.

In practice the general manager and other railway managers, whose duty it is to establish the schedules of rates, are guided by a principle known under the somewhat misleading name of "charging what the traffic will bear." To the uninitiated layman this is apt to suggest extortionate rates. While there have been times in railway history when rates have been excessively high, the United States has had effective federal regulation of interstate rates at least since 1906, and the states have similarly regulated the intrastate rates. Rate schedules are proposed by the railways subject to such dual regulation. In basing rates on the principle of charging what the traffic will bear (which really means charging no more than the traffic can well afford to pay), railway managers are primarily concerned with ascertaining the *value of the service* to the shipper. If wheat can be sold for a higher price in Chicago than in Topeka, or anthracite will command a higher price in Minneapolis than in Scranton, the differences in the prices obtainable represent the value of the service to the shipper. Certainly he cannot afford to pay the railway a transportation cost higher than the value of the service to him. If railways for any length of time sought to charge more, they would kill the traffic or lose it to competing transportation agencies, if such were available.

In estimating the value of transportation service to the shipper, railways must consider the competition of other transportation agencies and production centers. Railways must meet the competition of other railways and cannot remain insensible to the rates offered by other types of carriers when these can render equally satisfactory service. Widely scattered producing areas, moreover, compete with one another for rich central markets. The Chicago market, for example, is prized by the citrus fruit industries of both California and Florida. But California is more than twice as far away. It is to the interest of the railways serving California to fix their rates in such a way, if they can, as to provide California industries the widest possible market in competition with other producing regions.

As far as the value of the service is concerned, it is also obvious that some commodities can bear a much higher rate than others per unit of volume or weight transported. A shipment of silk from the Orient, carried by train from Seattle to Paterson, New Jersey, will stand a much higher rate than a trainload of lumber similarly transported across the continent. Heavy or bulky commodities, like coal, cement, and live stock, must be carried at lower rates than merchandise of high value and small bulk, if they are to be transported at all. Such differences in the value of commodities and the value of the service in transporting them are the basis of useful freight classifications. There are said to be millions of commodity freight rates between different shipping points in the United States. To get a manageable system of rates, railway managers have established different classes of freight. Dry-goods, for example, are not in the same freight classification with liquors. The rates for each freight classification between the origin and destination points are in accordance with what the traffic will bear. The economic justification of basing railway charges on what the traffic will bear rests on the fact that only in this way is it possible to secure the fullest utilization of the railway plant and to render the greatest service to the shipping public.

SPECIFIC RATES BASED ON THE COST OF SERVICE

Railway charges cannot be greater than the maximum set by the value of the service to the shipper or traveler. At the same time the minimum below which they cannot be set is the additional direct cost of rendering a particular service. Fixing rates in accordance with cost of service seems reasonable enough provided railway customers are willing to pay the charges and the costs can be determined. Legislatures, commissions, and courts, in regulating the rates not only of railways but of other public utilities as well, have been very partial to the principle of basing rates upon the costs of rendering the service in question. The practical problems in determining the cost of service arising out of the predominance

of joint costs and the difficulty of allocating a proper share of the fixed costs to each movement of traffic have proved the stumbling blocks.

In railway practice cost of service has various meanings. It may mean all expenses incurred in performing the service, thus including both operating expenses and fixed charges. It sometimes means only the operating expense incurred in using the existing railway plant to perform a given service, thus excluding that service's share of the fixed charges. Again it may mean only the additional expense of performing the given service, assuming the plant to be in operation anyway. If we assume that a certain railway in a given year had fixed charges of approximately \$2,000,000 and operating expenses of \$6,000,000 and that the traffic handled was 10,000,000 tons, the average cost of service per ton is eighty cents if both fixed charges and operating expenses are included, and sixty cents if operating expenses alone are considered. It is possible that this road may be able to carry extra tonnage at an additional out-of-pocket cost of only forty cents per ton. At this low rate, of course, the traffic would contribute nothing to help cover the fixed charges. But if it paid enough to cover the additional cost of carrying it, and a little more besides, it would be profitable to take the business, even though it is carried for less than the average ton-mile cost. Logically, in order to avoid all discrimination between commodities, the charges for any item of traffic should be sufficient to cover the operating expenses incurred in moving it and its fair share of the overhead costs. Practically, much low-grade traffic could not be carried over the rails at all if the cost-of-service principle were to be so strictly applied.

If specific rates are to be based upon the cost-of-service principle, it is reasonable that they should vary, to some extent at least, with the length of the haul. But cost of service is not directly proportional to the distance a commodity or person is carried. There are other factors in the cost. The operating costs of moving a consignment of goods include terminal as well as line haul costs. The former represent the outlays for handling, loading, and unloading the goods at the points of origin and destination, and are independent of the distance the goods are actually transported. The latter are the costs of actually hauling the goods to their destination and do vary with the length of the haul. In the practical procedure of fixing rates, even as regulated by the Interstate Commerce Commission, differences in distance are considered, but neither consistently nor proportionately. The competition of scattered producers—shippers who desire access to advantageous central markets—and the equally intense desire of commercial centers to enjoy rates that will permit the widest possible distribution of goods in competition with other centers, largely account for the chaotic existing rate structure as far as the factor of distance is concerned.

THE GENERAL LEVEL OF RATES

The general level of rates is an abstraction from thousands of specific rates charged on individual freight shipments. The preceding discussion has shown that in individual cases the range within which specific rates must fall is determined by the value of the service to the shipper, as an upper limit, and the additional direct cost of rendering the service, as a lower limit. It is obvious, however, that if rates generally were no higher than this lower limit, there would be little or no revenue to cover the overhead expenses and nothing at all as a return on the investment. Whatever may be done in individual instances, the general level of rates must be high enough to yield revenues that will cover both the fixed and the operating expenses. If the fixed expenses, including principally interest on borrowed capital, are not met, bankruptcy of the roads is inevitable.

If the railway industry is to be run as a private enterprise, the general level of rates should also be high enough to allow a reasonable return on the invested capital of stockholders. What constitutes a reasonable return it is hard to say. When the railway industry is still in the growing stage and new investments of capital are constantly needed to provide either extensions or improvements, it may be defined as such rate of return as will attract new capital into the railway industry. In 1946 the railways were only able to earn 2.75 per cent on their invested capital, in 1947, 3.41 per cent, and in 1948 (the year in which they reported their largest gross operating revenue) 4.24 per cent.¹¹ If a railway cannot show financial and operating statements that indicate satisfactory returns on the invested capital, it can hardly expect to sell its bonds in the open market or to float new stock issues.

Neither federal legislation nor regulations by the Interstate Commerce Commission attempted to prescribe what constitutes a reasonable rate of return until Congress in 1920 enacted the Esch-Cummins Law amending the Interstate Commerce Act of 1887, which had inaugurated the federal regulation of railways. Congress, in 1920, declared that a rate of return of $5\frac{1}{2}$ per cent, with an additional $\frac{1}{2}$ per cent for non-productive betterments, was reasonable. Subsequently, the Interstate Commerce Commission under power conferred upon it changed the standard rate of return to $5\frac{3}{4}$ per cent. All that this meant was that the Interstate Commerce Commission would allow the railways to establish rates that would permit them to earn $5\frac{3}{4}$ per cent on the aggregate value of the railway property in each of the rate-making districts into which the country was divided. As a matter of historical fact the railways as a whole were never able to initiate rates, which the traffic would bear, that yielded any such return.

¹¹ *Yearbook of Railroad Information*, 1949, pp. 2, 54.

A rate of return, even when declared reasonable by competent authority, is meaningless except as it is applied to some figure as a base. The question at issue was, what is the fair value of the invested capital of the railways? To answer this question Congress had at an earlier date (1913) under the Adamson-LaFollette Valuation Act directed the Interstate Commerce Commission to ascertain the capital value of the railways upon which a reasonable rate of return might be computed. The Commission was engaged upon the task for more than fifteen years, seeking to ascertain the cost of reproduction new of the railway property, its cost of reproduction minus depreciation, and its original cost to the extent that this could be determined. Tentatively, in 1920, before the completion of its valuation work and under the mandate of the Esch-Cummins Act, the Commission set the "fair valuation" of the railways of the country for rate-making purposes at \$18,000,000,000. In later years this was raised to over \$21,000,000,000, including the value of the land owned by the railways.

The practical purpose served by this attempt to fix the general level of rates in such a way as to allow the railways to earn a reasonable return on the fair valuation of their invested capital was to assure travelers and shippers that railway charges were not excessive and to inspire confidence in the value of railway securities. It tended to rehabilitate railway credit; investors had some assurance that they would get a "square deal." But events beyond the control of both the railways and the regulatory commissions soon largely relegated theories of reasonable return and fair valuation into the limbo of forgotten things. The primary post-war depression of 1920-1921, the increasing severity of competition from motor trucks and buses, as well as from private cars, and the devastating and prolonged depression of the thirties made it hopeless to establish a general level of rates that would yield any reasonable return on fairly determined capital value. The traffic could not afford to pay such rates.

Realizing the futility under present and immediately prospective conditions of the rate-making principles and procedure set up in the Esch-Cummins Act, Congress made them obsolete when it passed the Emergency Railroad Transportation Act of 1933. No longer is the Interstate Commerce Commission under a legislative mandate to allow rates that will yield any stipulated reasonable return on the fair valuation of the invested capital of the railways. A more opportunistic method of rate-making is suggested in the following section of the act:

In the exercise of its power to prescribe just and reasonable rates, the Commission shall give due consideration, among other factors, to the effect of rates on the movement of traffic; to the need, in the public interest, of adequate and efficient railway transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenues suffi-

cient to enable the carriers, under honest, economical and efficient management, to provide such service.¹²

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. A decrease in the volume of business is of more significance for the railway industry than for most types of business.
2. Since fixed charges are of great importance in the railway industry, the railway transportation business conforms to the principle of decreasing costs and increasing returns.
3. The profitability of any transportation business depends solely upon the volume of traffic carried.
4. Joint costs and large fixed costs are more characteristic of railways than of either motor vehicle or air transportation.
5. Pipe-line transportation is much less of a natural monopoly than railway transportation and should therefore not be regulated to the same extent.
6. Charging what the traffic will bear is unfair because it discriminates against the shipper of high-value goods and in favor of the shipper of low-value goods.
7. Whenever specific railway rates are set in accordance with what the traffic will bear, the rates will be unnecessarily high.
8. The interests of the railroads and the public would be best served if each class of railway service bore its full share of the cost.
9. The most important factor to be taken into account in the fixing of railway rates is the provision for a reasonable return on the fair value of the invested capital.
10. There is no economic justification for a railroad to charge a greater rate for a short haul than for a long haul.
11. By reducing the capitalized value of all the railroads by 25 per cent, the freight and passenger rates (on a cost-of-service basis) could also be reduced 25 per cent.

SUGGESTIONS FOR FURTHER READING

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¹² Emergency Transportation Act of 1933, Section 205.

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CHAPTER XIV

Organized Markets



MARKETS HAVE existed ever since men began exchanging goods. But organized markets and marketing are comparatively modern, if not in origin, at least in development. For centuries social groups were largely self-sufficing. It is true that some groups possessed advantages in the production of certain goods which were highly coveted and traded their surplus for equally prized goods which other groups possessed. Such trade, however, was inter-group rather than intra-group, and distinctly supplementary to what was otherwise an autonomous economic life. Gradually, however, trade grew. The economic self-sufficiency of the household declined. Trade accelerated the evolution of economic society. Trade came into its own in the handicraft stage of our economic evolution—in the economy of the medieval town. Here production was no longer exclusively carried on for home consumption but for exchange in the market. Trade became intra-group as well as inter-group exchange.

Our organized markets seem to be the lineal descendants of the town markets of the Middle Ages and of the medieval fairs. The town market, held on a certain day each week, provided a convenient meeting place for the people of the town and of the surrounding country. Here they exchanged their surplus products; goods for the most part moved directly from the original producer to the consumer. The closest approximation that we have today to the old medieval town markets are the public markets of our large cities. To these farm produce is brought from the surrounding country, and to these buyers from all over the city come to purchase their provisions.

The medieval fair was held periodically, perhaps once or twice per year, at places that marked natural cross-roads of commerce, or gathering places for large numbers of people for some special purpose such as a religious festival. At these fairs, which variously lasted from a few days to several weeks, the important commodities of national and international trade were bought and sold. Fabrics of silk and wool, skins and furs, leather products and pottery, exotic spices, foodstuffs, and wines were common offerings. Merchants, who were professional traders, played much more important parts at the fairs than they did at the town markets. The large well-established fairs drew traders from great distances and

proved a most important agency in facilitating the exchange of goods and in providing wider marketing areas. As trading institutions, modern fairs with their emphasis upon exhibitions and entertainments are mere shadows of the great medieval fairs. Those who criticize the obtrusive advertising and blatant commercialism of modern "world's fairs," however, forget the trade origin and purpose of fairs.

As the area in which goods could be advantageously bought and sold grew larger through the development of efficient systems of transportation and communication, specialization in production came to characterize the economic life of the world. But specialized production and its economics, which are the boast of our modern economic system, presuppose an equally efficient system of exchange. Unless there is a fairly steady market for their specialized products, it is futile for men to specialize. At no time in economic history have smoothly functioning markets, often world-wide in their ramifications, been as prevalent or as sorely needed as in our time, marked as it is by extensive and intensive specialization in production. So utterly interdependent have specializing producers grown that when markets break down economic chaos results. The nature of markets, their economic functions, and typical organized markets within which the price-determining operations of exchange are carried on constitute the main sequence of ideas in this chapter, devoted to showing the place of organized markets in our modern exchange economy.¹

NATURE AND IMPORTANCE OF MARKETS

Market-place versus market area. Ever since Mother Goose taught us all to repeat,

To market, to market,
To buy a fat pig,
Home again, home again,
Jiggety jig,

most of us have thought of a market as a *place* to which we could go to buy things, and in which other persons could sell things. Although the hog market has grown to be very important in some places, notably Chicago, the experience of most of us as buyers and sellers has been gathered in other market-places. Almost invariably, however, at least to begin with, we have associated the terms "market" and "marketing" with distinct places in which the business of buying and selling is carried on for the

¹ Typical markets are described in this chapter—the commodity market, the labor market, the loanable funds or money and capital markets, and the real estate market—in order to set forth the structural organizations within which the price-determining forces operate. What determines the prices in these markets is the theme of the succeeding ten chapters dealing with value and price, wages, interest, and rent.

purpose of effecting desired exchanges. A retail store, a public market-place to which not only many buyers but also many sellers come, or a definitely localized exchange, such as the commodity exchange called the Chicago Board of Trade, typifies the market as a market-place for most of us.

Market-places are markets without any doubt, but a market is not necessarily restricted to a specific place of business. The essential characteristic of a market is that there be communication among the prospective buyers and sellers. Neither the buyer nor the seller, and not even the commodity itself, need be physically present to constitute a market. Purchases and sales may be effected by mail, telephone, telegraph, or radio, and only the title or legal right to the goods needs actually to be transferred. Markets may be properly described as the entire area within which the forces of demand for and supply of a given commodity or service interact in effecting exchanges and establishing prices. Wherever and whenever buyers and sellers are brought together, whatever the means for achieving communication, markets exist. The field of operation of some markets is sharply circumscribed; local labor, real estate, and bulky perishable commodity markets are illustrations. Other markets are almost world-wide in their field of operations. The great international security exchanges, such as the London Stock Market or the New York Stock Exchange, draw buying and selling orders from the remote corners of the world. The markets for great staple commodities like the metals, wheat, and cotton are composed of buyers and sellers scattered throughout the world, who pour their orders to buy or to sell into the offices of brokers connected with the established exchanges in London, New York, Chicago, or other trading centers. When men talk about the money market or the securities market without reference to a particular exchange, they are thinking of a market in the abstract rather than the concrete sense.

Importance of markets and marketing. Available markets set a limit upon the extent to which specialization in production can economically be carried. A system of production which makes use of enormous investments in capital goods and practises all the economies of large-scale production must have an efficient marketing organization and adequate market outlets or it will perish. In the custom-order stage in the development of economic society marketing precedes manufacturing: the order is placed before the commodity is made. While modern factories do not run, at least very long, without orders for their products, they do necessitate heavy expenditures in plant and equipment, and steady outlays for maintenance, in order to be always ready for production when orders materialize. Marketing provides the circulatory system of modern production. Success in marketing their products makes businesses "going concerns" and gives them "going concern value." Because of the vital importance to

every business of getting its products to move in the arteries of trade and commerce, a large part of the thought and energy of business managements must be devoted to marketing problems. No matter how efficient the making of goods, unless it is supported by equal efficiency in the marketing of goods the business will fail to prosper. How important marketing is in the economic life of a people is evidenced by the fact that in the United States alone the value of the trade of retail stores—which is only part of the total volume of trade, since there are other outlets and many “turnovers” between producer and consumer—was \$128,183,000,000 in 1949. The total volume of trade, wholesale and retail, was several times this amount.² The government also reports that a total of 8,836,000 (full-time equivalent) persons were engaged in wholesale and retail trade and 2,615,000 in transportation³ out of 58,710,000 persons constituting the civilian labor force⁴ of the country in 1949. Most of what is produced by any people must be marketed, and it takes a large percentage of those gainfully employed to do the marketing.

ECONOMIC FUNCTIONS IN THE MARKETING OF COMMODITIES

Since the existing economic system is so predominantly an exchange economy in which the ultimate outcome of the productive process of creating form utilities depends upon the creation of place, time, and possession utilities as well, it is important to differentiate the economic functions discharged in the marketing of commodities. In general it may be said that these pertain to changing the place, time, and possession relations of goods to desiring human beings. All engaged in such marketing activities are as truly productive as those engaged in agriculture and manufacturing, the immediate objective of which is the creation of form utilities. Analysis of the process of marketing reveals that there are a number of essential marketing functions.⁵

The fundamental function of marketing, to which all others are subsidiary and supplementary, is *selling*, which involves transfer of ownership rights from seller to buyer. In some markets only such legal rights are bought and sold; the physical commodity itself may be stored in dis-

² *Survey of Current Business*, Vol. 30, No. 2 (Feb., 1950), p. 22.

³ *Survey of Current Business*, Vol. 30, No. 7 (July, 1950), p. 27.

⁴ *Federal Reserve Bulletin*, Vol. 36, No. 8 (August, 1950), p. 1056.

⁵ L. H. D. Weld, “Marketing Functions and Mercantile Organization,” *American Economic Review*, Vol. 7 (1917), 306-318; F. E. Clark, *Principles of Marketing* (New York, The Macmillan Company, 1932), Chap. II; F. E. Clark and L. H. D. Weld, *Marketing Agricultural Products in the United States* (New York, The Macmillan Company, 1932), Chap. II; Paul D. Converse, *Elements of Marketing* (New York, Prentice-Hall, Inc., 1935), Chap. III.

tant warehouses and merely be represented by sample. In some cases it may not even be in existence at the time of sale. At times that which is sold may represent an equity in near or remote properties. And then again, the good to be transferred may be physically present in the market, as it is in most retail stores. Selling involves agreeing upon a price with the buyer at which transfer of title to the good may be made. It is such transactions of the market, involving the transfer of ownership rights at a price, that most deeply concern the economist, since they provide him with his fundamental unit of investigation. To explain the prices that come to prevail in market transactions is a large part of the economist's task. To effect sales at advantageous prices men have created an elaborate marketing technique, including personal salesmanship and advertising, designed to convince and persuade the buyer. Goods do not usually sell themselves, even though a good product is essential for the long-term success of any selling campaign.

Other marketing functions are essential to selling but subsidiary to it. They range all the way from the original assembling to the ultimate delivery of the physical good itself from producer to consumer. *Assembling* is that function of middlemen in which they acquire control of goods for purposes of sale. Such control over goods may be easily and simply acquired, as is the case when goods come from a single source or at most from a few sources, or it may be a laborious process involving collection of goods or the rights to dispose of goods from scattered producers all over the world. In describing the marketing process of assembling Weld has this to say:

When communities were self-sufficing, there was no need of collecting or gathering commodities from distant places. But with the development of territorial specialization both in agriculture and manufacturing, the assembling of commodities from various places became a more or less difficult function to perform. The term "assembling," as used here, does not mean the actual physical transportation of commodities from one place to another, but rather the seeking out of sources, the making of business connections whereby commodities may be bought, and the study of market conditions so that they may be bought at the lowest price possible. Assembling therefore involves all the services connected with *buying*. Many wholesale houses assemble goods from different parts of the country—even from all corners of the earth.⁶

Standardization (grading or rearrangement) of the goods assembled for sale is another important marketing function. It is the process of sorting, grading, or classifying goods in accordance with established standards. Standard grades have been established for such agricultural products as wheat, cotton, and coffee. Wool is classified as to quality. Gasoline must conform to certain tests. Many manufactured goods and processed food-

⁶ *Loc. cit.*, p. 307.

stuffs are marketed in standardized packages. Standardization facilitates marketing because goods can be sold by description rather than by time-consuming inspection. Of course many consumers' goods do not lend themselves to such standardization, and some defy all attempts. Stylish goods, while the direct antithesis of standardized goods in some respects, may still conform to certain standards of quality.

Transportation and *storage* are other fairly obvious marketing functions. Transportation and storage agents in the productive process are the creators, respectively, of place and time utilities; they change the place and time relations of goods to human beings who desire them. Rubber in the East Indies needs to be transported to the United States or other countries to find its most advantageous and profitable use. Only through the indispensable function of transportation is it possible for the products of the uttermost parts of the earth to reach common markets and to contribute to human enjoyment. Few goods pass directly from the producer who raises or grows or makes them to the ultimate consumer. Some, like foodstuffs, are produced seasonally and must be stored by someone until such time as they are wanted. Storage makes possible a more even flow of goods to the market, more diversified consumption at all times, and greater stability of prices. The elevators that store the farmers' grain, cold-storage plants that house foods, the warehouses that store the stocks of manufacturers, and the retailers who fill their shelves are all contributing to a socially necessary marketing function.

Finally, *risk-taking* and *financing* are inescapable functions in the marketing of goods. The more circuitous the marketing process, the greater are the risks and financial costs involved. There are not only the ordinary risks incidental to the physical safety of any product, but there are also the greater risks of serious fluctuations in price and of unsalable supplies because of fundamental changes in the market. The marketing process is time-consuming because many goods travel a long way from their point of origin to their final destination. Payments are usually deferred somewhere along the way. This involves the extension of credit. While banks and other financial agencies have largely assumed this function (they are financial middlemen in many of their activities), the initiative for procuring credit is usually taken by one or more of the marketing agents. Retailers extend credit to consumers, wholesalers may have to give credit to jobbers and retailers, and all of them repair to the banks. Credit is the life-blood of trade, carrying nourishment to all parts of the marketing system.

The organization and processes of modern marketing are bewildering to those uninitiated in their details. It is comparatively easy to visualize and understand the primary production of goods on the farm or in the factory and also the final delivery of goods to the consumer. But there is a vast and complicated organization that functions between. Retail

merchandising is today done through general stores, department stores, specialty shops, chain-stores, mail-order departments of large retail establishments, regular mail-order houses, and directly by manufacturers and other primary producers themselves. Behind them stand many types of wholesale merchants (sometimes called jobbers), commission merchants, manufacturers' agents and brokers, finance houses and agencies, railway transportation, trucking, and shipping agencies, storage companies, delivery services and many more. Those who do not understand their functions very well are apt to denounce many of these agents as unnecessary and the chief reason for the high cost of goods to the final consumer. Experts in the field of marketing are ready enough to admit that there is much waste and inefficiency, but they rightly insist that the basic functions of marketing are as indispensable as the primary production of goods. Society must pay the necessary price for having goods in the forms wanted, where and when wanted, and in the possession of those who are to enjoy them. To eliminate some of the wastes and duplication of marketing agencies, and to procure both higher prices for the primary producer and lower prices for the ultimate consumer, coöperative marketing has been developed. The coöperative principle has been applied to both the selling and the buying of goods; there are tens of thousands of such "co-ops" in the United States alone. In many European countries, including Great Britain, Denmark, and Germany, coöperative buying and selling has had a long and distinguished history. In coöperative marketing as well as in all other forms of marketing, and for that matter in every type of business enterprise as well, the limiting factor for successful operation is trained and experienced management. On the whole, however, it may be said that coöperative marketing has a most promising future both in the United States and abroad.

COMMODITY MARKETS

Marketing as a process for the transfer of ownership rights in goods, at prices mutually acceptable to both buyer and seller, can be best studied by means of a survey of a few typical organized markets. We are here primarily concerned with the structural organization of representative markets as a means of understanding the price-determining forces that operate within them.

The great produce exchanges are typical organized commodity markets, and convenient institutions in which to see the price-determining forces actually at work. In them gather prospective buyers and sellers, eager to buy or to sell on the most advantageous terms. Prominent among these long-established produce exchanges in the United States is the Chicago Board of Trade, organized in 1848, and today the country's leading grain market. Other well-known commodity exchanges are the Mer-

chants' Exchange of St. Louis (founded in 1854), a leading fur market; the New York Cotton Exchange (1870); and the New York Coffee Exchange (1882). Exchanges in the same or different commodities are found in other American cities. In the discussion that follows, the Chicago Board of Trade is used as an illustration of a commodity market for the purpose of showing the types of transactions carried on and the prices established in them.

The Chicago Board of Trade furnishes a continuous market for grain. It is an incorporated association of grain dealers. The board itself only provides the physical facilities, and drafts and enforces the "rules of the game" under which the transactions in grain shall take place. During the crop-moving season in the fall, farmers sell their grain to dealers, who store it in elevators and warehouses from which it gradually moves to the central markets and is bought up by millers who convert it into a variety of consumers' products. The grain itself may be represented in markets by warehouse receipts and may be sold on the basis of samples available for inspection or of standardized grades known to all dealers.

As a spectator seated in the visitors' gallery looks down upon the spacious floor of the exchange his attention is particularly arrested by a number of "pits." Each of these is a series of steps, arranged in octagonal form so as to leave a pit-like depression in the center. Dealers and brokers standing on the floor of the pit or on the surrounding steps leading down to it can easily see each other and transact their business. The largest and usually the most active of these pits is the wheat pit. The others are for corn, oats, and rye. Beyond the pits and directly opposite the visitors' gallery are numerous tables exhibiting samples of grain that have arrived in the Chicago district. This grain is bought and sold for immediate delivery. A network of telegraph and telephone wires converging upon the floor of the exchange facilitates the incredibly swift execution and confirmation of orders. A publication of the board states: "So highly geared is the service over these privately leased wires that it is possible for an order to leave Kansas City, Minneapolis, or another pivotal point, be executed by a Board of Trade member, and confirmed back at the point of origin within fifteen seconds."

Trading for immediate versus future delivery. Grain is bought and sold on the floor of the exchange both for immediate and future delivery. The dealers standing or moving about among tables on which are samples of grain, which has been officially inspected and standardized, are the buyers and sellers of grain for immediate or cash delivery. The buyers represent millers and other processors of foodstuffs. The sellers represent grain dealers who have been storing wheat since acquiring it from the farmers. In this "spot" or "cash" market actual grain is being bought and sold for immediate delivery.

But wheat and other grains are also traded in for future delivery. In the so-called "futures" market traders deal in contracts to buy or sell instead of in actual grain. Brokers dealing in July wheat, for example, are buying and selling wheat for delivery in July. The designation is derived from the month of delivery and not from the time of sale or harvest. "Futures," or contracts for future delivery, are bought and sold in the pits. To facilitate and accelerate trading, the brokers have reverted to the simplest and oldest language known, the language of signs. Offers to buy or to sell are indicated by the fingers of the hand held in a vertical position, each finger representing 5,000 bushels, the unit of trade on the exchange. If the hand held in a vertical position has the palm outward, it is an offer to sell; if the palm is held toward the person signaling, it is an offer to buy. The upraised hand, palm outward, all five fingers extended, means that the trader is offering to sell 25,000 bushels. The price code is equally simple. Prices are denoted by the fingers of the hand held in a horizontal position. The even cent, say at the prevailing price of ninety-five cents per bushel, is indicated by the clenched fist; one eighth of a cent more by one extended finger, and so on through various positions of the fingers for the complete price code.⁷ A motion of the hand, accompanied by an irrepressible shout, an answering nod of the head by some other broker, and the transaction is complete; it is just as binding as if the contract had been made in writing. Both brokers merely note the terms of the sale on their trading cards.

Selling short. The exchange facilitates two types of transactions: ordinary trading in grain as a commodity of commerce, sold for immediate delivery; and dealing in contracts calling for the future delivery of grain, which are speculative transactions. Dealings in futures are the more spectacular activities of the exchange, to which the cash grain transactions, however, are not unrelated. Speculators in future contracts are commonly known as "bulls" or "bears." A bull is one who buys in the expectation that prices will rise, hoping later to sell at a still higher price. The bull's habit is to "toss up." Bulls are said to be "long" of the commodity they have purchased. If a bull in the wheat market buys May wheat in March, he is speculating that by the time the May delivery date approaches he will be able to sell the wheat for a higher price than the price at which he bought and thus to make a profit. A bear is one who sells in the expectation that prices will fall, and that before the date of delivery he will be

⁷ The price code as stated by the Chicago Board of Trade is as follows: one finger extended, one eighth of a cent; two fingers spread apart, one fourth of a cent, three fingers spread apart, three eighths of a cent; four fingers spread apart, one half of a cent; four fingers and the thumb extended and spread apart, five eighths of a cent; four fingers and the thumb extended but pressed together, three fourths of a cent; hand clenched with the thumb alone extended, seven eighths of a cent; the clenched fist, the even cent.

able to buy grain at a lower price than that at which he sold, and thus to make a profit. The bear's habit is to "pull down." Bears are said to be "short" of the commodity they have sold. If a bear in the wheat market sells May wheat in March, he is speculating that by the time the May delivery date arrives he will be able to buy the wheat at a lower price than the price at which he sold and thus to make a profit. It is always a matter as to whether the bulls or the bears have more accurately gauged the probable trend of wheat prices. Bulls like "to squeeze the bears," which means to force them to buy at higher prices than they had anticipated in making good on their futures contracts. Bears like "to rout the bulls" by forcing prices down and then buying what they need to make good their futures contracts on their own terms. The innocent outsider known as a "lamb," who gambols (or gambles) in the market with "bulls" and "bears," is often "fleeccd."

Dealing in futures is highly speculative. Bulls that go "long of the market" are pitting their judgment against the bears that "sell short." Selling short, which means to sell for future delivery what one does not own at the moment in the expectation that prices will fall, is often condemned. It is sometimes said that operations on the exchange ought to be confined to the actual traders interested in immediate delivery, and that its facilities should be closed to the speculators. It is argued that speculation has a disturbing effect upon prices, usually working to the disadvantage of both the primary producers and the ultimate consumers. There is no doubt that speculation often has just such a disturbing influence. The market is sometimes "rigged" to attract unsuspecting outsiders. When the market is artificially manipulated by professional speculators for the purpose either of advancing or depressing prices so as to make possible speculative profits, it accentuates fluctuations in prices rather than stabilizes them. Bulls occasionally seek to "corner" the market by buying up all that is offered of a commodity, like wheat, for delivery in a given future month. The apparent purpose is to compel those who have "sold short" to buy the wheat they need for their contracted deliveries at greatly enhanced prices. Since the bulls control the supply, they are in a position to reap handsome profits at the expense of the bears. Similarly, the bears at times raid the market for the avowed purpose of demoralizing prices and of profiting by the difference between the prices at which they sell and subsequently re-buy. Such speculative manipulations often defeat their own purposes. But whether successful or not, these attempted corners and raids generate sweeping price changes which are contrary to the interests of legitimate trade.

Speculation, however, is not to be condemned outright. It may also have a stabilizing influence upon prices by equalizing demand and supply over periods of time. The physical supply of wheat in the United States,

for example, is largely marketed by the farmers during the summer and fall months. There is a demand for wheat, on the other hand, throughout the entire year. If there were no speculative buying of wheat, its price would tend to be greatly depressed during certain months of the year with corresponding price accentuations at other times. This would prove of disadvantage to both the producers and the consumers of wheat. Speculation, when based upon an intelligent study of market conditions, may contribute something toward holding prices more steady than they would otherwise be. The speculator who sells short in the futures market may help to prevent prices from rising as high as they otherwise would. Subsequently, he may also prevent them from falling as low as they would without him and his kind, because he has to enter the market to buy a "futures" contract calling for the delivery of wheat to cover his short sale. It must be conceded, however, that the stabilization of prices is accomplished only indifferently. Speculation tempts all sorts of market adventurers. Amateurs buy on whims and "tips." Professional speculators try to anticipate the larger swings of the market. The net result is often an exceedingly nervous or "jumpy" market with many minor advances and declines.

Hedging. Dealing in futures provides the opportunity for hedging. Hedging is an attempt to eliminate some of the speculative risks of business, but oddly enough the speculative market itself must be used to accomplish the purpose. Hedging has been described as price insurance. Hedging involves both buying and selling by the same person at about the same time. The buying may be done in the commodity market for immediate delivery, and the selling in the speculative market for future delivery. The practice of millers, who wish to restrict their business operations to the moderate profits they can make on the conversion of wheat into flour, and to eliminate the risks of changes in the price of wheat, offers one illustration of hedging. When a miller buys actual wheat for immediate delivery, he at the same time sells a contract calling for the delivery of an equal amount of wheat in the futures market. The broker who buys the miller's futures contract is not interested in getting possession of the stipulated physical wheat, but is only interested in the profit which he can make if he has guessed the futures market correctly. The miller who hedges is not a professional speculator; rather he is a trader who is willing to forgo the opportunity of making speculative profits for the sake of escaping the possibility of speculative losses. Grain dealers, who buy the grain from the farmers and temporarily store it in elevators, may also protect themselves against losses by hedging.

Let us assume that in Chicago wheat for a certain future delivery month is selling at \$2.35 per bushel, and that a grain dealer in the wheat belt of the United States who expects to market his wheat during this same

future month, guided by this price, has just bought 100,000 bushels of wheat at \$2 per bushel and has paid the farmers cash for it. The difference of thirty-five cents represents freight charges, the cost of handling, and a fair profit to the grain dealer. He wishes to make this business profit and nothing more. But if the price of wheat should decline before he can market it in Chicago he may suffer a loss instead. Accordingly, to protect himself against such contingent loss he sells 100,000 bushels of wheat for future delivery at \$2.35 per bushel. (Usually there is a normal spread between the cash price and the futures price of wheat, but changes in the price of one are offset by corresponding changes in the price of the other. They rise or fall together.) The dealer has now hedged and can remain indifferent to price fluctuations of the wheat that he holds. When he sells the actual wheat in Chicago he at the same time takes in his hedge by buying a contract calling for the delivery of 100,000 bushels of wheat. If when he markets the actual wheat, the price he receives is, as contemplated, \$2.35 per bushel and he must also pay \$2.35 per bushel for the wheat that he sold for future delivery, it is clear that the two transactions perfectly offset each other. His only profit results from the difference between the selling price of actual wheat and what he paid the farmers for it, plus the costs of getting the wheat into the Chicago market.

But if the price of wheat for immediate delivery is \$2.40 per bushel, he makes five cents more per bushel than he had anticipated. At the same time, however, he must also pay five cents per bushel more in order to take in his hedge, for he had sold 100,000 bushels for future delivery at \$2.35. To acquire a futures contract calling for the delivery of 100,000 bushels of wheat he must now pay \$2.40 per bushel. The extra five cents per bushel that he makes on the one transaction he loses on the other. But he still has his non-speculative profit as a grain dealer, measured by the difference between what he receives and his cost of doing business.

If the price of wheat for immediate delivery is \$2.30 per bushel by the time the dealer can market it in Chicago, he loses five cents per bushel. But the hedge contract that he buys also costs him five cents per bushel less than the futures contract he sold at \$2.35 per bushel when he bought the wheat from the farmers at the outset. What he loses in the trade market, he now gains in the speculative or futures market through the hedging contracts in which he has participated. He still has the profit he counted on, however, when he bought the wheat from the farmers.

The opportunity of hedging in the market for futures makes it possible for grain dealers to allow for a narrower spread than they otherwise could between the prices they pay the farmer and the prices they expect to get in the central markets. If it were not for hedging the risks of price fluctuations between the buying of the farmers' grain and its final sale would have to be borne by the farmers in the lower prices they would

receive. Hedging has the further advantage of transferring risks to a body of professional specialists most competent and willing to shoulder them.

LABOR MARKETS

Most of us are inclined to think of markets and marketing as pertaining only to the buying and selling of finished goods, usually commodities that are on their way to the final consumer. But markets and marketing are much broader than this. They include agencies facilitating the transfer of commodities at every stage of the productive process, the buying and selling of human services, the procuring of funds for much of the financing of business enterprise, and the leasing and sale of real estate.

Labor markets characteristically lack the high degree of organization that distinguishes commodity markets of the kinds just considered. But they are no less representative of markets. They are organized to facilitate the buying and selling of human services for specified periods of time. A labor market exists wherever and whenever prospective employers and employees meet for the purpose of negotiating the purchase and sale of human services. Sometimes the market is local, small, and wholly unorganized. It may be located in some business office to which applicants come to present themselves in person for some work that has been advertised. Or it may be located at some factory gate or in the office of an employment manager where those responsible for the hiring look over and interview any prospective employees that gather at the appointed time. The labor market may also be large-scale and highly organized, such as is the case when representatives of one or more railway brotherhoods meet representatives of the railway managements and bargain collectively concerning the wage scales that shall prevail in railway transportation on a given system or on a number of systems. Both private and public employment exchanges have also been established to facilitate not only selling but also buying the services of labor.

The effective functioning of labor markets provides most persons with their opportunities for work and their daily bread. Successful sale of one's services means employment. Employment brings wages. Wages confer purchasing power over the goods of life. When employment fails in any large way, the whole economic system works badly. Labor markets, like commodity markets, result in the establishment of prices. The price of labor is known as wages. To the worker wages are his purchasing power; to the entrepreneur-employer they usually represent his principal item in the cost of producing any commodity for the market. Workers, employers, and consumers all are directly interested in the functioning of labor markets and the wage scales which are established by them.

REAL ESTATE MARKETS

Still another representative market is furnished by the land or real estate market. The use of land, represented by leaseholds, and ownership in land, represented by deeds conveying title, are regularly bought and sold. Many of these transfers are negotiated directly between the interested parties. In many others the transactions are effected through real estate brokers. Like the commodity market, and unlike the labor market, the real estate market is dominated by middlemen. These find their principal activity in brokerage and derive their living largely from the sales commissions they collect. There have been marked tendencies in the United States for realtors to engage on a limited scale in construction, the plotting of urban subdivisions, the management of real estate properties, and the appraisal of land values.

It is estimated that land values, including the value of improvements, constitute nearly one half of the developed wealth of the United States. The transfer of real estate from one owner to another, and the whole business of real estate merchandising, are of course based upon the institution of private property. With property rights in land firmly established, men were free to lease or sell their rights. As transfers of title became less complicated (they are still far from simple) and the demand for land increased, the marketing of real estate became an established business.

Most real estate markets show a less continuous flow of transactions than either the commodity or labor markets. They are apt to be highly active, perhaps assuming "boom" proportions, or so inactive as to be described as "dead." It is the transactions of the market, however, that set the price of land. What is bought and sold in the land market is both the temporary use and the more permanent possession of the land. The determination of the price of land and its relation to other prices constitute one of the knottiest problems in economic theory and practice. The slow and inadequate functioning of land markets has far-reaching effects upon our economic life: investment businesses, including banks and insurance companies, find some of their assets frozen, and assessors of property for taxation purposes find it difficult to make fair appraisals of land values without the guide of an active market.

MONEY AND CAPITAL MARKETS

Of great importance to modern economic society is the functioning of the money and capital markets, through which the use of loanable funds is made available for short or long periods of time. When funds are needed for a relatively short period of time—say not to exceed six months—the money market stands ready to serve the needs of business. Banks are the

most important, though not exclusive, agency supplying the funds. A wide assortment of loans and obligations is available. There are the "over-the-counter" loans or discounts which banks make to their regular customers, whose credit standing is thoroughly known to them. There are call loans payable at the option of either lender or borrower upon twenty-four hours' notice. Collateral loans, supported by stocks and bonds, bankers' acceptances, and commercial paper are other credit instruments in which the money market deals. The United States Treasury is a frequent borrower in the money market, issuing treasury bills and certificates in return for the funds received. When more permanent or long-term investments are wanted, the capital market is ready to function. Investment houses, trust companies, savings-banks, and mortgage banks, as well as insurance companies, are the more important agencies supplying funds for long-term investment. The term "commercial banking" is frequently used to cover all the transactions of the money market, and "investment banking" to cover the transactions of the capital market.

The buying and selling of loanable funds by borrowers and lenders in either the money or the capital market result in the establishment of interest rates, which are the prices paid for the use of capital. The rate of interest tends to govern both the accumulation of capital and the direction of its flow for investment purposes.

SECURITY MARKETS

Closely related to capital markets, which are usually thought of as institutions facilitating *new* capital issues, are security exchanges, which provide ready markets for stocks and bonds already issued. Security trading has become centralized in a few exchanges. Only in this way is it possible to provide a reasonably active market. Although there are now more than a score of security exchanges in the United States, the New York Stock Exchange does the bulk of the business. It is one of the two leading exchanges of its kind in the world, the London Stock Market being the other.

The New York Stock Exchange in organization and operations is typical of all security markets. It is still a voluntary unincorporated association, at present consisting of 1,375 members. The number of members stood unchanged at 1,100 from 1879 to 1929, when the membership was increased by 275. Only members are allowed to trade on the floor of the exchange. The members may deal in the listed securities either as principals or as agents. Membership in the exchange is usually acquired only through purchase, with the approval of the committee on admissions. That it is highly coveted is evidenced by the fact that in 1929 before the membership was increased 25 per cent the high price paid for a single membership was \$625,000. After the stock market crash in the fall of that year the

price of an exchange seat fell off sharply; it reached a low point of \$17,000 in 1942, which was the lowest price paid for a seat since 1898. In August, 1950, a seat sold for \$48,000.

The securities of the leading corporations are listed on the exchange. Initiative for listing must be taken by the corporations. The Committee on Stock List calls for a detailed statement of the financial condition of the issuing corporation and requires the regular publication of financial and operating statements. Registrars and transfer agents must be located in New York City. The securities must be seasoned. A listing fee must be paid, if the Governing Committee finally approves the application for listing.

Trading in listed securities takes place about stands or posts, of which there are twenty-two on the large floor of the exchange. Separate stands are assigned to groups of stocks, such as the steels, railways, railway equipments, and textiles. On July 31, 1950, there were 1,471 individual issues of preferred and common stocks and 932 issues of bonds listed on the exchange. When, for example, orders to buy and sell 100 shares of United States Steel preferred at 140 are executed, a ticket is exchanged by the members participating in the transaction, showing that the one has bought and the other has sold the shares in question. Employees of the exchange gather the price quotations at which securities are sold. The New York Quotation Company, a subsidiary of the exchange, supplies quotations to members of the exchange. The Gold and Stock Telegraph Company, a subsidiary of Western Union, distributes them to exchange-approved clients throughout the United States. Both utilize a ticker service, which is a telegraphic printing device. The financial pages of the metropolitan newspapers carry a daily report of the number of shares of each listed security sold, together with the opening, high, low, and closing prices. The total sales registered on the New York Stock Exchange in any one year reached a peak in 1929, when 1,124,800,410 shares were transferred. The daily average for that year was 4,276,808 shares, with one day during the crash when 16,410,030 shares exchanged hands, much the largest number in the history of the exchange. The year 1942 offers a striking contrast with total sales of 126,000,000 shares. The market value of both the stocks and bonds listed on the New York Stock Exchange on January 1, 1929, exceeded \$114,000,000,000. On July 31, 1950, the market value of the listed stocks and bonds was over \$207,209,000,000.⁸

To many persons a stock-exchange is merely a place where a very noisy aggregation of brokers gamble in securities under the thinly disguised pretense of doing a legitimate business. Such persons fail to understand the economic functions of the exchange. True it is that the exchange

⁸ Cf. *New York Stock Exchange Year Book* for continuous data such as the above.

is sometimes used for gambling purposes, but this should not condemn it outright, since gambling is a subversion and abuse of its primary purpose. It is possible to gamble on almost any event. Boys have been known to gamble on the length of a minister's prayer, but it is to be hoped that this did not destroy its efficacy nor curtail future ministerial functioning in this respect.

The stock-exchange is primarily a market-place. It facilitates two types of legitimate transactions: investment and speculation. Since orders to buy and to sell converge upon the floor of the exchange, both investment and withdrawal from investment are made easy. It is possible to buy a single share of stock, or a single bond with a par value of \$100. Although shares are usually only bought and sold in even lots of 100 shares each, the operations of the odd-lot broker, who "bunches" orders, make it possible to buy or sell any desired number of shares. The exchange provides a diversified list of investment opportunities, ranging from the most solidly conservative bonds to the more speculative common stocks, and thus appeals to all classes of investors. It provides marketability for those holding securities listed on the exchange. The ready marketability of listed securities makes them peculiarly available as collateral for bank loans, if those owning them find it necessary or desirable to borrow.

But the exchanges furnish opportunities not only for investment and the liquidation of investments, but also for speculation. Since there is a speculative element in all business, it is exceedingly difficult to draw a sharp line of demarcation between speculation and investment. Because most business has to be conducted on an estimate of future demand, there is some speculation in it. Perhaps as practical a criterion as any for distinguishing between an investment and speculation from the individual's point of view is this: when a security is bought, primarily, for the income it yields, the transaction is an investment; when bought, primarily, for possible appreciation in the value of the security itself, the transaction is a speculation. In making an investment the buyer seeks as much as possible to avoid risks; in committing himself to a speculation, he courts risks in the hope of making profits. To speculate intelligently, rather than blindly, may require as much thought and study, or even more, than to make a relatively safe investment.

The technique of speculation on the New York Stock Exchange resembles that on the Chicago Board of Trade. The bulls and bears operate in both. Stocks may be sold short just as grains are. Under the rules of the New York Stock Exchange, however, brokers selling a stock short must deliver it by the close of business the following day. They are able to do this by borrowing the stock from other brokers who hold it in their accounts. As security for the borrowed stock they must deposit the market value of the stock in cash. When the borrowing brokers cover their short

sales by subsequent purchases, they are in a position to return the number of shares of one stock they have borrowed.

A widespread speculative practice in both stock markets and produce exchanges is "dealing on margin." Dealing on margin consists in buying a stock by paying only part of the purchase price and borrowing the rest. If the margin required represents only 50 per cent of the purchase price, the speculator's broker, or the broker's bank, must advance the rest, at interest because the stocks bought in the market must be paid for in full. The broker keeps the purchased stock as security for the money advanced the speculator. If the price of the stock advances in the market, all is well. But if it declines, and the decline is drastic enough to wipe out the margin put up by the speculator, the broker calls for more margin, that is, a bigger down payment from the holder of the stock. If he can furnish it, he retains the stock; if not, the broker will sell the stock before the original margin payment is completely wiped out. Dealing on margin increases the speculator's leverage, because a given sum of money used as margin will finance the purchase of a larger number of shares than a purchase with payment in full. The chances both for profits and for losses are correspondingly greater. If a person owns stocks outright, it rarely happens that the value of his holdings is completely destroyed. If he owns them on margin, however, it frequently happens, and with surprising rapidity, that he loses his entire equity.

Control over the issuance of securities. The issuance of securities and the operation of the security exchanges in the United States was brought under close governmental supervision and control during the great depression of the thirties. The investing public needed protection against exploitation and also against its own mistakes. That investors would suffer terrific losses in the depression beginning in 1929 was to be expected. But it came to be realized that some of these losses could have been avoided if greater care had been exercised in the issuance and sale of the securities. Foreign bond issues fared badly, from 50 to 75 per cent of those held in the United States going into default. A congressional investigation revealed inexcusable laxity by investment banking houses in floating securities that never should have been sold at all, excessive commissions for underwriting them, and some actual financial scandals. The pyramiding of public utility holding companies, and the marketing of their securities, with the eventual collapse of a huge system like the so-called Insull Empire, shook public confidence in the old methods of distributing securities. The conviction became widespread that the full facts pertaining to many security issues had not been given to the public. Others, while admitting this, contended that, even if they had been, the public needed further protection because so many investors would either not understand the facts or take time to master them.

The Securities Act of May 27, 1933 (amended June 6, 1934), was designed to compel the issuers of securities to tell the whole truth concerning them and to hold such persons liable for losses sustained if they failed to do so. As the Conference Committee of the Senate and the House said in favorably reporting this "truth in securities act," its purpose is "to provide full and fair disclosure of the character of securities sold in interstate and foreign commerce and through the mails, and to prevent frauds in the sale thereof." While the Securities Act is based upon the assumption that what the investing public needs is full and accurate information, it also substitutes for the old rule of *caveat emptor* the new rule of *caveat venditor* ("let the seller beware"). Under the act those contemplating the issuance of securities, not specifically exempted by the act, must file a registration statement with the Securities and Exchange Commission, which sets forth all the facts that an interested investor should have at his disposal. Unless this is done, the instruments of transportation and communication in interstate commerce, including the mails, cannot legally be used in marketing the security. Sellers must provide buyers with prospectuses of the securities sold, the prospectus is an epitome of the registration statement. If misleading statements are made concerning the new securities to be issued, or pertinent facts are withheld, the purchaser of such securities has legal cause for action against those concerned with their issuance and marketing, provided he can show that he relied upon such false or misleading statements in the registration papers or prospectus. After the new securities have been properly registered with the Securities and Exchange Commission, a "waiting period" must elapse before they can be sold to the public. This permits some time for investigation by the prospective purchaser.

The Securities Act applies only to new issues, not to stocks and bonds of the public at the time the law was enacted. The law cannot be relied upon to prevent a speculative craze such as that which reached its climax in 1929, although it may help. The Securities Act will not prevent an investor from making foolish commitments in risky ventures. It can provide him with no real information concerning the future upon which, rather than the past, the value of investments so largely depends. What it does is to give him full information concerning the past, and an opportunity of knowing what he is committing himself to before he does it. It cannot compel an investor to act wisely, but it gives him a chance to act intelligently.

Control over trading in securities. The Securities Exchange Act of June 6, 1934, supplements the Securities Act of 1933. It regulates the whole business of *trading* in securities, as the earlier act regulated the issuance of securities. Stock-exchanges are brought squarely within the regulatory powers of the government. Prior to the enactment of this law they had

not been regulated under either state or federal laws. The New York Stock Exchange, for example, had frequently been described as a rich man's club outside the pale of regulation. The act made it a regulated public institution.

There had been serious abuses in the operation of the exchanges, with no real public accountability. Stock market manipulations, speculation on thin margins, the slaughter of "lamb," the draining of funds into speculative channels when needed elsewhere, and the creation of artificial values for the sake of avoiding tax payments were some of the counts in the indictment of the exchanges. The Securities Exchange Act seeks to correct these abuses. It sets up a Securities and Exchange Commission of five members, appointed by the President, to regulate the whole business of issuing and marketing securities and to offer what protection it can to the public.

One important power of the Commission is the power to require registration of stock-exchanges and securities as a condition for the use of any of the instrumentalities of interstate commerce by the exchanges in the conduct of their business. The Commission thus receives information in regard to the securities listed on the exchanges and may call for further information as needed. It may prescribe the form of the accounts and records to be kept and made by the brokers and exchanges, and may itself make whatever examinations are deemed necessary. It may suspend trading in securities if the issuer has not complied with all the requirements of registration, and it may suspend exchanges themselves if they violate any of its rules.

A second objective in the establishment of a regulatory commission is the prohibition of manipulative practices, generally regarded as undesirable. Wash sales, matched orders or fictitious transactions, rigging, upward and downward manipulation of prices, all designed to create an impression of exchange activity and to affect prices for the benefit of insiders, are expressly prohibited. Security prices may not be pegged except upon authorization of the Commission. Puts, which are contracts to deliver stock at a specified price, and calls, which are rights to take stock at a specified price, may only be used under rules laid down by the Commission. This is also true of short sales.

Finally, the Securities Exchange Act seeks to control credit for speculative purposes. Two provisions of the act are important in this respect. The Board of Governors of the Federal Reserve System is given power to control margin requirements for dealings on margin, under congressional declaration that they shall be substantial and designed to prevent excessive speculation. The other significant provision is that brokers' loans must be made through banks that are members of the federal reserve banking system or have agreed to its regulation in this respect. This seems to give the Board of Governors of the Federal Reserve System power to check

what it regards an undesirable flow of bank credit into the security markets of the country.

The Securities Act of 1933 and the Securities Exchange Act of 1934 have unquestionably tended to restore confidence in the securities business. An incidental danger is that they may lull investors into a false sense of security, because after all many securities are not registered, and many of those that are must be classified as speculations and not as investments. On the whole, however, it may be expected that there will be somewhat greater security in securities, and that investors will turn more to sustained earnings than to the possibility of speculative profits as the basis of their market valuations. Honest markets, with an abundance of sunlight and fresh air to encourage their growth, are the all-inclusive objective of our securities and the security exchange legislation.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. If the producer sold directly to the consumer, the costs of the middleman could be eliminated and the retail price lowered.
2. Trading in commodity futures should be abandoned, since it serves no useful economic or social purpose.
3. Hedging in a commodity market is not speculation, but rather an attempt to avoid speculation.
4. Labor markets are more highly organized than real estate markets.
5. Since money is more mobile than workers, it follows that capital markets are more competitive than labor markets.
6. Dealing on the margin reduces the degree of speculation in the securities market since less money is required to purchase an issue.
7. The New York Stock Exchange, while providing facilities for speculation, is of no particular use to real investors.
8. Speculation in commodities or securities does not differ from gambling in them.
9. Government regulation of organized markets, such as is provided by the Securities Act and the Securities Exchange Act, has corrected abuses without hindering the useful functioning of the markets.
10. An efficient administration of the law by the Securities and Exchange Commission would prevent the possibility of making bad investments in securities listed on an organized stock exchange.

B

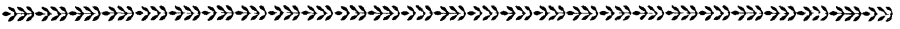
1. A grain dealer on the Pacific Coast wishes to ship some wheat by boat through the Panama Canal to New York; the wheat will not be delivered for sale in New York for at least a month. How could the dealer protect himself against a possible fall in the price of wheat while the cargo is in transit?

2. The Ryan interests who had a *corner* on the stock of the Stutz Motor Company some years ago *squeezed the bears* who had *sold short*. When the bears *rushed to cover*, under the attack of the *bulls*, they found prices hovering around \$700 per share, finally settling at approximately \$550 per share. What is the meaning of the *italicized* terms?

SUGGESTIONS FOR FURTHER READING

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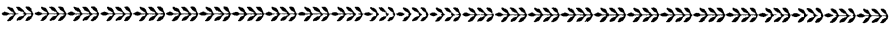
PART III



VALUATION

CHAPTER XV

The Genesis of Value and Price



THE CENTRAL problem in economic theory and practice is the problem of what determines value and price. The price of consumers' goods such as food and clothing, of producers' goods such as land and machinery, of human services whether manual labor or professional service, all present intricate problems for economic analysis that are of the deepest significance. Whether prices are relatively high or low, rising or falling, balanced or unbalanced, is usually a matter of prime importance as far as the prosperity or depression of an economic community is concerned. What an individual must pay for butter and meat, shoes and gasoline, coal and housing, and what in turn he can sell his own services or products for are price problems that loom large in his own economy.

The core of economics as a distinct branch of human learning is furnished by its theory of value. This has been a fertile field of inquiry—and of controversy. In 1848 John Stuart Mill, whose *Principles of Political Economy* admirably summed up the thinking of the classical economists as it had developed during the previous seventy-five years, had this to say about value: "Happily there is nothing in the laws of value which remains for the present or any future writer to clear up; the theory of the subject is complete."¹ It was an over-optimistic statement. Only a generation later the American economist, John Bates Clark, took direct issue with Mill when he wrote: "The charm of novelty, at least, should attach to a philosophy of value, provided only that it prove to be the true one; for it is certain that in all that has been written on this much elucidated theme, a statement of the real nature of the thing discussed is not to be found."² Hotly contested theories of value bear witness to the supreme importance of the subject. What theory of value, or value principles, does present-day economics have to offer in explanation of the value problem? This is a basic question because we are all deeply concerned with the interaction of forces and influences that determines the prices we have to pay for the goods we desire and the prices we get for whatever we have to sell.

¹ *Principles of Political Economy*, edited by W. J. Ashley (London, Longmans, Green and Company, 1909), p. 436.

² *Philosophy of Wealth* (Boston, Ginn and Company, 1885), p. 70.

NATURE OF ECONOMIC VALUE

"Value" is a term that has many meanings. In ordinary speech it is commonly attributed to anything that is of use in the satisfaction of human wants. In this sense there are not only economic but also political, social, esthetic, ethical, and religious values of life. The meaning which all such values have in common is perhaps best expressed by such words as "worth," "esteem," "usefulness," or "utility." But while economic value is a species that belongs to this broad genus of want-satisfying goods, it is something more than mere utility.

Anything has economic value if it is not only useful but also scarce and if its value is susceptible of more or less definite measurement. Under these conditions it has economic value whether it is exchanged or not. When a thing is both useful and scarce, economic value arises, and it arises under no other conditions. Useful things that exist in superabundance have no economic value. They are free, not economic, goods. Economic values usually, though not necessarily, reveal themselves in ratios of exchange. But scarce goods have economic value whether they are objects of exchange or not. There were economic values in a self-sufficing economy, although there was an absence of exchange. There were economic values for Robinson Crusoe even before Friday's advent made exchange values possible. There would be economic values in a communistic society in which each produced in accordance with his capacities and took in accordance with his needs without the aid of any organized system of exchange. The economic value concept is also essential in accounting for the value of many goods in our modern exchange economy which themselves are never intended for exchange, such as public buildings and prized possessions of many kinds. Economic values may be thought of as existing antecedent to exchange. They guide the wealth-getting and wealth-using activities of man, prompting him to direct and invest his productive efforts so as to satisfy his most urgent desires. As a tool for the complete qualitative analysis of the value problem the concept of economic value is fundamental, even though quantitatively, economic values are usually measured in exchange.³

ECONOMIC VALUE EXPRESSED IN EXCHANGE VALUE
AND PRICE

Economic values commonly manifest themselves in exchange and lend themselves to pecuniary measurement in the exchange ratios of the mar-

³ On the nature and importance of economic value in discussions of the value problem cf. F. M. Taylor, *Principles of Economics* (New York, The Ronald Press, 1921). Chap. I; Chap. XIX, pp. 242-243; also B. M. Anderson, Jr., *The Value of Money* (New York, The Macmillan Company, 1917), Chap. I; B. M. Anderson, Jr., *Social Value* (Boston, Houghton Mifflin Company, 1911).

ket-place. "Value," says John Bates Clark, "expresses itself in the quantitative ratio in which commodities exchange for each other in the market."⁴ Goods come to have exchange value largely because specialization in production has developed and so the exchange of goods has become necessary and desirable. If every person produced all that he needed in the satisfaction of his wants, there would be no occasion to exchange goods and no exchange values to settle.

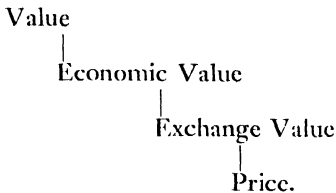
Exchange value has aptly been described as "power in exchange." The exchange value of a good may be measured by whatever other goods are offered in exchange for it. To have exchange value a good must invite and sway man's choice. Some things are chosen, others are rejected, because they have greater or lesser importance for man than what he has to offer in exchange. It is this importance which things have when they become man's choices that gives them exchange value. In economic literature, unless qualifying adjectives are used, "value" usually means "exchange value."

Since men no longer customarily exchange goods directly but rather do so through the medium of money and credit, exchange values are usually expressed as prices. While the exchange value of a good could be expressed in terms of every other good for which it might be exchanged, money serves as the most convenient common denominator. Accordingly price is exchange value expressed in terms of money. The fact that we can reduce all exchange values to money prices enables us to compare values of the most diverse sorts. A small particle of radium commands a fabulous price; a pound of coal, a negligible price. A concert artist may be paid \$5,000 for an evening's performance; a surgeon may receive a few hundred dollars for an operation that lasts as long; a skilled mechanic may get a few dollars for working the same number of hours; but a champion prize-fighter may even be rewarded with \$100,000 or more for lasting a few three-minute rounds. Prices are a convenient means of reducing all the qualitative differences of want-satisfying goods to a common denominator. Prices are subjective when they denote the sums of money, or its equivalent, at which prospective buyers will buy or prospective sellers will sell a given good. Prices are objective when they denote the sums of money at which exchange transactions actually take place. At any given moment prices may fairly represent values; over a period of time price changes do not necessarily record corresponding changes in value. If given styles of shoes and hats sell for \$8 and \$4, respectively, on a given date, their relative value is obviously as 2 is to 1. If some time later their selling prices are \$12 and \$6, their relative value is still the same, although it is evident that their money prices have advanced 50 per cent. If the price of shoes alone advances, while all other prices remain unchanged, it

⁴ *Philosophy of Wealth* (Boston, Ginn and Company, 1885), p. 91.

is a safe inference that either the value of shoes has risen as measured by other goods, or that the value of all other goods has fallen when measured in terms of shoes. Changes in the price of a single commodity over a period of time are not a reliable index of changes in value unless the prices of other goods are also known. But at a given time prices do express relative values. The immediate problem of the theory of value is to explain the ratios at which goods exchange for one another. Economists have largely confined themselves to this phase of the value problem. The more remote problem in the theory of value is the explanation of the economic values that enter into ratios of exchange. Since prices express exchange values, the explanation of exchange value in practice becomes the problem of price determination.

The relationship of the preceding value concepts may be summarized by the following classification, which shows each successive concept as a sub-class of the preceding. It is with the analysis of what determines price that the problem of value is largely concerned.



FUNCTIONING OF THE MARKET IN THE DETERMINATION OF COMMODITY PRICES

In the preceding chapter the organization and functioning of representative markets have been discussed. Exchange values or prices arise out of the transactions of such markets. The commodity market may be thought of as either a retail or a wholesale commodity market. Essentially every such market is a series of transactions in which commodities are bought and sold at prices which under the conditions of the market are acceptable to the buyers and sellers.

While every transaction of the market represents the meeting of the minds of an actual buyer and an actual seller, market price is influenced by the presence of other parties as well. Actual buyers and sellers are in competition with potential buyers and sellers. To the actual buyer and seller, and to the potential buyer and seller, the state may be added as a fifth party to the transactions of the market, since it provides the governmental sanctions for such transactions and often limits their terms.⁵

⁵ Cf. John R. Commons, *Legal Foundations of Capitalism* (New York, The Macmillan Company, 1924), pp. 65-68.

The prospective parties to a transaction of the market, both buyers and sellers, formulate their subjective prices, which merely represent the terms on which they are willing to do business. The subjective prices of prospective buyers and sellers are measured, respectively, by the largest amount of other goods which they will give for a good, or the smallest amount of other goods which they will accept for it. Such subjective prices may be carefully and precisely formulated in advance of possible participation in the transactions of the market or they may be nonchalantly expressed in the market through the acceptance by either buyer or seller of the price offer of the other party to the transaction. The objective prices of the market which always and only emerge from the actual transactions of the market are the resultants of the interactions of the subjective prices of prospective buyers and sellers. These subjective prices together make up the demand for and supply of the goods of the market, since goods are always wanted and offered at specified prices. The demand for a good is a composite of the subjective prices of prospective buyers, and similarly the supply is a composite of the subjective prices of prospective sellers.

To say that exchange value is a resultant of the interaction of the subjective prices of buyers and sellers, or an expression of the relation between demand and supply, is not, however, to offer any real explanation of value at all. At one time it was supposed that the fundamental law of value could be summed up in the simple formula: Value varies directly with the demand and inversely with the supply. But one does not need to be an economist to know that when in a competitive market the total demand for a good rises with either no change in the supply or a decrease in the supply, prices will rise. Conversely, when the total demand for a good falls, with either no change in the supply or an increase in the supply, prices will fall. The law of demand and supply explains variations in value, but it does not explain the origin or causes of value. It merely tells us how the market forces work themselves into equilibrium. It is a formula and not a doctrine or theory of value. Demand and supply furnish the most convenient approach to the determination of exchange value or market price, but if themselves unexplained they are nothing more than the mechanism of the market. Both the demand and the supply, in a given market, and over periods of time, require explanation if we are to have any real theory of exchange value or market price. Henry Clay has picturesquely expressed the superficiality of much of the current demand and supply explanation in the following words:

It was said in the middle of the last century that you could make a good economist of a parrot by teaching it to repeat the words "supply and demand"; a great many people have acted on this belief, and, having taught themselves to repeat, like parrots, the words "supply and demand," have set up for economists. In spite of frequent misuse, however, the principle that

value depends on supply and demand is extremely important; a parrot that fully understood it would indeed be a good economist, but it seems to be beyond the comprehension of most parrots, human and otherwise.⁶

If exchange value emerges from the interaction of the subjective prices of prospective buyers and sellers, together represented in the market demand and supply, it is clear that the important theoretical question at issue is: What determines the subjective prices of prospective buyers and sellers? Value theory (i.e., price theory) largely turns on the explanation of the determinants of the subjective prices of the parties to a transaction of the market. These determinants are both general (institutional) and specific. There are certain general determinants, represented by the economic institutions of time and place, which affect the transactions of the market. Among these are custom, competition, monopoly, and public authority. The strength or weakness of custom, the effectiveness or ineffectiveness of competition, the presence or absence of monopoly, and the intervention or non-intervention of public authority, all have much to do with the sort of prices that will prevail in an economic society. They are powerful general determinants of the subjective prices of prospective buyers and sellers, and thereby help set the prices at which commodities and services can be bought and sold in the market. But there are even more important specific controlling determinants provided by what the buyer is able and willing to pay and what the seller is willing to take. A qualitative analysis of these constitutes the core of most price theories. Much of the discussion that immediately follows represents an attempt to make such a qualitative analysis.

While subjective prices, however they may themselves be determined, interact in the establishment of objective market prices, it is also well to note that prevailing market prices influence the subjective prices of both prospective buyers and sellers in future price transactions. We live in a world of prices, and the terms on which we are willing to buy and sell are influenced by the "going" valuations of the market. This is what is meant by saying that demand, supply, and price all interact. Any given price to be sure is the resultant of the market demand and supply, but the going price so established affects future demand and supply. The price of Grade A wheat on the Chicago Board of Trade or of United States Steel common stock on the New York Stock Exchange is of course a resultant of the demand and supply which are expressed on the exchange at a given time. But the price so established—the going price of the market—is not without influence upon the subjective prices of future buyers and sellers, and so upon future demand and supply and the resulting price.

The approach to a study of the problem of price determination that

⁶ *Economics for the General Reader* (New York, The Macmillan Company, 1918), p. 274.

has been sketched in the preceding pages may be conveniently summarized as consisting of a study in sequence of the

- Market
 - Transactions
 - Parties
 - Subjective Prices (Comprising the Demand and Supply)
 - Determinants
 - General (Institutional)
 - Specific.

Value theory is largely concerned with setting forth the specific and general determinants of the subjective prices of parties to transactions in given commodity or service markets.

INSTITUTIONAL DETERMINANTS OF PRICE

Emphasis upon institutional factors in the determination of price recognizes the influence of collective habits or action in shaping the value-judgments and choices of the individual. The institutional approach to value problems allows for much greater flexibility in economic behavior than when the only assumptions made are that man always acts rationally in a world characterized only by free competition. There are many institutions that shape man's economic conduct. John R. Commons defines an institution as "collective action in restraint, liberation, and expansion of individual action."⁷ Illustrative of such institutional collective action in control of individual action are custom, competition, monopoly, and public authority—the last expressed in laws, administrative agencies, and the courts.

Customary price. Custom has been one of the earliest and most persistent institutionalized forces in our economic life. While custom may be described as unorganized collective action in contrast to the organized expression of collective action in statutory law, it is none the less potent on that account. Indeed many of the business customs of people, and the decisions of judges applying them to issues in dispute, have become the basis of a great body of common law. Nor can custom be regarded as wholly static, because customs change with changing economic conditions. Custom is an institution which affects many business practices, and is a not inconsiderable force in determining certain prices.

⁷ *Institutional Economics* (New York, The Macmillan Company, 1934), p. 73. He goes on to say: "These individual actions are really *trans*-actions—that is, actions between individuals—as well as individual behavior. It is this shift from commodities, individuals, and exchanges to transactions and working rules of collective action that marks the transition from the classical and hedonic schools to the institutional schools of economic thinking. The shift is a change in the ultimate unit of economic investigation, from commodities and individuals to transactions between individuals." *Idem*.

Custom was a particularly powerful determinant of price in the Middle Ages. Writers of those times speak of "just prices," which were largely the prices long established by custom. Departures from customary prices by sellers, who asked for more, or by buyers, who tried to buy for less, were frowned upon in the business codes of the time. Custom under such conditions exerted a strong stabilizing influence upon prices—it was an institutional determinant of price.

The rôle of custom as a present price determinant is most familiar in the field of retail prices. In many American communities five-cent prices for a loaf of bread, a quart of milk, and a street-car or bus fare prevailed long after economic conditions warranted an advance. At times bakers and candy bar manufacturers have preferred to reduce the size of the loaf or weight of the bar rather than to risk the resentment among customers which an advance over the long-established customary price would have aroused. Custom is an influential general determinant of price, particularly in the case of standardized articles the purchase of which is repeated at frequent intervals. Some professional fees, if not determined, are at least restricted by custom. In transactions involving wages, interest, and contract rent, as will be shown later, the pressure of custom is felt in helping to shape the subjective prices of prospective buyers and sellers in these respective markets.

Competitive price. In most price situations custom has yielded to some form of competition, as a more effective force in determining the subjective prices of buyers and sellers. There are many degrees of competition. The fact that prospective buyers often bid against one another in seeking to acquire the goods they want, and that prospective sellers more often seek to outdo one another in disposing of the goods they offer for sale, is a matter of prime importance in accounting for the terms on which buyers and sellers will do business. If no such competition existed the resulting price situation would be very different. Commodity exchanges, such as the Chicago Board of Trade, and security exchanges, such as the New York Stock Exchange, furnish as good an example as we have of the operation of competition in the establishment of market prices. Pure competition presupposes an indeterminate number of participants in competitive enterprise, all dealing in the same standardized good, and no one of them selling (or buying) so large a part of the available supply as to have an appreciable effect upon the price. While pure competition rarely exists, lesser degrees of competition do exist and greatly affect the course of market prices. If a market is competitive in the sense that buyers, or buyers and sellers together, set the price, different prices will obtain than if the market is dominated by custom or controlled by either monopoly or public authority. The institutional framework of a market has much to do with the market prices that appear within it.

Monopolistic price. Monopoly is, of course, the antithesis of competition. If competition is essentially characterized by the presence of many sellers, monopoly is distinguished by the presence of a single seller. Monopoly commonly means such control over the supply of a good as to give some control over its price. If the monopoly is complete, the business concerned is usually either socialized, as is the case with the postal service everywhere, or regulated by the government, as is the case with the public utilities. In either case prices are controlled by the government. An exception is made of the temporary private monopolies granted under copyrights and patents, in which the purpose, however, is to serve the public interest through rewarding originality and inventiveness.

Private monopolies are rarely so complete that no substitutes are available for the good sold by the monopolist. But even though substitutes are available, what the seller seeks to do is to build up a reputation for his product as something different, and by implication something better than is furnished by any substitute. If he is successful in building up a clientele for his business he may achieve some degree of monopoly power, that is, some control over the price that customers will be willing to pay for his product. Even though his price is higher than that charged for substitutes, he does not lose a significant part of his patronage. Goods bearing a widely known trademark or other distinctive label often confer a degree of monopoly power. Wherever and whenever monopoly exists, whether it dominates the whole of the market or only a part of it, the subjective prices not only of the prospective seller but of prospective buyers as well are influenced by this fact. Monopoly, whether as a legalized institution or as a market condition, is an institutional determinant of price.

Authoritarian price. An institutional determinant of price again growing in importance is public authority. More extensively than is commonly supposed, public authority fixes or regulates the prices of many commodities and services which the consumer buys. Even though the good concerned may be worth more to him, the consumer will naturally not offer more than the publicly established price, nor can he secure it for less. The charges of all public utility enterprises, such as those for railway service and electric light and power, are familiar examples of prices determined by public authority. In the United States until the period of the First World War government largely confined its price-activities to fixing the prices of the few government monopolies that existed, and to regulating the prices of the public utilities. During the First World War Period considerable price-fixing of basic commodities was undertaken by the government. In the decade of the thirties the government sought to influence the prices particularly of agricultural products, with the avowed purpose of trying to increase what farmers received in relation to what they had to pay for the commodities they bought. In some countries, such as com-

munistic Russia, even in peace-time the government has played a dominant rôle in the setting of prices. As for the war-time economies of the Second World War, public authority had not only to regulate many prices but for some goods had to ration the amounts that could be bought and sold.

The prevailing institutions of an economic society (those collective actions that restrict and otherwise influence individual action) exert a pervasive influence upon the price-structure of a given time and place. All of these institutional forces are in operation at the same time in various segments of the market. Some prices are predominantly determined under competitive conditions, others are influenced by whatever degree of monopoly power exists, and still others are set or regulated by public authority.

SPECIFIC DETERMINANTS OF PRICE

Within the institutional framework of any economic society many specific forces operate in the determination of exchange values (or prices, when such values are expressed in terms of money). Basic to the emergence of an exchange value or price in the market are two indispensable conditions—utility and scarcity. Without them there are neither economic values nor exchange values. Utility without scarcity, distinguishes free, but not economic goods. No one will pay a price for goods that already exist in superabundance. Scarcity without utility is of no economic importance. Scarcity may be due to a limitation of supply by nature or to the fact that it costs something in terms of human effort and other sacrifices to bring goods into existence. The combination of utility and scarcity creates values. Want-satisfying goods limited in supply in relation to the demand for them are goods that have value and command a price in the market.

What lies behind the price-offers of prospective buyers is some degree of utility. What lies behind the asking-prices of prospective sellers is usually some form of costs. So decisively important did costs seem to the earlier expositors of value theory (the Classical Economists, for example), that all the emphasis was placed upon costs to the neglect of utility. But an outlay of costs is justified only by the ultimate value that results. Goods are not valuable because costs have been expended upon them, but costs are expended in the expectation that the resulting values will sanction the outlay of costs. Demand is limited by utility; supply is commonly limited by costs.

The interdependence of utility and scarcity (costs) in accounting for value is brought out in what has been called the "paradox of value," namely, that an increase in the quantity of a good available may result in a smaller total market value for the good in question. Two representative American cotton crops illustrate the point. In 1923 approximately

10,000,000 bales of cotton were produced. On December 1, the average farm price was 31 cents per pound, which made the total cotton worth \$1,550,000,000 to the producers. In 1926 about 18,000,000 bales of cotton were produced. But the average farm price on December 1 was only 10.9 cents per pound, which made the crop as a whole worth only \$981,000,000 to the producers. A large crop sold for less in the markets than a much smaller one. This paradox of value is understood when we recall that price is a function of both utility and scarcity. The primary reason that the larger crop brought less than the smaller was that the price per pound had to be dropped sharply in order to dispose of so large a crop. While everyone can use some cotton, its utility and desirability are not so great as to lead to unlimited consumption. Any other cause that restricted demand would produce a similar result. When supply increases more rapidly than the demand, prices fall. On the other hand growing scarcity in relation to the demand results in higher prices.

The entire structure of price theory that follows, including commodity prices, wages, interest, and contract rent, is built around the framework of four principal ideas:

First, the demand and supply mechanism. There is no more direct, no clearer, statement of the problem of price than in terms of demand and supply.

Second, the institutional "set-up" of the society in which the price-determining forces of demand and supply operate. Changes in the institutional environment such as decline in competition, growth of monopoly, and the extension of public authority are felt in price changes and must be considered in price theory.

Third, the contractual transaction in which a bargain is struck between buyer and seller. All exchange values or prices originate in transactions of the market, which are agreements or contracts between prospective buyers and sellers.

Fourth, the specific determinants of the subjective prices of prospective parties to transactions of the market. Together these subjective prices make up the demand and supply, and demand and supply under all the influences of the market interact in the establishment of objective market prices.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Economic value may exist antecedent to any ratio of exchange.
2. Price is the common denominator of all exchange values.
3. Custom as well as competition affects the market price of some goods
4. In any exchange transaction, the price finally established will never be

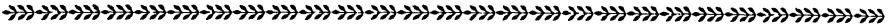
lower than the subjective price of the buyer, nor higher than the subjective price of the seller.

5. Since prices fixed by merchants themselves have come to be the rule rather than the exception in retail stores, individual buyers exert no influence whatever upon them.
6. The law of supply and demand does not operate in those markets in which subjective prices are largely determined by either custom or public authority.
7. The economic institutions of a society have much to do with the prices that prevail within it.

(For Suggestions for Further Reading, see close of Chapter XVII.)

CHAPTER XVI

Market Price Under Competition



EVERYONE who has any practical familiarity with prices knows that there is commonly a difference between the daily market price of a good and the price that prevails over a longer period of time. The former may be exceptional; the latter is apt to be more typical of conditions in the industry concerned. In their analysis of value and price, economists distinguish between the market price and the normal price of a good. By the former they mean the price at which an existing supply of a good is being bought and sold in a given market at a given time. By the latter they mean the more permanent price which obtains after a sufficient time has elapsed to allow the supply to effect a more stable equilibrium with the demand. Market prices are the passing prices of the moment; they may or may not be stable. Normal prices are prices that prevail in the long run under more stable equilibrium conditions. Factors that loom large in the determination of the one may be of lesser importance in the determination of the other. The present chapter deals with market price; the next analyzes short-run and long-run equilibrium price (normal price). Since both market prices and normal prices are conditioned by the prevailing institutions of economic society, it seems simplest to examine prices in turn under such representative institutions as competition, monopoly, monopolistic competition, and public authority. This the following chapters seek to do.

QUALITATIVE ANALYSIS OF DEMAND

In a competitive market all the conditions and forces affecting the price of a good must bring their influence to bear through the demand for and supply of the good. Both the demand and the supply of a single individual may be negligible in their effect upon market price. But the total demand for a good, together with the supply available in the market, accounts for the price. The market demand for a good is the amount that buyers are ready to purchase at each specified price in a given market at a given time. Varying amounts are wanted at different prices. The total demand of the market is expressed as a schedule of the quantities of a good which prospective buyers are ready to purchase at each designated price. The demand of the market is relative to a given moment of time,

because with the lapse of time conditions may change and so price-offers will change. Practically, the "moment of time" may lengthen into a period of time in which neither basic conditions nor price-offers change. Of the total demand at all possible prices, some is translated into an actual market price through the consummation of purchase and sale and some remains potential, awaiting more favorable conditions to become actual. Demand, whether actual or potential, expresses the subjective prices of prospective buyers. The chief task in commodity price analysis is the explanation of what determines the subjective prices of the parties to a market transaction. Demand, as an expression of buyers' subjective prices, is something more than mere desire. It is desire which is supported by purchasing power and which has reached the stage of a positive inclination to buy because of the relative importance of the desired good to the buyer. We desire goods that are of use to us. We attribute utility to them. But the desire for a good can only be translated into effective market demand through the possession of purchasing power.

Some time ago a hungry-eyed boy was standing in front of an exceedingly transparent but forbiddingly thick plate-glass window of a Madison confectioner's shop. He was longingly admiring the alluring display of sweets that a skilful window-dresser had prepared to catch the attention of passers-by with money to spend. Anyone would have had to be blind indeed not to note eager desire depicted on the boy's face. But desire does not constitute effective demand. Noting the intense longing on the youngster's features and surmising his impecuniousness, a generous fellow-observer—whether a big-hearted student from the near-by university or a kind-hearted professor, memory no longer distinctly recalls—gave the boy a dime. That changed his economic situation. Within the limits of ten cents of purchasing power he could now become an effective demander for candies. Then something interesting happened; a sort of tug-of-war developed in the little fellow's mind between two rival desires. Economists, with their fondness for abstractions and impressive names with which to label them, would call it a struggle between marginal utilities. It was in the days when ten cents still admitted a child to a motion-picture theater. Remembering the display pictures of a thrilling melodramatic "movie" which he had seen a short distance down the street, the lad now had to choose how to spend his unexpectedly acquired wealth. Which was the more important to him: the enjoyment of two hours of the silent "movie" or the gustatory delights of consuming the sweets? Apparently being of an imaginative turn of mind, the boy chose the picture. In choosing the motion-picture he gratified one desire at the expense of another; he helped to the extent of ten cents in making up the effective demand for pictures rather than for candies; and he chose that which for the moment at least seemed to have the greatest appeal and importance to him. Simple though

the illustration is, it typifies the demand situation which any theory of value must analyze.

Purchasing power as a specific determinant of demand. The possession of purchasing power, whether it be money income or accumulated wealth, is a prime determinant of effective market demand for a good. Without it there may be unfulfilled desires for a good, but these desires, no matter how intense, have no effect upon market price. To say that effective demand is desire supported by purchasing power, and that such demand is essential to the emergence of market price, is to assume something of value in the explanation of market price. An ultimate theory of economic value must of course explain the value of the assumed purchasing power as well as the price of the good which the purchasing power helps to determine. The original endowment of purchasing power may well have arisen in the capacity of human beings to render services to each other, and in the establishment of possession claims, ultimately of property rights, to the objects of their environment. But that need not concern us now. Our immediate problem is the explanation of the exchange value or market price of goods. The theoretical question at issue is: What determines how much of what a person has (which is his purchasing power) *he is willing to offer* in exchange for a particular good? And secondly, what determines how much of his purchasing power *he finds it necessary to offer* in exchange for a designated good? In the answer to these questions the law of demand and supply appears.

Marginal utility as a specific determinant of demand. How much of his possessions or his control over other goods a person is willing to give in exchange for a particular good depends upon its relative importance to him, the strength of his desire for it. The mere fact that a thing is wanted in the satisfaction of a human desire, however, is sufficient neither to give it exchange value nor to explain its exchange value, if it had any. Utility alone does not create value. Things having utility must at the same time be scarce in relation to the wants to be satisfied if they are to command a price. Otherwise they are free goods, which have utility (that is, want-satisfying power) but no exchange value simply because they exist in superabundant amounts. Air out-of-doors has infinite utility, but no scarcity and consequently no exchange value. With reference to the exchange value of any good the question is, How much or how badly is it wanted in the market? The answer to this question involves an understanding of the associated principles of diminishing utility and marginal utility.

The law of diminishing utility in relation to marginal utility. In determining how much he is willing to offer for a unit of a given good, every person is influenced by a certain principle of experience which economists have called the law of diminishing utility. This law states that the intensity of a person's desire for a good tends to decrease as he consumes or acquires

successive units of it. The basis of the law is both physiological and psychological. A single want at any given moment is soon satisfied. Man's organism at any given time does not respond with equal units of satisfaction to a long or often repeated stimulus. For a short time in the acquisition and consumption of goods there may be increasing rather than diminishing utility; appetite sometimes comes with eating, which means increasing utility, but sooner or later the consumer becomes "fed up," which means that utility has declined. At a given moment, the goods which he acquires for consumption will have diminishing utility for him. This fact will of course affect the prices he is willing to pay for them. Illustrations of the principle are commonplaces of everyday experience. Not everything in economics can be demonstrated in an experimental laboratory. The reader, however, can test the law of diminishing utility and its relation to price at any time and any place. The consumer of buckwheat cakes for breakfast or of "malted milks" in the afternoon can soon demonstrate to his full satisfaction that the law of diminishing utility is something real and strongly affects the price he would be willing to pay for another unit provided he had to consume it at once.

But we acquire goods not merely for immediate consumption but also for the gratification of future wants. Does the law of diminishing utility apply in such cases? The answer is yes, but the present provision for future wants naturally retards the rate at which utility declines. We all seek to take advantage of economic situations in which we can acquire goods on attractive terms for both present and future wants. But even upon the assumption that the buyer has the means to make the advance provision, there is a distinct limit to the number of units of a good he cares to acquire and store for future needs. Diminishing utility is experienced in providing for future as well as present wants.

If it be granted that utility has a tendency to diminish as we acquire successive units of a good for both present and future consumption, it is evident that it is the importance attached to the possession of a single additional unit that determines what we are willing to give for a good provided we have the means to acquire it. This principle of valuation economists call by a name that sounds strange and unfamiliar to the uninitiated, namely "marginal utility."¹ It means the utility derived from the possession of a single unit of a given stock of identical units of a good.

Significance of marginal utility. In the consideration of exchange value the principles of diminishing utility and marginal utility explain the sometimes puzzling fact that goods the total utility of which is very great may have little or no value in exchange. Adam Smith observed: "The things which have the greatest value in use have frequently little or no value

¹ The term is the English equivalent of the German *Grenznutzen*, as developed by the Austrian economists.

in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use." He said by way of illustration that diamonds had little value in use and yet great value in exchange; that water had great value in use but little value in exchange.² In drawing his distinction and making his comparisons Adam Smith was thinking of total utilities and not of unit utilities. If he had had the marginal utility concept, he would have drawn a very different conclusion. The total utility of water is infinitely greater than the total utility of diamonds, since man cannot live without the former and can easily dispense with the latter. But this is not a choice he is compelled to make. All that ever has to enter his calculations is the importance to himself of a single unit. The marginal utility of diamonds is under normal conditions greater than the marginal utility of water.

By the marginal utility of a good is meant the least important use of that good to the person considering its use. As long as the identical units of a good have any utility for him, he has an incentive to acquire or consume them. The utility of the good in its least important use for him is its marginal utility to him.

If the various uses of the good can be satisfied by units of the good, and if the units are all homogeneous or identical and consequently freely interchangeable, marginal utility is the importance of any one of the homogeneous units of a supply of the good. Marginal utility does not mean the utility of any particular unit, but the utility dependent on the possession of any one unit of a given stock of goods. Marginal utility is unit utility, provided the units are of the same kind and quality. Since marginal utility depends upon the intensity of the want that is satisfied through the possession of one unit of a given stock of goods, the larger one's supply of a given good, the lower in general will be its marginal utility. The smaller one's supply of a given good, the higher in general will be its marginal utility. The marginal utility of any good to a person varies directly with the intensity of his desire for it and inversely with the number of units of it already at his disposal. If a householder needs twelve tons of coal to heat his residence comfortably through one of our northern winters, the marginal utility of coal to him is the degree of importance that he attaches to the use of any one of the twelve tons of coal. Since presumably each ton of coal is capable of perfect substitution for every other, the utility attached to the twelfth ton is the utility he would lose if he dispensed with the use of any one of the twelve tons. The loss of the twelfth ton might mean less comfort on the chilly days of autumn and spring because the furnace was not in operation. Dispensing with the eleventh ton might necessitate lower temperatures in the house throughout the coal-burning season. Going without the ninth and tenth tons might

² *Wealth of Nations*, Book I, Chap. IV.

force the householder to shut off certain rooms of the building. To give up the seventh and eighth tons of coal might occasion very great discomfort and serious risk to health. Six tons may be the indispensable minimum. It is obvious that the marginal utility of coal rises as the amount available to the householder falls and the gratification of more intense wants is dependent upon the use of the coal. In direct order of importance six tons are essential to prevent freezing in the house; the seventh and eighth tons, to avoid jeopardizing health; the ninth and tenth to enable the occupants to use the entire house; the eleventh to provide the desired temperature; and the twelfth to enjoy comfort on chilly days as well as during the colder season. Marginal utility varies with the intensity of the want satisfied and the amount of the want-satisfying good on hand. *When identical units of a good have a number of different uses for a person, it is what he regards as the least important use that measures its marginal utility to him. Any one of the units, however, is the marginal unit, since they can be freely interchanged.*

Newcomers to the marginal utility analysis of value are sometimes puzzled in their attempts to identify the marginal unit and its utility. Is it the utility of any one of the units of a good that has already been acquired? Or is it the utility of an additional unit to be acquired? It may be either. Whether marginal utility is defined as the utility of any one of the units of a stock of goods already on hand or of an additional unit to be acquired varies with the viewpoint of the present or prospective holder, the seller or the buyer. To the present holder or prospective seller of a good, its marginal utility is the utility that he would sacrifice through parting with one unit of the good. To the prospective purchaser, the marginal utility of the good is the degree of importance he attaches to the possession of an additional unit of the good.

What the prospective buyer always considers in making a purchase is the utility to himself of "a little more or a little less."³ With most consumer-buyers it is not a question of acquiring something of a given good or getting along without any, but rather a question of buying a little more or getting along with a little less. With food, clothing, housing, and sundries of all sorts, consumers rarely have to choose between some or none, but rather between using a little more or economizing by buying a little less of these goods. It is usually the utility of this "little more or little less" that decides what a good is worth to us in the market and not its total utility. Men rarely buy the total supply of a good, although of course it does happen; the purchase of unique works of art is an illustration. In such cases marginal utility and total utility coincide.

Marginal utility no gauge of total utility. Important as is marginal

³ Philip H. Wicksteed, *The Common Sense of Political Economy* (London, Macmillan and Company, Ltd., 1920), pp. 367-368.

utility in influencing demand, provided there is purchasing power to make it effective in the market, marginal utility is no gauge of the total utility of a good to a consumer. The consumer's total utility derived from his supply of a commodity cannot be estimated at the rate of utility attributed to the marginal unit, the least important utility to him. Suppose that he has five units of a good whose diminishing utility to him is measured by the series 5, 4, 3, 2, 1. Obviously the marginal utility is 1, the degree of utility that he would lose by parting with one unit. But the total utility is not 1 (the marginal utility) \times 5 (the number of units). The total utility is much greater than this. It is the sum of the successive unit utilities: $5 + 4 + 3 + 2 + 1$ or 15, since marginal utility rises as the available supply grows smaller. Not the product, five, but the sum, fifteen, measures the total utility of the good under the conditions assumed. Total utility may also be gauged by considering what utility would be lost if the consumer had to sacrifice his entire supply of a good in one fell swoop. Since men customarily buy units of a good rather than their total supply, their inclinations to buy and their subjective price-offers are influenced by marginal utility rather than by total utility.

Marginal utility not identical with subjective price. Although marginal utility affects the subjective price of the prospective buyer, it is not identical with subjective price-offer. One cannot measure the marginal utility of a good to a person by noting his price-offer for it, because the latter is strictly limited by the amount of purchasing power he has. Only upon the assumption that "all other things are equal" (that face-saving clause so conveniently used by many a logician-economist) is it true that price-offers vary directly with marginal utilities. Marginal utility assuredly affects the subjective price of the prospective buyer, but it does not exclusively determine it. No price-offer would be forthcoming for a good unless it had positive marginal utility for some buyer (i. e., a utility above zero). But how much he can afford to offer depends not only upon the marginal utility of the good concerned but also upon the amount of his purchasing power and the strength of his desire for other goods. The marginal utility of pork chops to a poor man may be very much higher than to a rich man even though they make the same price-offer and pay the same price for them. Or the poor man may decide that in spite of the high marginal utility of pork chops to himself, he would prefer to spend his scant wages for something that he needs and wants even more. Every subjective price of a prospective buyer, which is a price-offer, involves the comparison of one marginal utility with another. If a person offers fifty cents a pound for bacon, what he substantially says by his price-offer is that the marginal utility of the bacon is greater to him than the marginal utility of any other good which his fifty cents will buy. If this is not true, he should spend his money for that which has the greater

marginal utility for him. Davenport has well put the relation of marginal utility and price-offer when he says: "No price offer anywhere is expressive of absolute, but only of relative, marginal utility. . . . The decision to purchase is arrived at only as a choice between competing marginal utilities."⁴

Measurement of marginal utility. Since marginal utilities represent degrees of want-satisfaction, it follows that they are psychic, not physical, magnitudes. For the same good, they will vary from one individual to another, and for the same individual, from one time to another. Marginal utilities are not commensurable. There is no generally recognized unit by which they can be measured, such as our units of length or weight. The individual in his own mind can compare one marginal utility with another. He may assert, for instance, after examining the state of his wardrobe, that the marginal utility to him of one additional pair of shoes is the same as the marginal utility of six selected neckties. All that this tells us, however, is that this pair of shoes is counter-balanced in importance for him by these six neckties; it tells us nothing of the absolute utility of either.

The fact that the intensity of marginal utilities is neither commensurable nor comparable from one individual to another does not affect the validity of the marginal utility analysis of demand. Diminishing marginal utility is a demonstrable experience for practically everyone every day. Subjective price-offers reflect marginal utilities even though they do not measure them. Subjective price-offers express both marginal utility and limited purchasing power. The assumptions of the marginal utility analysis of demand are that there is a relation between utility and demand, and that the diminishing marginal utility of a good is reflected in the diminishing subjective price-offers for successive units of that good. The gap between utility and demand is partially bridged by the reasonable assumption that the demand curve is similar in slope and shape to the utility curve.⁵

⁴ H. J. Davenport, *The Economics of Enterprise* (New York, The Macmillan Company, 1913), pp. 103, 104.

⁵ Because utility, which is a state of mind, is not commensurable in the way in which ordinary differences in magnitude are, and because consequently one must jump from the premise of differences in utility to the conclusion of corresponding differences in demand, some economists have proposed to substitute another method of analyzing demand for the marginal utility analysis. It is known as the indifference schedule and curve analysis. An indifference schedule for an individual is an orderly array of various combinations of any two goods which are equally acceptable to him. Indifference curves, technically, are lines which mark the locus of the points at which an individual is indifferent as to whether he acquires X units of one commodity or Y units of another. By plotting the number of units of Commodity A that are wanted along the vertical OY axis, and the number of units of Commodity B with which they are ranked as equal in importance along the horizontal OX axis, we get points of indifference—that is, various combinations of Commodities A and B which are equally satisfactory to the person whose indifference schedule they represent. Indifference curves have been proposed as an approach to the theory of value because they

Balancing of marginal utilities. In fixing their subjective prices, which involve such comparison of marginal utilities, and in apportioning their expenditures, men are apt to place their most urgent wants first. But on account of the law of diminishing utility, men do not usually acquire an indefinite number of units of the good that satisfies their most urgent want. More units of satisfaction can be obtained by spending their money for something else. The diversification of expenditures usually results in the largest possible total utility. This is fully achieved only by those buyers who so diversify their expenditures that the utility derived from the final dollar's purchase of any good is equal to that of every other dollar's purchase of other goods. Such consumer-buyers have achieved a perfect balance of their marginal utilities. They are getting the most for their money. The marginal utilities of a consumer-buyer, all together, locate his margin of consumption. The buyer intent upon getting the greatest possible gratification seeks constantly to keep his marginal utilities as nearly equal as possible. This necessitates acquiring varying numbers of units of different goods until the marginal utility of the last unit of any one about equals the marginal utility of every other. Of course it is a rare occurrence when human beings act as rationally as this process of balancing marginal utilities suggests. Perhaps an approximation to it is furnished by the careful budgeting of family expenditures, but these are often more closely balanced on paper than in practice.

The marginal utility analysis of the value of a good may be applied not only to whole units of goods but to the different qualities of such goods. Most goods that we buy have several qualities that appeal to us; they are "bundles of utility." The marginal utility of such a good really consists of the separate marginal utilities of the different qualities attributable to the good. In considering the purchase of an automobile such qualities as power, size, comfort, elegance of finish and equipment, and even reputation have varying appeals to different prospective buyers. Some prefer more of this and others more of that. It is said that men are usually more interested in qualities of mechanical construction and women in qualities of appearance and comfort. In debating what type and make of car to buy, most persons contemplating the purchase of an automobile are forced to consider whether they want more or less of this quality and that, and what price they are willing to pay for the particular combination of qualities they desire. No one person in all likelihood (as will be pointed out presently) is the marginal purchaser of all the qualities of the auto-

avoid the problem of measuring utility. They rank utilities but do not measure them. For this analysis of demand cf. J. R. Hicks, *Value and Capital* (Oxford University Press, 1939); George J. Stigler, *The Theory of Price* (New York, The Macmillan Company, 1946), Chap. 5, pp. 63-84; and Albert L. Meyers, *Elements of Modern Economics* (New York, Prentice-Hall, Inc., 1948), Chap. 7.

mobile—the person who would not buy an automobile at all if the price involved were higher.⁶

The preceding qualitative analysis of demand as a price-determining force in a given market at a given time has resolved demand into the subjective prices of prospective buyers, which are specifically determined by the marginal utilities of goods but limited by the purchasing power of the buyers. The subjective prices of prospective buyers vary greatly in most markets because both their marginal utilities and purchasing powers are so different. Some potential buyers find that their subjective prices are too low to induce sellers to part with their goods. Others find that market conditions are such that they do not need to pay what they would have been willing to pay if it were necessary. Market price is conditioned and explained not only by the demand but also by the supply.

QUALITATIVE ANALYSIS OF SUPPLY

Market supply, like market demand, always means something very definite. It does not signify the entire physical supply that might conceivably be thrown upon the market. Market supply does mean the amount of a good that sellers are ready to sell at each specified price in a given market at a given time. Varying amounts are available at every possible price. The total supply of the market is expressed as a schedule of the quantities of a good which prospective sellers are ready to sell at each designated price. The supply of the market, like the demand, is relative to a particular moment or period of time, during which the selling offers hold good at the specified prices. Of the total supply at all possible prices, some is converted into an actual market price through the consummation of purchase and sale, and some remains potential until market conditions change in its favor. Supply, whether actual or potential, expresses the subjective prices of prospective sellers. What determines these subjective prices is the question that a theory of commodity prices must seek to answer in its analysis of supply.

One important difference between prospective sellers and buyers, in the retail commodity market particularly, is that for the most part the former are “professionals” while the latter are “amateurs.” Most selling is done by persons who make their living by selling goods to ultimate consumers. Most retail buying is done by persons who are interested in acquiring goods for the satisfaction of their own wants or the wants of

⁶ For discussion of the rôle of the marginal buyer cf. pp. 420-422 of this chapter. For the application of the marginal utility principle to the separate qualities of a good and development of the idea that the price of the good is lower than would otherwise be the case because no one person is the marginal purchaser of all its qualities, cf. J. B. Clark, *Distribution of Wealth* (New York, The Macmillan Company, 1899), pp. 210-245.

others which they have undertaken to gratify. The buyer acquires goods for use. Their marginal utility is of decisive importance to him. The seller as a rule parts with goods that he has no intention of using himself. He is interested in the profits that he can make in the business of selling. It is not so much the marginal utility of that which he has to sell that controls the subjective price of the prospective seller as it is the marginal utility of that which he hopes to get in exchange. Of course there are exceptions to this general rule. The good in question may have very great marginal utility as a commodity of use to both buyer and seller. A family in straitened circumstances, but which has known much better financial days, may be compelled to find a market for its Oriental rugs and silver. Obviously these family possessions may have very great marginal utility as objects of use to the necessitous seller. But things to be acquired with the funds obtained from their sale may have even greater utility.

In a very real sense the seller may also be regarded as "a buyer"; he "buys" the money or its equivalent of the party conventionally known as the buyer. The commodity or service for sale represents the seller's purchasing power; with it he hopes to buy the money of the other party to the transaction. But while "buyer psychology" might thus be used in explaining the terms of the seller, the determinants immediately controlling the subjective price of the "professional" seller are directly related to his cost of doing business. He wants to acquire the money of the buyer to cover these costs and, if possible, to enable him to do business at a profit.

Withholding power as a specific determinant of supply. A prime determinant of seller's subjective price, sometimes decisive in doing business at a profit or a loss, is the seller's withholding power. His ability or inability to withhold a good from the market affects the terms on which he is willing to do business. If he has no withholding power, if every sale is a "forced sale," he is at the complete mercy of what buyers see fit to offer. Perhaps his own creditors are pressing him for payment. Bank loans which he has made may be about to mature. If his need for cash is urgent, his withholding power is limited. But if his working capital is ample and his credit resources are strong, he is under no such external compulsion to sacrifice his goods regardless of all costs. The perishable or durable character of the commodity, the probable "carrying charges" involved in holding it until it can be more profitably sold, and the imminence of fresh supplies of the commodity coming into the market are other factors affecting the prospective seller's decision to sell or to hold. All supplies are produced on the basis of past estimates of the future prices they will bring. Producer-sellers naturally prefer to have their estimates come true. If present prices are disadvantageous to them, and they have confidence that prices will strengthen rather than soften, they may prefer not to sell at present prices. Decision not to sell implies ability to withhold the good from the market.

Withholding power is assuredly a determinant of the subjective price of a prospective seller—of what has been called his “reservation price.”

Cost of production as a specific determinant of supply. But the principal specific determinant is the seller's cost of making a good available to the buyer. If the seller is a merchant, his cost includes the price he directly or indirectly must pay the manufacturer or other producer, together with his own cost in offering the good for sale. Future costs are more important in this respect than past costs. No matter what past costs may have been, if present costs are falling, future prices must reflect the lower costs. The competition of producers eager to capture markets through offering goods at attractive prices brings this about. On the other hand, if present costs are rising, future prices will reflect the higher costs. Dealers will not long, at least as a rule, sell goods at the old low prices when they know the goods must be replenished at higher prices. A subjective price based upon the total cost of supplying a good in the market is an anticipation or hope on the part of the seller. Regardless of what it may have cost to put a good on the market, the seller can get no more for it than some buyer will give. He can sell no more units of a good at any price than buyers will take. The ultimate decision to buy or not to buy, and at what price to buy, rests with the buyer and not with the seller. But the seller is by no means passive in the matter. He has his own ideas as to what prices ought to prevail. His success depends upon getting prices that will cover costs or of keeping his costs within the prices that he can reasonably expect to get. To this end he always estimates the utility of his products to the buying public and then seeks through skilful advertising and salesmanship to influence the opinion of the prospective buyer and thereby to enhance the marginal utility of the good to him. Sometimes, however, goods must be sold without reference to cost and sellers must accept a loss. Under such conditions sellers have no reservation prices, but are obliged to accept whatever the market offers.

Rôle of marginal buyers and sellers in determining market price.

In a typical competitive market for consumers' goods there are many buyers and many sellers. Some prospective buyers find that their subjective prices are too low to enable them to become actual buyers under the conditions of the market. On the other hand, some prospective sellers find that their subjective prices are too high to permit them to become actual sellers under prevailing market conditions. Again there are prospective buyers who find that under the conditions of a competitive market they do not need to pay as much as they would actually be willing to pay if it were necessary. Similarly, there are potential sellers who find that, market conditions of demand and supply being what they are, they can obtain prices higher than those at which they would actually be willing to sell if it were necessary. Finally, there are both prospective buyers and sellers

who find it barely worth while to buy or sell at the prices that come to prevail in the market. In the technical language of economics, which is growing increasingly familiar in the market-place, there are sub-marginal, supra-marginal, and marginal buyers and sellers. Who are the marginal buyers and sellers of the market place? Identification of them will serve to differentiate the others as well. The marginal buyer is the buyer whose subjective price coincides with the market price. At a specified price he is the buyer who can barely afford to buy and who would drop out of the market if the price were any higher. Similarly, the marginal seller is the seller whose subjective price coincides with the market price. At a particular price he is the seller who is just barely willing to sell and who would withdraw from the market if the price were any lower. The significance of these distinctions lies in this fact: for an *existing* supply of goods to be sold, the market price must be low enough to attract the most reluctant prospective buyer, the marginal buyer or group of marginal buyers, whose purchases are necessary in order to dispose of the supply. In marketing 200,000 automobiles of a certain model in the low-price automobile field, a price must be found not merely such that 50 per cent or 75 per cent of the supply can be sold but a figure at which the total supply can be marketed. This figure, say \$1200, is the price of the marginal buyers. For an existing supply of goods market price tends to be set by the subjective price-offers (expressing their marginal utilities within the range of their purchasing power) of the marginal buyers.⁷

The marginal buyer at any specified market price is the most reluctant buyer at that price, but a buyer whose purchases are necessary to dispose of all the goods offered at that price. Similarly, the marginal seller at any given market price is the most reluctant seller at that price, but a seller whose supplies are necessary to satisfy the entire market demand at that price. In a perfectly competitive market the subjective prices of the marginal buyers and sellers coincide, and equal the market price. In such a market buyers who were willing to pay more than the marginal buyers, and sellers who were willing to sell for less than the marginal sellers, benefit by the fact that the market price must be low enough to attract the marginal buyer and high enough to attract the marginal seller.

⁷ There are many margins in economic relations and economic analysis. It may help to clarify matters by noting that so far in this chapter two concepts of the margin have been employed: the marginal importance of a single unit to an individual, and a competitively established market margin through the interactions of buyers and sellers with varying subjective prices. *Marginal utility* and *marginal productivity* (a term used in connection with wages, interest, and rent) illustrate the first type of margin, an individual margin measuring the importance of a single unit of a good to some person. The expressions *marginal buyer*, *marginal seller*, *marginal producer*, *margin of production*, *margin of cultivation or utilization* (some of these terms will be used and explained in subsequent chapters) illustrate the second type of margin, the margin located through the competition of the market.

But although marginal price-offers and marginal selling prices have much to do with market prices, it must not be inferred for a moment that only those who offer to buy and sell on these terms are the causative factors. All the other actual buyers and sellers (sometimes called infra-marginal buyers and sellers) help to fix the market price. Herbert J. Davenport has expressed the thought that margins are never exclusive price determinants, in language that deserves to be remembered:

At the most the market price is simply commensurate with the marginal offer or with the marginal selling price. It is not the result of either more than of the other; demand has no more to do with price than has supply. Nor is the price rightly to be regarded as the result of both margins together. It is the result of all the price offers over against all the commodities offered. Price is adjusted *at* the margin and not *by* the margin—where, indeed, either manner of statement accurately holds. To assert that these marginal traders are, as against the opposing in-pressing volumes of commodities and of purchasing power, the causal facts in fixing the price calls to mind Æsop's tale of how the fly sat on the axle tree of the chariot and said, "What a dust do I raise!"⁸

The preceding qualitative analysis of demand and supply, which has stressed utility and cost as price-determining factors in a given market at a given time, implies that neither demand nor supply can be neglected nor underemphasized in the explanation of price. Perhaps the best-known figure of speech illustrating the complete interdependence of demand and supply, which has proved delightfully illuminating to thousands of students of the theory of value, is the scissors simile of Alfred Marshall.

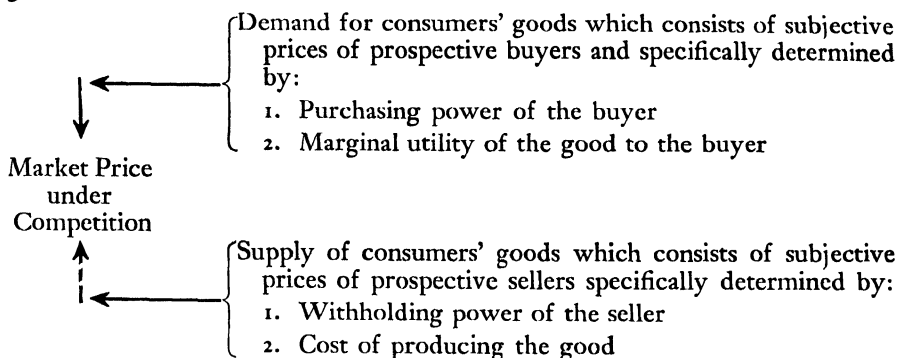
We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production. It is true that when one blade is held still, and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second; but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not a strictly scientific account of what happens. . . .

We may conclude that, *as a general rule*, the shorter the period which we are considering, the greater must be the share of our attention which is given to the influence of demand on value; and the longer the period, the more important will be the influence of cost of production on value. For the influence of changes in cost of production takes as a rule a longer time to work itself out than does the influence of changes in demand. The actual value at any time, the market value as it is often called, is often more influenced by passing events and by causes whose action is fitful and short lived, than by those which work persistently. But in long periods these fitful and irregular causes in large measure efface one another's influence; so that in the long run persistent causes dominate value completely. Even the most persistent causes are however liable to change. For the whole structure of production is modi-

⁸ H. J. Davenport, *Economics of Enterprise* (New York, The Macmillan Company, 1913), p. 95.

fied, and the relative costs of production of different things are permanently altered, from one generation to another.⁹

The following diagram summarizes the main sequence of ideas in the preceding analysis of market price, particularly the price of consumers' goods.



THE MARKET FOR CONSUMERS' GOODS

QUANTITATIVE ANALYSIS OF DEMAND AND SUPPLY

When the subjective price of a good to a prospective buyer is equal to or greater than the subjective price of that good to a prospective seller, an exchange between these two is possible and a market price can be established through bargaining. Bargaining is not to be identified either with haggling over price or with the "bargain counter" which advertises cut prices. It is rather to be identified with the mental processes of conviction and persuasion by which men "strike a bargain," i.e., reach an agreement. The price bargain is an agreement between buyer and seller which settles what each shall give and receive in the transaction to which they have become parties. The more frictionless or highly competitive the market the narrower is the subjective price range within which the minds of buyer and seller must meet. In a perfect market the price-offer of the marginal buyer and the reservation price of the marginal seller coincide. But there are many markets that are not competitive, and there are few so perfect as to preclude a bargaining area.

Every market price is the resultant of the interaction of the forces of demand and supply, which are constantly working to achieve a price equilibrium. Every change in either the demand or the supply necessitates a new price adjustment. Demand and supply are human forces, since they express the terms on which human beings are willing to enter upon the

⁹ *Principles of Economics*, 7th ed. (London, Macmillan and Company, Ltd., 1916), pp. 348, 349-350.

contractual relations of buyers and sellers. Most of the countless millions of market transactions fall into one or another of the following cases: the case of one buyer and one seller, of many buyers and one seller, of one buyer and several sellers, of many buyers and several sellers, and of many buyers and many sellers. Market price must be quantitatively analyzed and measured in each. The typical case of competition, which is the subject of this chapter, is the fifth: the case of many buyers and many sellers. An indefinite number of buyers and sellers provides two-sided competition. The case of one buyer and one seller denotes the complete absence of competition, but furnishes an instructive contrast to the case of competition.

No simpler market case can very well be imagined than that of one buyer and one seller, when the former has enough purchasing power to give market effect to his marginal utility for the good the seller offers him. Let us suppose the commodity in question to be a used automobile. If the buyer's maximum subjective price for this car, which has seen better days, is \$500 and the seller's minimum is \$400, it is clear that a deal is possible. But in all probability, at least if he is economically wise, the prospective buyer does not begin negotiations by broadcasting his maximum price offer. If he did, the seller would of course at once accept it, since it is \$100 above his own minimum price. In an individual transaction of this sort the seller may also not have announced his minimum price. Both parties may prefer to "feel each other out" by offering less than the buyer is really willing to pay and by asking more than the minimum the seller is really willing to take. The better trader gets the advantage in the bargain. The price may conceivably be \$500 or \$400 or any price between these two. If the buyer is the better bargainer, it will be closer to \$400 than to \$500; if the seller is the better bargainer, it will be closer to \$500 than to \$400. Within the limits set by the buyer's maximum and the seller's minimum, and upon the assumption that the former exceeds the latter, the exact price will turn on the relative bargaining skill of the buyer and the seller. Neither the buyer nor the seller is under any pressure from potential buyers or sellers that might affect his bid or his asking-price. He must rely entirely on his own judgment and wits.

Under competition, however, many buyers are in the market to procure the same goods; many sellers to dispose of them. Each seeks to do so on the most advantageous terms to himself. Produce markets, boards of trade, commodity markets, stock-exchanges, other exchanges, such as those for coffee, cotton, and sugar, are familiar examples of markets distinguished by the presence of many buyers and sellers. Retail stores also illustrate this case, although it may seem at first glance as if there were an absence of many sellers in any store that buyers patronize. An individual store, however, is likely to be only one of a number of similar stores in its trade

area; the seller in reality is in competition with other sellers for the patronage of local buyers.

The interaction of buyers and sellers in the establishment of market price is evident enough in so active a market as the Chicago Board of Trade or the New York Stock Exchange. Here buyers and sellers can be seen and heard shouting price-offers to buy and to sell at each other and reaching agreements concerning their transactions. But it is not quite so apparent what the buyer has to do with the determination of price in the ordinary retail store. Prices seem to exist in advance of his coming, or at least the price labels all indicate what the seller wants for his goods. Is not the prospective buyer restricted to the choice of taking the goods at the indicated prices or of leaving them with the merchant? This is largely true, but it is a most influential alternative. No merchant wants goods left on his hands. There is no profit in this. He is interested in sales. Consequently his prices are mere hopes and anticipations, largely set by what it costs him to do business; they are tentative prices which he hopes the buyers will be willing to pay. By his decision to buy or not to buy at the seller's announced prices the buyer in a retail store has a great deal to do with the prices that are charged. Indeed up-to-date merchants exhaust every possible resource in setting prices that they think will prove both acceptable and attractive to prospective buyers.

One of the most distinctive characteristics of a truly competitive market is the existence of a uniform price in the market at any given moment. If buyers and sellers dealt with one another in isolation, a great variety of prices would obtain. When markets break down, this is exactly what happens. We say under such circumstances that "the market has gone to pieces"—there is lack of uniformity of price. But in a perfect market, or one as nearly perfect as it is possible to achieve, communication among buyers and sellers results in reasonable uniformity of prices. The uniformity is not absolute, but competition unceasingly works toward this objective. If there should be any temporary lack of price-uniformity, the low-priced good would draw buyers from the high-priced good of the same class. Dealers with the high-priced goods would have to reduce their prices to meet competition as long as it lasted.

The competitive interplay of many buyers and sellers, which tends to establish price-uniformity in a given market at a given time, may be conveniently illustrated by the following assumed demand for and supply of cotton in a certain southern market on a given date.

The reader will recall that the total demand of the market has been described as a schedule of the quantities of a good which prospective buyers are ready to purchase at each designated price. Similarly, the total supply has been defined as a schedule of the quantities of a good which prospective sellers are ready to sell at each designated price. Demand and

supply schedules are schedules of price possibilities; which of these price possibilities will be converted into actual market prices depends upon

DEMAND AND SUPPLY IN A GIVEN COTTON MARKET

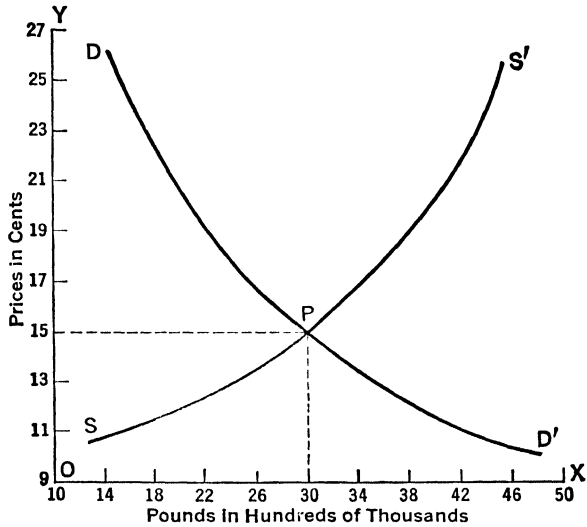
<i>Price in Cents</i>	<i>Demand (in pounds)</i>	<i>Supply</i>
25	1,600,000	4,700,000
23	1,700,000	4,500,000
21	2,000,000	4,300,000
19	2,200,000	4,000,000
17	2,500,000	3,600,000
15	3,000,000	3,000,000
13	3,700,000	2,400,000
11	4,500,000	1,600,000

the relation between the demand and the supply. Unless the prospective buyers and sellers operating in a given market announce all the terms on which they are willing to buy and sell, such schedules must be hypothetical except for the prices at which transactions actually occur. The schedules for the most part represent estimates of the quantities that could and would be bought and sold at the indicated prices. If some market referee could know the total demand and supply at all possible prices of the potential buyers and sellers represented in a given market (as in the above illustration), it would be relatively easy to set a satisfactory price. Without such omniscience there must be "trial-and-error" experimentation in the transactions of the market. Just as water seeks its own level, so the forces of demand and supply work ceaselessly to establish an equilibrium price.

Since each prospective buyer and seller, if he is really to participate in the market, must formulate a more or less definite schedule of subjective prices, the demand and supply schedules of a given market are composites of the subjective prices of all prospective buyers and sellers. How a common market price emerges from such composite demand and supply can best be shown by reducing the above demand and supply schedules to graphs. This is done in the diagram on the next page.

Prices per pound are indicated on the OY axis and the number of pounds of cotton which buyers will take or sellers will offer on the OX axis. The curve DD' is the locus of the subjective prices of prospective buyers—the prices at which they stand ready to take the indicated number of pounds of cotton. Similarly, the curve SS' is the locus of the subjective prices of prospective sellers—the prices at which they stand ready to deliver the specified number of pounds of cotton. Each curve shows the relation between prices and the quantity of cotton wanted or offered for sale at such prices. Any point on the demand curve, DD', may be read

by dropping perpendicular lines to both the OY and OX axes. The point of intersection with the OY axis indicates the price, and the point of intersection with the OX axis the number of pounds of cotton wanted at such price. Together these points of intersection constitute the ordinate (on the OY axis) and the abscissa (on the OX axis) of the selected point on the



DEMAND AND SUPPLY IN A GIVEN COTTON MARKET

demand curve which is being read. In the diagram, point P, which is common to both the demand and supply curves because it is their point of intersection, indicates that at a price of fifteen cents per pound, 3,000,000 pounds will be taken (as read on the demand curve) and 3,000,000 pounds will be offered (as read on the supply curve). Therefore, fifteen cents is the price which effects an equilibrium between demand and supply. It becomes the market price for cotton in this particular market on the given day under the prevailing conditions of demand and supply.

Suppose that a doubting Thomas as far as this reasoning is concerned insists that a price of seventeen cents can prevail in the market. Careful reading of the curves shows that at seventeen cents only 2,500,000 pounds of cotton will be taken but 3,600,000 pounds will be offered. It is obvious that this creates a temporary situation of disequilibrium and that the excess supply would force down the price. If a particular buyer has any further doubts about what price market conditions justify, he need only offer to buy cotton at seventeen cents. He would soon be overwhelmed by sellers anxious to dispose of their cotton at this price. In self-defense he would have to lower his price-offer. If on the contrary it be assumed that

a price of thirteen cents could prevail, the same line of reasoning will show that a price of thirteen cents would represent a state of disequilibrium and that the excess demand would force an advance in price. At thirteen cents 3,700,000 pounds will be taken but only 2,400,000 pounds will be offered. The excess buyers will bid up the price. If any seller is not convinced, he need only offer to sell cotton at thirteen cents. The deluge of buyers eager to buy at this attractive price would soon compel him in self-interest to advance his price.

In a competitive market, price is set at the point of equilibrium between demand and supply. The equilibrium price is the price at which the largest volume of business can be done. At this price no one wishing to buy will fail to secure the good he wants; no one willing to sell will fail to find a buyer. This is true only of the equilibrium price. In the cotton market illustration, fifteen cents is the point of perfect adjustment between demand and supply; it equates demand and supply at 3,000,000 pounds each. Every other proposed price leaves them in unstable equilibrium. At seventeen cents, for example, there are sellers who would like to dispose of their cotton but can find no buyers, since there are not enough to go around. And at thirteen cents there are buyers who would like to procure cotton but can find no sellers, since there are not enough willing to sell at this price to satisfy the demand. Only the equilibrium price, the point of perfect adjustment between demand and supply, "clears the market." It leaves no disappointments in its wake, for at this price everyone willing to buy has his opportunity, as has everyone willing to sell.

This of course does not imply that there are no disappointed dealers in a competitive market. The disappointment, however, lies in not being able to buy at as low a price as they had wanted or to sell for as high a price as they had hoped. The disappointment does not lie in failure to do business in the cotton market, if they are willing to trade at fifteen cents. Some potential buyers and sellers, moreover, fail to reach an agreement because their subjective prices are either too low or too high under prevailing market conditions.

Except under the most unusual conditions an equilibrium price for the market as a whole is not reached instantly. It is frequently said that "it takes time for the market to settle down." During the settling-down period the prices of individual transactions may vary appreciably from the ultimate equilibrium price. But this is only a matter of time. Ignorance or carelessness on the part of either buyers or sellers, as far as their market possibilities are concerned, may of course also result in individual prices that are above or below the prevailing market price. But the equilibrium price rules the market. Changes in either the demand or the supply, or in both, inevitably lead to new equilibrium prices in the endless transactions of the market.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Marginal utility varies with the intensity of an individual's wants and the amount of the want-satisfying goods he possesses.
2. Marginal utility and subjective price-offers are not identical.
3. When two persons are known to have paid the same price for an article, it can be said that the marginal utility of that good was the same for both of them.
4. When the units of a good have a variety of uses for a given person, marginal utility measures the least important use of the good.
5. Marginal utility is a factor in the location of market price because it helps to determine the market demand.
6. Marginal utility, rather than purchasing power, determines the subjective prices of prospective buyers.
7. Regardless of what it may have cost to produce a good, a seller can get no more than buyers will give.
8. In the final analysis costs of production really determine what the market price will be for any good offered for sale.
9. Sellers are interested only in their costs and not in the marginal utilities of the potential buyers.
10. Only marginal buyers and sellers are of importance in setting the market price.
11. The consumer (by his decision to buy or not to buy at various prices) determines what goods shall be produced; therefore, market prices correctly reflect the judgment of society as to the relative social importance of the various commodities.

B

1. Suppose that in a given competitive market the demand for and supply of strawberries is as indicated in the following schedules:

Price per Box	Demand in Boxes	Supply in Boxes
\$0.30	5,200	1,000
.32	4,200	1,200
.34	3,600	2,000
.36	2,900	2,800
.38	2,500	3,200
.40	2,200	3,600
.42	1,900	4,000
.44	1,500	4,300
.46	1,200	4,600
.48	1,000	4,800

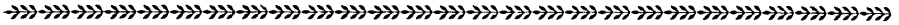
- a. Plot the demand and supply curves and determine the market price that would effect equilibrium between demand and supply.
- b. Suppose the demand to be twice as great at each of the above prices, the supply remaining as indicated. Construct the new demand

- schedule, plot the demand and supply curves, and determine the equilibrium price.
- c.* Suppose the supply to be one-half as great at each of the above prices, the demand remaining as indicated. Construct the new supply schedule, plot the demand and supply curves, and determine the market price that would equate demand and supply.
 - d.* Suppose both the demand and supply to be twice as great at each of the above prices as indicated. Construct the new schedules, plot the demand and supply curves, and determine the equilibrium price.
 - e.* Suppose that the supply remained at 3,600 boxes for the entire range of prices, the demand remaining as indicated. Plot the demand and supply curves, and determine the equilibrium price.
2. *a.* Assume that in a given competitive market the prospective buyers have the following subjective prices:
- A will buy 1 unit at \$60; or 2 at \$42 each; or 3 at \$32 each.
 - B will buy 1 unit at \$52; or 2 at \$40 each; or 3 at \$30 each.
 - C will buy 1 unit at \$44; or 2 at \$34 each; or 3 at \$24 each.
 - D will buy 1 unit at \$36; or 2 at \$28 each; or 3 at \$20 each.
- b.* Assume that the sellers, each of whom is willing to sell one unit, have the following subjective prices: M, \$24; N, \$34; O, \$40; P, \$18; Q, \$30; R, \$36; S, \$16; T, \$28; U, \$30; V, \$20; W, \$22; X, \$28.
- c.* Construct the demand and supply schedules for the above market.
 - d.* Plot the demand and supply curves for the above market.
 - e.* What market price would tend to be established under the above conditions?
 - f.* Why is this the equilibrium price?
 - g.* Why, if you assume that the subjective prices remain constant, could the market price be neither higher nor lower?

(For Suggestions for Further Reading, see close of Chapter XVII.)

CHAPTER XVII

Short-Run and Long-Run Equilibrium Price Under Competition



MARKET SUPPLY CONTRASTED WITH SHORT-RUN AND LONG-RUN SUPPLIES

THE DISCUSSION OF the preceding chapter was largely concerned with the explanation of market price resulting from the interaction of demand and supply in a given market at a given time. The assumption was that the goods had been produced and were on hand available for immediate sale. Supply in such a market was restricted to what had been produced in the past. The chief theoretical questions at issue were what determines the subjective price-offers of prospective buyers, and what sets the "reservation-prices" of prospective sellers? On what terms can they do business with one another? The conclusion was reached that in a competitive market there is an irresistible tendency for market price to be established at the point of equilibrium between demand and supply.

The market supply of a good is a stock of goods, available for immediate sale, the amount of which is fixed by past production. The market supply of a good, however, can readily be increased within the limits set by existing production facilities. This is short-run supply. Short-run supply is not a *stock* of goods on hand, but rather a *flow* of goods made possible by operating existing production facilities at different percentages of capacity and up to the maximum set by total capacity. The period represented by the short-run is not long enough to permit any changes in the size or number of production units.

Long-run supply, on the other hand, allows for a sufficient lapse of time to permit the expansion of existing plant and equipment and the construction of new facilities to whatever extent seems warranted by anticipated demand. In such long-run, if prosperous times seem in the making, not only do existing firms enlarge their operations but new firms may enter the industry. On the contrary, if the economic skies are dark and threatening and bad times seem in the offing, individual firms will reduce their output and some firms may go out of business altogether. Thus long-term supply is restricted.

COSTS THAT CONDITION SUPPLIES IN THE SHORT-RUN AND THE LONG-RUN

That some costs or costs to someone have much to do with determining prices in both the short-run and the long-run is a widely held conviction. And it is not a conviction without foundation. The question is what is the relationship and how does it work out.

The term "cost of production" is commonly bandied about as if it always meant something simple, uniform, and readily ascertainable. But most costs are complex rather than simple; they are far from uniform; and even if the producer knows what they are, which is often not the case, he likes to keep them secret. American cheese, for example, was produced in Wisconsin—which ranks first among the states in the value of its dairy products and so should know the cheese-making business—at costs in a fairly typical year ranging from 2.46 to 4.84 cents per pound.¹ Whose costs of production does price tend in the long run to equal? In the production of cheese, or any other commodity, there are low-cost, medium-cost, and high-cost producers. Some of the producers are supra-marginal, others are marginal, and still others are sub-marginal. Although the sub-marginal producers are operating at a loss (the marginal producers "break even," and only the supra-marginal producers make a surplus profit), they often continue production as long as their resources permit in the hope and expectation that for them financially happy days will come again. To analyze and appraise the significance of costs, as controlling short-run and long-run supplies and thereby affecting price, presupposes a clear understanding of the nature of costs and their variations in different types of economic enterprise. Costs vary with the volume of production not only of a given business establishment but also vary in different types of industry. Within the limits of plant capacity, as production increases, costs have a tendency to fall in a given business establishment. Industries differ strikingly in this respect. In some industries, as production increases, costs per unit of product tend to fall, in others to increase, and in still others to remain about the same.

Fixed and variable costs to a given firm or in a given plant. Some of the costs of producing a commodity are fixed or "overhead" costs, others are variable costs. The relation between variable and fixed costs has a pronounced effect upon price as production is increased. Variable costs are expenses which vary directly, although not necessarily proportionately, with the amount of goods produced. They include particularly

¹ Henry H. Bakken, *American Cheese Factories in Wisconsin*, Research Bulletin 100, Agricultural Experiment Station of the University of Wisconsin (Madison, 1930), p. 25. Cost data apply only to conversion of milk into cheese. The author of this monograph supplied the above revised figures for 1948.

the costs of labor and materials. Fixed or overhead costs are expenses which do not vary directly with the volume of goods produced. Some of them run on, if the business is to survive, regardless of output. Interest on borrowed capital, outlays for management, maintenance of buildings and equipment, insurance, and some taxes illustrate fixed costs. The effect of the ratio of fixed to variable costs upon prices, as production is increased, may be seen from the following illustration. If the fixed costs of a small manufacturing concern are \$400,000 and its variable expenses are \$3 per unit or \$1,200,000 when 400,000 units are produced, it is apparent that the total average cost of production is \$4 per unit. If the plant can produce 800,000 units with no change in fixed costs (\$400,000) and with the same outlay per unit (\$3) for variable expenses, it is obvious that the total outlay will be \$400,000 for fixed expenses plus \$2,400,000 for variable expenses, or a total average cost of \$3.50 per unit. This lower cost is possible upon the assumption made that the fixed costs are not increased as the production is "stepped up." Whenever productive plants are not used up to their maximum capacity such results are possible. It is a case of spreading the overhead costs over a larger volume of production and thus lowering the average costs per unit of output. But there is a distinct limit to such cost-cheapening possibilities provided by the full utilization of the plant. If larger productive facilities must be provided to meet the demand, fixed costs will of course also advance.

Marginal costs. That unit costs differ greatly in the same plant, depending upon the percentage of productive capacity utilized and the spreading of the fixed expenses over a larger or smaller product, has been one of the conclusions drawn in the preceding discussion. Costs, like prices, are in constant flux, with sharp variations among producers in the same industry. In the long run the most efficient producers, who can supply goods at the lowest price, will capture and dominate the market provided they can meet the demand. But only rarely does it happen that the most efficient producer can meet the total demand. Demand is sufficiently strong to requisition the efforts of many producers, with unit costs that are low, medium, and high. Some of these producers (and their costs) are marginal; they would reduce their output and seek other productive fields if market prices did not justify their costs. *Price tends to equal the cost of producing the marginal part of the supply.*

It may contribute to a clearer understanding of the principle of marginal costs if a distinction is drawn between the marginal costs of any individual producer, and the cost of producing the marginal part of the supply demanded by a market under usual long-run conditions—between marginal costs to the firm and marginal costs to the industry. Any individual producer is interested in his total costs per unit of output, and of so combining fixed and variable costs as to achieve the lowest possible

unit cost. The difference between the price received per unit and the total cost per unit of output shows him whether he is operating at a profit or a loss. But in spite of profitable operations he may be falling short of realizing as large a profit as he could make by the best possible adjustment of his output to the anticipated price of the market. Whether he is operating most profitably or not depends upon the relation between his marginal costs and the market price. The marginal costs of any individual producer are measured by the difference in the total cost of any outputs resulting from the production of one unit more or one unit less. Marginal costs may be measured by the difference between the costs of producing N units and $N + 1$ or $N - 1$ units. The calculation of such marginal costs may have to be a matter of only rough approximation, since the change in output may have to be of considerable size if its effect on cost is to be computed. If three tool manufacturers, A, B, and C, have marginal costs in producing a certain tool amounting, respectively, to \$8, \$9, and \$10, and if \$10 is the prevailing market price, it is obvious that C, whose marginal cost is \$10, cannot expand his output further without loss, and that both A and B can do so provided the market price remains unchanged. Under pure competition in order to achieve maximum profits the individual producer seeks to expand his output until his marginal costs equal the anticipated market price. This procedure of course assumes, rather than explains, a going price of the market. But the individual producer under pure competition accepts the going prices of the market and merely decides in light of them how much he will produce.

In the usual state of productive industry there is a wide variation of average unit costs. Market prices seem to sanction varying levels of productive efficiency. Because the total demand of the market can normally not be fully met by the lowest-cost producers, market prices must be high enough to cover the costs of those high-cost producers whose supplies are necessary to satisfy the demand. These are the marginal producers, and their costs exert a preponderant influence upon the market. Marginal producers are the producers of the high-cost part of any supply, which it is necessary and economically possible to create in order that the supply may be adequate to meet the demand. Marginal producers find it just barely worth while to continue production. Their total costs are no more than covered by what they receive for their products. Their expense of producing a given commodity is marginal in the sense that within the market concerned they are producing the marginal part of the supply. The marginal producers stand in contrast to the supra-marginal producers, who more than cover their costs, and to the sub-marginal producers who fail to do so. The latter are "hangers-on" desperately waiting for better days. Marginal producers would withdraw from production, wholly or partly, if in the long run their expenses were not covered.

The only reason the high-cost or marginal producer survives in competition with the low-cost producer is because society cannot dispense with his product. What he produces is needed to help meet the demand of the market for the product concerned. Since he must be paid a price high enough to cover his costs in helping produce the socially necessary supply, every other producer of the same commodity in a competitive market can secure the same price. The market cannot discriminate. So it happens that the expense of producing the marginal part of the supply becomes the normal price. Of course, as previously brought out, the price-determining forces of demand and supply merely focus at the margin. Not only the marginal producers but all the supra-marginal producers coöperate in locating the margin and thus in fixing the price which producers must have. Were it not for the presence and production of the supra-marginal producers at any given price the cost of producing the marginal part of the supply would be even higher.

The relation between the costs of the supra-marginal and marginal producers, between marginal supply and demand, and between costs and price may be illustrated as follows. If Class A wheat farmers, supplying a given market, spend an average of \$20 in cultivating an acre of land and get twenty bushels per acre, their cost of producing wheat is \$1.00 per bushel. If they could produce all the wheat their market demanded, the price of wheat at the farm would not need to exceed \$1.00 per bushel. If Class B farmers and Class C farmers, spending the same amounts, produce only fifteen and ten bushels per acre respectively, their costs of producing wheat are \$1.33 per bushel for Class B farmers and \$2.00 per bushel for Class C farmers. If the demand of the wheat market is sufficiently strong to requisition the productive services of the Class C farmers, the price of wheat at the farm must be no less than \$2.00 per bushel. Although the Class A and B farmers could afford to sell their wheat for less than \$2.00, they are not obliged to do so, because the market wants wheat badly enough to demand that the Class C farmers shall produce it. And they can only produce it at \$2.00 per bushel, which becomes the price payable to all producers.²

² The slow but certain tendency of competition to eliminate the high-cost producer wherever possible and to equalize costs among producers lends support to the use of the "representative firm" concept of Alfred Marshall and other economists as a means of measuring normal price. The representative firm is supposed to be typical of all the producers in a given kind of business enterprise. It is neither the leader nor the straggler. It is assumed to be of the most economical size for efficient operation, to be advantageously located, to have fair permanency of existence, and to be managed with average ability. Representative firms are the adults of any branch of business enterprise at the height of their powers. Their costs are typical of the industry as a whole. Higher-cost firms tend to be eliminated. Lower-cost firms are not representative of the industry as a whole because too few in number. Price in the long run—that is, normal price—tends to equal the costs of the representative firm. (*Cont'd.*)

Inter-relations of costs. The inter-relations of costs—fixed (total and average), variable (total and average), total of all costs and average total unit costs, as well as marginal costs—may be illustrated by the following table and the graphs based on it.

TYPES OF COSTS AND THEIR VARIATIONS WITH THE NUMBER OF UNITS PRODUCED ³

Types of Costs	Number of Units									
	1	2	3	4	5	6	7	8	9	10
Total fixed costs	\$20	20	20	20	20	20	20	20	20	20
Average fixed costs	20	10	6.67	5.00	4.00	3.33	2.86	2.50	2.22	2.00
Total variable costs	5.25	9.70	12.60	15.10	17.50	20.65	27.35	37.10	49.95	68.45
Average variable costs	5.25	4.85	4.20	3.78	3.50	3.44	3.90	4.64	5.55	6.85
Total of all costs	25.25	29.70	32.60	35.10	37.50	40.65	47.35	57.10	69.95	88.45
Average total unit costs	25.25	14.85	10.87	8.78	7.50	6.77	6.76	7.14	7.77	8.85
Marginal costs	—	4.45	2.90	2.50	2.40	3.15	6.70	9.75	15.15	18.50

Fixed costs do not vary directly with the output. They may remain the same through various levels of output and within the limits set by existing production facilities. In the table the total fixed costs are the same, \$20, whether 1 unit or 10 units be produced. The average fixed costs are obtained by dividing the total fixed costs by the number of units produced. The larger the production, the greater the number of units over which the fixed (or overhead) costs can be spread. The average fixed costs drop from \$20 to \$2 as the production is stepped up from 1 to 10 units. Total

During the First World War period the government was obliged to fix the prices of some commodities. Its experiences brought the expression "bulk-line costs" into vogue. The purpose of the bulk-line cost concept was to eliminate freakish costs from consideration in price-fixing—perhaps the costs of the producers of 10 per cent of the product who could not expect to have prices set in such a way as to protect them. Bulk-line costs were and are generally regarded as costs within which 80 to 90 per cent of the product could be supplied. Such costs were regarded as a fair basis for price-fixing. Cf. F. W. Taussig, "Price Fixing as Seen by a Price Fixer," *Quarterly Journal of Economics*, Vol. 33 (1919), 205 ff.

³ The table is based on fixed costs of \$500 per month, an average of 25 working days per month, giving an average daily fixed cost of \$20. The variable costs are estimates based on business experience.

variable costs, which differ with the volume of production, are shown as ranging from \$5.25 to \$68.45 as the volume of production is increased from 1 to 10 units, and the resulting average variable costs from \$5.25 to \$6.85. The totals of all costs are simply the sums of total fixed costs and total variable costs for each number of units produced. Average total unit cost in the table may be calculated either as the sum of average fixed costs and average variable costs for each unit, or by dividing the total of all costs by the number of units. The marginal cost is measured by noting the difference in the total costs of any outputs resulting from the production of one unit more or one unit less. The difference between the total cost of producing seven units and the total cost of producing six units measures the marginal cost of producing the seventh unit.

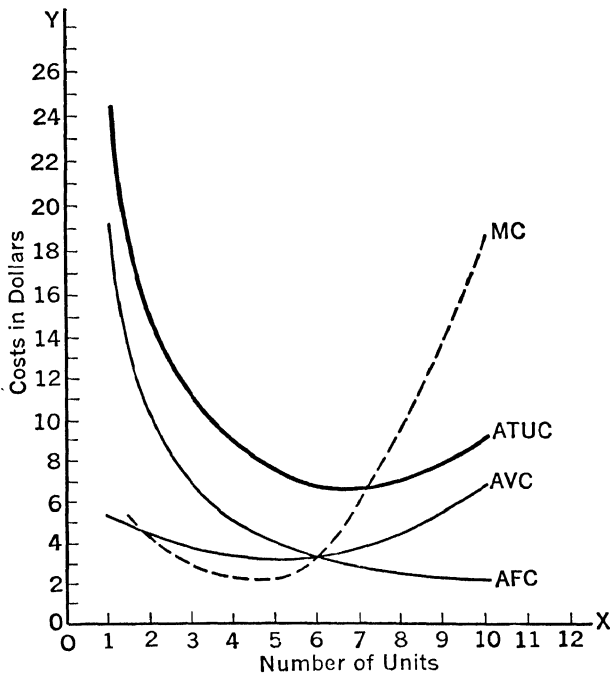


FIG. 1. EFFECTS OF CHANGES IN OUTPUT UPON VARIOUS TYPES OF COST

The graphs based on the table show the changes in *average fixed costs*, *average variable costs*, *average total unit costs*, and *marginal costs* as the volume of production is increased. Costs are shown on the OY axis and the number of units produced on the OX axis. The graphs portray precise cost situations and the effects upon costs of changing volumes of output.

FEATURES THAT DISTINGUISH DEMAND IN THE SHORT-RUN AND THE LONG-RUN

Important as is the tendency of price in both the short-run and long-run under competitive conditions to equal the expense of producing the marginal part of the supply, such costs avail nothing in the explanation of price except upon the assumption that there is a sustaining demand which sanctions their outlay. Market price, short-run and long-run price are always and everywhere resultants of demand and supply. Demand authorizes and sanctions supply. Implicit in the entire preceding discussion of supply (and costs) as a determinant of price has been the assumption of demand as of at least equal significance. Not only the nature of the supply of a good but also the character of the demand for it has much to do with its price in the long run. Social changes in the consumption and spending habits of people, such as those effected by education, travel, fashion, and advertising, are of great importance in shaping the long-term demand for goods.

Elasticity or inelasticity in the demand for goods. Of basic importance, however, is the elasticity or inelasticity in the demand for a good. Demand is elastic when slight changes in price are attended by relatively large changes in the quantity of a good that buyers are willing to take. On the other hand, demand is said to be inelastic when changes in price are accompanied by relatively small changes in the quantity of a good that buyers stand ready to take. The demand is inelastic for necessities such as bread and salt; for goods such as tobacco that have become objects of habitual consumption; and for goods for which there are no adequate substitutes. Salt is a necessity, but a little of it goes a long way. Consequently, when that little is supplied, no more is wanted, and a drop in the price will cause little change in the amount taken. Similarly, an advance in the price will have little appreciable effect on the amount taken, because any one person wants so little that small changes in price will not affect the quantity of his purchases. Tobacco, for those who are confirmed smokers, is so habitual an article of consumption that small changes in price do not affect the demand very much. The inelasticity of the demand accounts for the popularity of the cigarette tax with legislative bodies. They reason that the imposition of the tax will not seriously hurt the cigarette business and at the same time will bring revenues into the public treasury.

On the other hand, the demand for luxuries, for non-habitual consumption goods, and for goods for which there are adequate substitutes is elastic. If luxuries, in contrast to necessities, are thought of as goods that are not indispensable either to life or to the maintenance of one's customary standard of living, it follows that the demand for them is elastic. Electric

refrigerators furnish a good illustration. For most people they are luxuries. With successive drops in price large additional quantities have been sold, a fact that attests the elastic character of the demand. A wide range of available substitutes for a good renders the demand for it more elastic than it would otherwise be. Tenderloin beefsteaks would doubtless be enjoyed by most non-vegetarians if they could afford to buy them. The elasticity of the demand is accentuated by the availability of other cuts of beef, as well as of other meats, poultry, fish, and eggs.

With reference to demand it is also true that persons with large incomes do not have to scrutinize individual expenditures closely, and consequently their demand is more inelastic than that of persons with small incomes who must watch over the expenditure of pennies as well as dollars.

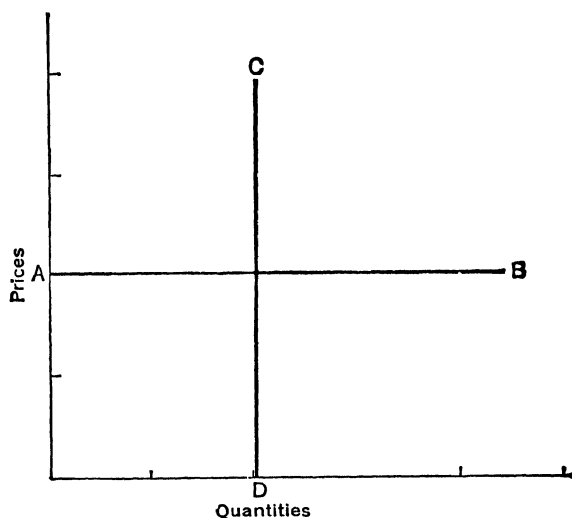


FIG. 2. PERFECT ELASTICITY AND INELASTICITY OF DEMAND

The elastic or inelastic character of the demand for a good may be shown by the slope of the curve that represents it. If the demand for a good is perfectly elastic, we have a situation in which any quantity that is offered will be bought at the same price. Graphically, such perfectly elastic demand is represented by a horizontal straight-line demand curve, indicating that the elasticity of demand is infinity. (AB of Figure 2.) Actually, of course, such perfect elasticity is limited by quantities available.

If the demand for a good is perfectly inelastic, it means that there will be no difference in the quantity bought resulting from a change in price. Graphically, such perfect inelasticity of demand is represented by a vertical straight-line demand curve. The elasticity of demand is zero. Such

perfect inelasticity, however, is actually possible only within a given price range. (CD of Figure 2.)

If the total amount spent for a good (the price per unit multiplied by the number of units bought), remains unchanged after a given change in the price per unit, the elasticity of the demand may be said to be unity. Changes in the rate of sales exactly offset rates of change in price.

In Figure 3 the more sloping curve, AB, represents an elastic demand, and the steeper, more sharply inclined curve, AC, an inelastic demand.

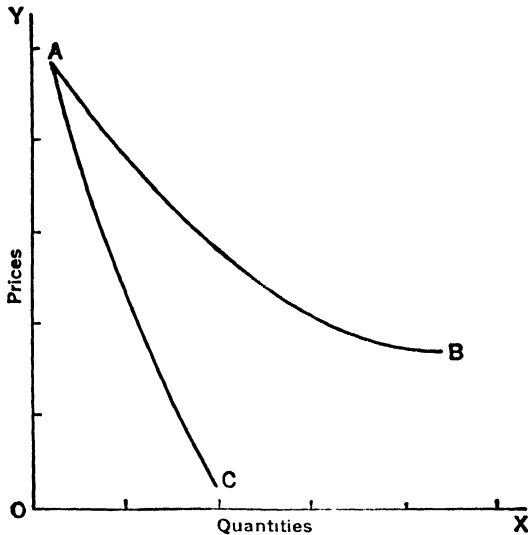


FIG. 3. ELASTICITY AND INELASTICITY OF DEMAND

Estimated shape of the demand curve and the resulting revenues of a firm. The character and the volume of the demand for a good determine what it is profitable to produce. Supply in the long-run must adjust itself to the demand. Elasticity or inelasticity of the demand profoundly affects the decisions of producers in such basic matters as increasing or decreasing the volume of production in the face of market tendencies. Shall the producers increase their output for the purpose of reducing costs per unit as a result of the economies of mass production? If the demand is elastic, it is good business judgment to do so. When unit costs are advancing, is it wiser to curb production than to expand it? If the demand is elastic, restriction of output is the wiser decision if one wishes to avoid loss; if the demand is wholly inelastic, producers may safely go ahead. It would be worth fortunes to producers really to know in advance of production the precise degree of elasticity in the demand for their products. High prices may defeat themselves. Business men are usually inclined under

competitive conditions to stimulate sales by lowering prices. Elasticity or inelasticity of demand carries the key to the situation. Modern business men are deeply concerned not only with reducing their costs but also with learning all they can about the probable volume of the effective demand for their products.

Primarily, a business firm is concerned with the elasticity or shape of the demand curve for its products because such demand curve will indicate the amount of revenue or income the firm may expect to receive for the varying amounts of its products that it chooses to sell. The demand curve for a firm's product is at the same time the average revenue curve of that firm for the product concerned. Total revenues divided by the number of units sold give the average unit revenue. The following graph illustrates relations among the total, average, and marginal revenues of a firm.

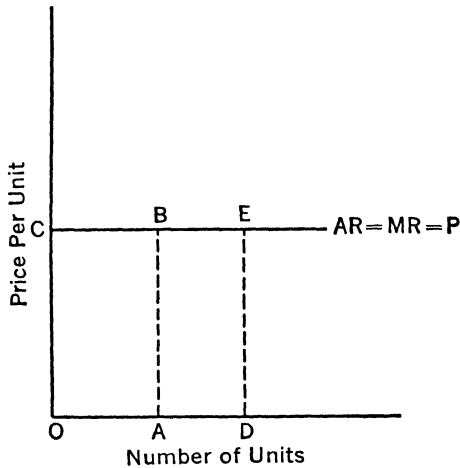


FIG. 4. RELATIONS OF TOTAL, AVERAGE, AND MARGINAL REVENUES OF A FIRM UNDER COMPETITION

If a firm should sell OA units of a good at a price of OC , the total revenue would be the price per unit multiplied by the number of units sold, or the area $OABC$. Price is the average revenue per unit of good sold. The firm may increase its total revenue by selling more units, such as OD units, so that its total revenue will be represented by the area $ODEC$. One of the assumptions of selling goods under competition is that no single firm can produce and sell so large an output, in relation to the total output, that it can force down the price or have an appreciable effect upon it. Consequently, any single seller can expect to receive the same price or average revenue for each unit of product that he chooses to sell. This may be shown by a perfectly elastic or horizontal demand curve.

The additional revenue derived from the sale of one more unit of product is called the marginal revenue. If a business man, for example, receives \$10 from the sale of 5 units and \$12 from the sale of 6 units, the marginal revenue is \$2. Two dollars is the amount added to the firm's total income by the sale of the last or marginal unit. Since, under competition, all units are sold at the same price, the average and marginal revenues are equal. In this case, average revenue (AR) = marginal revenue (MR) = \$2. The significance of marginal revenues and marginal costs in the determination of short-run equilibrium price will be considered next.

SHORT-RUN EQUILIBRIUM PRICE UNDER COMPETITION

In the short-run productive capacity is fixed. The time-interval is too short to permit either the expansion of existing production facilities or the addition of new ones. Additional supplies must come from the more complete or more efficient utilization of existing plant capacity. But they will be forthcoming within the limits set by existing capacity if the demand warrants and sustains such increased production. Every producer will seek to use his existing production facilities to turn out such quantities of goods as will maximize his profits. This goal is crossed when a firm produces such an amount of goods that the marginal revenue or price received just covers the marginal cost. Short-run equilibrium price under competition has been achieved when marginal revenues equal marginal costs. A firm is said to be in equilibrium when with existing plant and equipment maximum net returns are obtained. In such case there is motive neither to expand nor to contract output.

Because in the short-run fixed or overhead costs remain unchanged, the only increase in costs when producers step up their output to maximize profits will be an increase in variable costs. The marginal costs of production will be solely increases in variable costs. If a producer is to increase his output at all, the revenue or price anticipated must at least enable him to meet his additional variable costs. A higher price than this would make it possible to cover some of the fixed costs as well. A lower price than the average variable cost would mean that he would have to operate at a loss. If a producer temporarily closes his plant, his loss would be limited to the fixed charges that he must pay. He will cease to produce altogether if the total revenue is less than the total variable costs, because his loss would then be even greater than the amount of the fixed costs. In this case the loss would be equal to the fixed costs plus the difference between the total variable costs and the total revenue. To show a profit, on the other hand, requires that the average revenue or price be greater than the average total unit cost.

The relationships among these several items of revenue and of cost

may be read in the graphs that follow. The vertical scale on the OY axis measures costs and prices, up from zero, and the horizontal scale on the OX axis measures units of product, out to the right from zero on the left. D_1 , D_2 , D_3 , and D_4 represent possible demand curves at different levels of prices. They are straight-line demand curves, indicating perfect elasticity of demand. (A straight line is a particular kind of curve. Mathematically, it is "a curve of infinite radius.") Since the demand curve for a firm's product, as previously shown, is at the same time, under competition, the

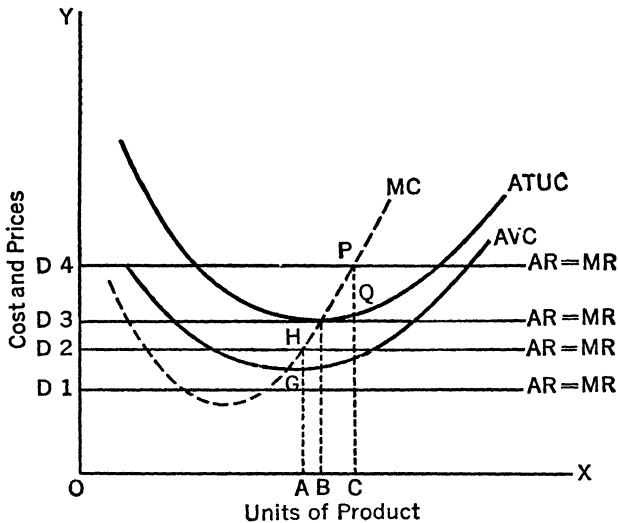


FIG. 5. INTER-RELATIONS OF REVENUES AND COSTS GRAPHICALLY SHOWN

average revenue curve of that firm for the product concerned, and because, under competition, all units are sold at the same price, the demand curve, the average revenue curve, and the marginal revenue curve are all the same. The cost curves shown are the average variable cost curve (AVC), the average total unit cost curve (ATUC), and the marginal cost curve (MC). Their points of intersection (or failure to intersect) with the assumed perfectly elastic demand curves (D_1 through D_4) are of importance in the conclusions that follow.

Study of "Figure 5, Inter-relations of Revenues and Costs Graphically Shown," warrants certain observations and conclusions.

First, the possible demand curves for the products of an individual firm are perfectly, or at least highly, elastic. Curves D_1 , D_2 , D_3 , and D_4 show this.

Second, the most profitable output of a firm is at the point or price reached when marginal cost (MC) just equals marginal revenue (MR).

This is OA units of product at the price level denoted by D₂, OB at D₃, and OC at D₄. These quantities are read by noting the points at which the marginal cost curve cuts a marginal revenue curve.

Third, the profits or losses incurred by the firm at price levels D₁ through D₄ are read as follows:

a. At price D₁ the firm would not find it advantageous to produce at all because the price or revenue obtained does not even cover the average variable cost (AVC). The D₁ marginal revenue line is below the average variable cost curve (AVC).

b. At price D₂ the firm would produce OA units and would cover all of its variable costs and part of the fixed costs (GH) as well.

c. At price D₃ the price or revenue would exactly cover all costs and OB units would be produced. At the D₃ level of prices the marginal revenue (MR), marginal cost (MC), and average total unit cost (ATUC) curves all intersect.

d. At price D₄, if the price should temporarily rise that high, the firm would make profits of PQ per unit and output would be expanded to OC units. Attractive profits together with further lapse of time would probably stimulate further competition and bring down the price.

LONG-RUN EQUILIBRIUM PRICE UNDER COMPETITION

In the long-run productive capacity can be expanded to meet any demand situation. If the long-range outlook for making profits is inviting, existing production facilities will be expanded and new competitors will also enter the industry. In the long-run, as in the short-run, individual firms will seek to maximize profits by equating their marginal costs with their marginal revenues. But in any industry the marginal costs of various producers may differ widely. Whether a producer with high marginal costs can remain in business depends upon the effectiveness of competition and the ability, or inability, of the more efficient producers to supply the total demand. The principle underlying long-run equilibrium price is this: if we may assume a sustaining demand, it is the cost of producing goods, specifically the cost of producing the marginal part of the supply, which in the long-run determines their price. The primary reason for this is that there would be a shift of productive factors out of the industry concerned, if prices in the long-run under competition did not cover the cost of producing the marginal part of the supply: those final increments of supply which must be produced to satisfy the existing demand. And if prices far exceeded such costs, additional competition would be forthcoming to bring them down.

The long-run average costs which are of such importance in explaining long-run equilibrium price not only vary from firm to firm, but sometimes

even from plant to plant. The size of the firm or the plant in relation to the total demand to be supplied may have to be very large before it achieves maximum efficiency. Such efficiency of the firm is attained when it achieves its lowest average cost.

Supply in industries of decreasing costs. But even more important than the cost-lowering possibilities of an individual firm or plant are the long-term potentialities in this respect of the industry itself, which the single firm or plant merely represents. An industry may be thought of as a branch of production in which numerous firms are engaged in producing the same commodities, or at least commodities that can be substituted for each other. There are some industries which in the long-run tend to be industries of decreasing costs: an increase in the volume of production is achieved with gratifying decreased expense per unit of output. Manufacturing, transportation, and communication are such industries. Production techniques may be improved from time to time as a result of advances in science and improvements in technology. In much manufacturing in which processing costs are of greater importance than the cost of materials, lower average costs will result in the long-run. The *sine qua non* for the achievement of decreasing costs in any industry is the economies which large volume of production makes possible. These economies are not merely the economies of large-scale production in any plant which makes full use of its productive capacity, but also the more important economies that arise through the more intensive development and organization of the industry itself. Specialization of entire plants, strategic location of plants with reference to materials, labor, or markets, the development of complementary and supplementary businesses are all means to the attainment of some of these economies, if large volumes of production can be maintained. Large businesses in growing industries are most apt to show decreasing costs per unit of output—and such has been their actual record.

Supply in industries of increasing costs. There are other industries which in the long-run tend to be industries of increasing costs: an increase in the volume of production is attended by increased expense per unit of output. The extractive industries in general and agriculture in particular are such industries. When it is necessary to resort to the use of poorer soil and less advantageously located lands, the unit costs of production tend to rise. The same thing is true when lands already in use are worked more intensively by employing more labor and capital goods upon them—increased product can only be obtained at the price of higher unit costs. The only escape from this consequence—and it is merely temporary—is the introduction of improved methods of production which effect economies. In the development of American agriculture constant improvements in technique have counteracted and retarded the working of the principle of increasing costs.

Supply in industries of constant costs. Industries or trades of constant costs per unit of output are relatively few in number and unimportant in volume of production. Industries and trades that are necessarily small-scale and in which hand labor preponderates furnish the best example. Of these custom tailoring is typical. Except for variations in the cost of materials each suit of clothes is made with about the same outlay. A substantial increase in the demand would hardly be met by the mechanization of the industry but rather by the employment of more tailors.

Examination again of the graphs shown in Figure 5, "Inter-relations of Revenues and Costs Graphically Shown," leads to the conclusion that long-run equilibrium price will tend to be D_3 and that OB units will be produced. At the D_3 level of prices not only are the marginal revenue (MR) and the marginal cost (MC) equal, which is essential to equilibrium of the firm, but the average revenue (AR) just equals the average total unit cost ($ATUC$), which is the goal of competition in the industry. If the price should temporarily rise, say to D_4 , profits of PQ per unit would be made and output would be expanded from OB to OC units. The lure of profits would encourage existing firms to expand their output and induce new firms to enter the industry. In the long-run, however, increased competition would increase supplies and prices would tend to fall again, say to D_3 . Long-run equilibrium price tends to equal the cost of producing the marginal part of the supply. This price must be high enough to cover the minimum average total unit costs of the marginal or least efficient producers.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Long-run price is influenced by the cost of production of the marginal producer.
2. The selling price of a commodity, under competitive conditions, may temporarily rise above cost of production, but cannot long remain above it.
3. The distinction between long-run price and short-run price turns upon the expansion or contraction of output for each producer in an industry.
4. A firm is not in short-run equilibrium unless the selling price per unit of its product equals the minimum production cost per unit of product.
5. If the output of any plant is doubled, the total expenses of production are also doubled.
6. The long-run tendency of competitive price to equal cost of production works itself out through the actions of individual producers.
7. In an industry of constant costs there is little variation in the price of the product over a period of years.
8. Under competitive conditions producers with the lowest costs will always drive producers with higher costs out of the market.

- 9. A seller can always stimulate sales by lowering the price of his goods.
- 10. The inelastic demand for tobacco makes cigarettes a good target for taxes which serve to advance the price of the cigarettes.

B

- 1. Silversmiths, Incorporated, produce one type of sterling silver candlestick under the following conditions of cost and revenue:

<i>Number of Pairs of Candlesticks</i>	<i>Total Costs of Production Per Day</i>	<i>Total Revenue Expected Per Day from Sales</i>
1	\$ 60.00	\$ 27.50
2	100.00	55.00
3	130.00	82.50
4	155.00	110.00
5	177.50	137.50
6	198.75	165.00
7	219.38	192.50
8	239.69	220.00
9	260.32	247.50
10	281.57	275.00
11	304.07	302.50
12	329.07	330.00
13	359.07	357.50
14	399.07	385.00
15	459.07	412.50

- a. Compute and graph the average cost, marginal cost, average revenue, and marginal revenue schedules.
 - b. Determine the equilibrium price and output for this firm under competitive conditions.
2. Suppose that the costs remain the same as above, and that the conditions of revenue are as follows:

<i>Number of Pairs of Candlesticks</i>	<i>Total Revenue Expected Per Day from Sales</i>
1	\$ 30.00
2	60.00
3	90.00
4	120.00
5	150.00
6	180.00
7	210.00
8	240.00
9	270.00
10	300.00
11	330.00
12	360.00
13	390.00
14	420.00
15	450.00

- a. Determine the short-run price and output of this firm under competitive conditions.
- b. Is this firm in equilibrium?

3. Suppose that the costs remain the same as above, and that the conditions of revenue are as follows:

<i>Number of Pairs of Candlesticks</i>	<i>Total Revenue Expected Per Day from Sales</i>
1	\$ 25.00
2	50.00
3	75.00
4	100.00
5	125.00
6	150.00
7	175.00
8	200.00
9	225.00
10	250.00
11	275.00
12	300.00
13	325.00
14	350.00
15	375.00

- a. Determine the short-run price and output of this firm under competitive conditions.
- b. Is this firm in equilibrium?

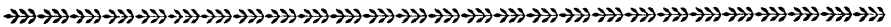
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CHAPTER XVIII

The Rôle of the Business Firm in the Determination of Price



RÔLE OF THE FIRM UNDER PURE COMPETITION

THE ANALYSIS OF PRICE so far made has pertained to freely competitive markets. When buyers and sellers are at liberty to enter a market or to withdraw from it as they see fit, without any restrictions on the prices they offer or ask, or the amounts they offer to buy or sell at such specified prices, we have a competitive market situation. Writers of an earlier day often called it *free competition*, and thereby emphasized the absence of restrictions and controls. Free competition was supposed to be effective in protecting the interests of both buyers and sellers. Competition among buyers, if other things remained equal, tended to raise prices and to ensure the seller a price that would enable him to produce. Competition among sellers, eager to develop markets for their goods, was relied upon to hold prices down and thus to supply the wants of buyers at the lowest possible prices.

More recently, the terms *pure (or impure) competition*, and *perfect (or imperfect) competition* have come into vogue. "Pure competition" is the term employed by Edward H. Chamberlin in his *Theory of Monopolistic Competition*. "Imperfect (as contrasted with perfect) competition" is the term used by Joan Robinson in her *The Economics of Imperfect Competition*.¹ *Pure competition* arises under two basic conditions: first, when the many prospective buyers and sellers all deal in a standardized commodity so that it is a matter of complete indifference to any prospective buyer whether he deals with one seller or another; secondly, when the buying or selling of any one person represents so small a percentage of the total that he in his single capacity can have no effect upon the price. Under pure competition only price matters in influencing the transactions of buyers and sellers. *Perfect competition* assumes full knowledge of the market on the part of those concerned, perfect mobility of the good, freedom of movement of its buyers and sellers, and perfect elasticity in the

¹ Both books were first published in 1933. Cf. foot-note reference on p. 465.

supply of the productive agents. Concretely applied this means (1) that business firms have perfect knowledge of both production processes and the market; (2) that they can apply this knowledge unrestrained by patents which might restrict their entry into a given business; (3) that they can obtain the necessary factors of production to expand output; and (4) that consumers have perfect knowledge about the prices of goods offered by all firms.

In the purchase and sale of goods, some markets are much more competitive than others. Perhaps within the limits of certain recently established controls the marketing of grains on the Chicago Board of Trade, and dealing in securities on the New York Stock Exchange, approximate the conditions of pure competition. These exchanges at least are organized to make competition effective. The units of goods that are traded are homogeneous. One bushel of Grade A wheat is practically identical with every other bushel of like grade. One share of the capital stock of the American Telephone and Telegraph Company is like every other in the rights that it conveys. Since there are both many buyers and many sellers and the existing supplies of grain or securities are widely distributed, the grain and security markets approximate pure competition. The significance of such competitively organized markets for buyers and sellers lies in the twin facts that they make possible much greater volumes of sales than would less well-organized or unorganized markets, and do so at the lowest possible prices. The presence and effectiveness of competition are sometimes indicated by the very units in which prices are quoted. On the New York Stock Exchange, most securities are quoted in terms of eighths for fractional parts of the dollar, such as $\$50\frac{1}{8}$ for one share of General Electric Company stock. On the Chicago Board of Trade, offers to buy or to sell are indicated in terms of eighths of a cent for fractional parts of the cent, such as $\$2.48\frac{3}{8}$ per bushel of wheat.² An eighth of a dollar or an eighth of a cent difference in price may bring about a significant difference in the volume of purchases and sales.

Under pure competition, and perfect competition, too, price is a resultant of the interaction of all the forces of the market in general affecting the demand for or supply of the good concerned. By assumption, the buying or selling of a single firm (which in this connection means any business unit) represents so small a part of the total that it has no perceptible effect upon the price. A wheat farmer may sell thousands of bushels of wheat, but in relation to the hundreds of millions of bushels of wheat that are bought and sold in a year, his selling will have no appreciable effect upon the price. The result would be the same if he as a single seller doubled his

² Cf. Chap. XIV, "Organized Markets," pp. 379-384, 386-389, for discussion of the functioning of the Chicago Board of Trade and the New York Stock Exchange as organized markets.

offerings or reduced them by one-half. But if he acted in coöperation, or collusion, with all other producers in reducing the supply of wheat by as little as 10 per cent, all other factors remaining the same, the chances are that the price of wheat would be substantially affected. Under pure competition the single seller, acting for himself alone, is largely powerless to affect the price. He accepts the prevailing price situation and adjusts his operations to it. He decides only on the amount of his own output. He is interested in maximizing profits by so adjusting his output that his marginal revenues will just cover his marginal costs. Under pure competition the demand curve for an industry is less than perfectly elastic—it is a negatively sloping demand curve, sloping downward and to the right. On the other hand, the demand curve for the product of any single firm tends to be perfectly elastic—it approaches or becomes a straight line parallel to the base. Since the demand curve facing the individual seller under pure competition is perfectly elastic he can do nothing alone in affecting price. Because he is powerless to affect price he has no economic motive to restrict output in order to raise price. If in a purely competitive market a producer should raise his price above that of his competitors, he would lose all of his patronage. By supposition buyers are swayed by considerations of price alone. It would be equally foolish for a firm to offer its goods at a price lower than the prevailing price, for if it can sell its entire output at the prevailing price, why offer to sell for any less? That does not make sense as far as maximizing profits is concerned.

RÔLE OF THE FIRM UNDER NON-COMPETITIVE CONDITIONS

The rôle of the firm in the determination of price is very different, however, in non-competitive markets. In such markets the firm becomes an active factor not only in the possible restriction of supply but in seeking to influence the demand. The range of its activities is widening, because non-competitive markets are no longer mere exceptions to the general rule of pure competition. Indeed, pure competition begins to look like a special case rather than the general rule. Its assumptions are applicable in very few fields. It serves very well as "a first approximation to reality," but it is neither the whole nor even most of the story. The important fact is that in many fields the number of sellers has decreased to such an extent that each remaining key firm produces a significant part of the total supply; that what it produces and sells makes an appreciable difference; and that by varying its output and following certain pricing policies it can directly influence the price. The institutional framework of society is no longer wholly, or even largely, pure competition, but rather in many parts has become some form of monopoly.

Various factors have hastened the decline of pure competition and the

emergence of monopoly, or at least of competitors who also have or seek some degree of monopoly power.³ Chief among these has been the vast growth in technological knowledge and methods which in turn have made heavier demands upon the resources of business firms. In many industries, of which the manufacture of heavy electrical equipment is a good example, modern methods of technology require such huge amounts of specialized and expensive equipment that only the financially strong can enter the industry or hope to survive. This usually means that a few large firms will dominate the industry. Modern methods of technology also call for greater managerial "know-how," which the stronger and larger firms are in the best position to provide and to retain. Outstanding "masters of production" capable of organizing and directing vast and yet highly integrated enterprises are none too plentiful. Modern marketing methods and selling techniques similarly make heavy demands upon the financial resources and ingenuity of business firms so that only the strong can meet the challenge and prosper. Improved technological processes and equipment, highly integrated organization, and promotional techniques in selling have worked together to restrict the number of firms in many industries. The size of firms has grown to the extent that in many industries leading firms produce substantial and significant parts of the supply, and by varying their outputs and influencing demand can influence price.

Although in the United States the preservation of competition has been one of the prime objectives of public policy, certain public policies have actually contributed to the decline of competition and the growth of monopoly. The corporate form of business organization, for example, has greatly facilitated the organization and development of large-scale enterprise. Favorable legislation, or the lack of any legislation on the subject, has made it possible for firms to "plow back" undistributed earnings into the business in the form of corporate surplus, and to grow and expand thereby. Holding companies and mergers, that do not actually violate anti-trust laws, have made for large-scale enterprise. Patent laws have often operated in a way that has fostered monopoly. Business firm B may develop and patent a device that is an improvement over the device on which business firm A holds the basic or original patent. B may not benefit from the improvement unless the firm can get a license to use it from A, the holder of the basic patent. The result is that B usually sells the patent to A—and A's position continues unchallenged.

The decline of competition, however it may have been brought about, and the emergence of some form of monopoly, have provided the oppor-

³ This situation has been called "monopolistic competition." It is described and analyzed in Chap. XX, "Price Under Monopolistic Competition." For a full discussion cf. Edward H. Chamberlin, *The Theory of Monopolistic Competition* (Cambridge, Harvard University Press, 1933).

tunity for the individual firm to play an active rather than a passive rôle in determining output and price.

With basic conditions in any industry favorable to the emergence and operation of only a limited number of firms, these firms have further sought to entrench their positions in the market by differentiating their products in the public mind from all others. Standardization of product is the rule of pure competition. Differentiation of product is the rule of various forms of monopoly. To build up the idea among such parts of the public as are potential customers that the product of a given seller is different from all others, that it is superior in quality, that its ownership and use confer certain distinction, that its acquisition conveys certain concessions, guarantees, or follow-up services, that for it there are no satisfactory substitutes whatever the claims of rival sellers may be, is successfully to practice product differentiation. If a dealer's customers stay with him regardless of the enticements of his rivals, he has succeeded in building up a market of his own, and may also share the general market with others. Limitation of the number of firms in an industry and differentiation of their products create the conditions under which an individual firm can both affect supply and demand and thus have an effect upon price.

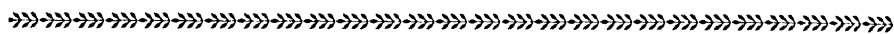
The preceding chapters on price have largely dealt with market conditions under competition, in which the individual seller has merely accepted the prevailing price and adjusted his output to it as he saw fit. His rôle in price determination was largely passive. The next two chapters deal with market situations in which large firms predominate and seek actively to influence the price. Their rôle in price determination is active.

Economists of the nineteenth century usually advised businessmen to strive for greater profits by operating on the supply side of the equation of demand and supply: to produce more and better goods at lower prices through greater efficiency in technical production. Businessmen of the twentieth century still find the advice good, but some of them also believe in operating on the demand side of the equation, since price which they seek to influence is a resultant of the interaction of supply and demand. Instead of responding to price changes by merely varying their costs, if possible, and adjusting their outputs, businessmen now direct some of their most creative efforts to the development and enlargement of new markets for their goods.

(For Problems see close of Chapters XIX, XX.)

(For Suggestions for Further Reading see close of Chapter XX.)

Price Under Monopoly



THE PRICE PATTERN of any economic society is largely determined by its institutions. In preceding chapters the pattern described for market, short-run, and long-run prices was that set by competition. In the present and succeeding chapters the pattern described is that furnished by monopoly, partial or complete, and by public authority. If the prices of competitive markets may be said to be freely determined, the prices of markets dominated by monopoly or authority may be described as controlled. Under competition, as has been shown, the market price of goods already in existence tends to equal the price at which the market demand and supply are in equilibrium—the price that clears the market. Normal price, which is an equilibrium price established in the long run after there has been time for the productive factors to adjust themselves to the demand, tends to equal the cost of producing the marginal part of the supply. These conclusions are based upon the assumption of freely competitive markets. Ideally, such markets are composed of many buyers and many sellers, who are free to enter or to withdraw as they see fit. They all deal in a standardized or at least undifferentiated commodity, which makes it a matter of indifference to any buyer, for example, whether he deals with one seller or another. The buying or selling of any one of them, moreover, represents so small a part of the total that by itself it can have no perceptible effect upon the price. While there are few markets that approximate these conditions of pure competition, there are in actual economic practice many kinds and intensities of competition. It is just as instructive to study the behavior of prices under such assumed competitive conditions as it is to study the behavior of natural forces under the assumption of a frictionless world. Allowances for the frictions of the market can be made as readily as for the frictions of physical media.

But all markets are by no means competitive. The direct antithesis of competition is monopoly. In its extreme form of a single seller, who can set his price regardless of its effect on the demand for his product or on the emergence of someone who will seek to oust him, monopoly is rare. But lesser degrees of monopoly are common. And the will to achieve some form or degree of monopoly power in disposing of one's commodities or services is even more common.

NATURE AND SOURCES OF MONOPOLY POWER

Characteristic of every monopoly is some measure of control over the supply of a good for the purpose of controlling its price and of raising to a maximum the total profits that can be made. The ultimate objective of the monopolist is maximum profits. While complete monopoly is not common it is possible under certain conditions. Monopoly-creating conditions are both natural and social. If the distinctly limited natural supply of a good, such as diamonds, is all owned or controlled by the same business enterprise, we most assuredly have a case of complete monopoly. Similarly, natural conditions may be such as to make monopoly more desirable socially than competition. This is notably true in the field of the public utilities in which the multiplication of competing plants is physically impracticable and economically undesirable, because it ensures neither low prices nor adequate service.¹ In some fields the commanding size of the most successful business enterprises has inhibited potential competition, and afforded at least a temporary measure of monopoly power. In contrast to the preceding natural monopolies are the social monopolies, which arise out of human arrangements rather than out of natural conditions. They are illustrated by the granting of patent rights and copyrights. Such monopolies are created by the state for limited periods of time, and to serve the social purpose of rewarding originality. The holders of patent rights have the temporary exclusive right to manufacture and to market the patented article and have cause for action against anyone who infringes upon this right. Similarly, copyright owners are protected against infringements of their monopoly rights of duplicating and distributing that which they have written. The owners of all such monopolized products, unless restrained by government as in the case of the public utilities, have a power over price which is denied the owners of competitive enterprises. How this power may be exercised the price analysis that follows seeks to show.

POSSIBLE MARKET SITUATIONS UNDER MONOPOLY

The rôle of a single seller in our price system may be illustrated by three market situations. The seller may have a single good for sale, several identical but non-reproducible goods, or freely reproducible goods. The last is what is ordinarily meant by monopoly, although the others may also represent monopoly situations.

The case of a single good for sale. Let us imagine ourselves present in the sales rooms of the Grant Art Galleries of Chicago on an afternoon when the dealer is offering a Kerman rug for sale at auction without any

¹ Cf. pp. 108-109, 860-861.

reservation price of his own. Five prospective buyers are interested in acquiring it. Let us further assume that the maximum subjective prices of these five possible buyers, which of course they reveal only in the bidding, are as follows:

Buyer A will bid as high as \$1,000.
 Buyer B will bid as high as \$900.
 Buyer C will bid as high as \$800.
 Buyer D will bid as high as \$700.
 Buyer E will bid as high as \$600.

It is the function of the auctioneer (the seller or his agent) by all the artful devices of his trade to stimulate rivalry among the potential buyers and to dispose of the rug to the highest bidder. It is apparent from the maximum price-offers indicated that ultimately the bidding rests exclusively between buyers A and B. If B bids his maximum price, \$900, before A does, buyer A is in a position to raise his bid and will be unopposed at any price over \$900 and not in excess of \$1,000, which is his own maximum. If buyer A, however, should bid \$900 before B was able to enter his maximum bid, the rug would be sold to A for \$900 because no other buyer is disposed to raise his bid. The general price rule in such cases is that the price must be high enough to exclude all but the highest bidder.

The case of several identical goods for sale. If the single seller has not one but several fairly similar though non-reproducible goods for sale, a variety of prices or a uniform price is possible depending upon the method of selling the goods. Let us suppose that there are five fairly comparable antique sofas in a valuable collection of furnishings, differing slightly in decorations and finish, but all in equally good condition and of substantially the same value. Of the possible buyers present at the auction the maximum price-offers of the six highest bidders among a group of fifty or more interested buyers are the following (naturally these subjective prices must be inferred from the actual bidding because the prospective buyers do not announce them in advance).

Buyer A's maximum price is \$300.
 Buyer B's maximum price is \$290.
 Buyer C's maximum price is \$275.
 Buyer D's maximum price is \$250.
 Buyer E's maximum price is \$235.
 Buyer F's maximum price is \$200.

If the sofas are sold singly, as is the custom at auctions, and each prospective buyer bids whatever he can or finds necessary, the sofas will sell at different prices. The first will sell for \$290 or better, but not to exceed \$300; the second for \$275 or better but not to exceed \$290; the fifth for \$200 or better but not to exceed \$235. This is upon the assumption that

the auctioneer recognizes only the first bid at a given figure even though there are several persons who might be willing to bid the same amount. In this case, as assumed, successive auction prices drop, which in the end proves disconcerting to the higher and more eager bidders when they see the greater good luck of Buyer E for example. But conditions might easily be different. Any one bidder does not know how many others will bid, what their upper price limits are, and how many of the bidders are holding back, thinking that subsequent prices may be lower. Consequently the more eager and interested buyers are afraid to run the risk of waiting for the sale of the last sofa or two, because the bidding may be more spirited.

If the sofas are not sold at auction but are put on sale by a regular dealer in antique furniture, the problem of price arises in another form. What price can the dealer reasonably hope to get for them? If his prospective customers have the subjective prices indicated in the auction illustration and he guesses or judges the situation with remarkable acumen, he could place a price over \$200 but not in excess of \$235 upon each of the five sofas and dispose of the entire lot. If his price were set in excess of \$235 he would find that he could not sell all five sofas. If all of the sofas are to be sold at a uniform price, the maximum price of the buyer necessary to dispose of the lot of five (Buyer E.) will set the upper limit of the market price. The practical problem of the seller is to guess it as closely as he can.

It is evident from both of these illustrations that in the case of rare antiques, when the seller himself has no reservation price, market price is set by the most eager buyer. "The sky is the limit," if buyers are so disposed, because there is no competition of sellers to help set an upper limit.

The case of freely reproducible goods for sale. If the single seller in the case of many buyers and one seller offers a good for sale which he can freely reproduce, we have the typical monopoly situation. The monopolist controls the supply but not the demand. He may influence the demand through advertising and other marketing methods, but he cannot control it. Usually the demand is elastic because of the possibility of using substitutes for the monopolized good or of restricting one's consumption of it. Demand is elastic when small changes in the price asked by the seller result in large changes in the demand. This possible elasticity in the demand for his product limits the monopolist in his determination of price. The monopoly price of goods the demand for which is relatively elastic must be low or it will smother the demand. The monopoly price of goods the demand for which is relatively inelastic may be high. It is to the interest of the monopolist so to adjust his output to the existing demand as to secure the highest net returns. In a certain market for a monopolized commodity it is estimated that there could be sold the number of units

indicated in the first column of the following table, at prices given in the second column, and produced at prices per unit stated in the third column. A little calculating, which the author has spared the reader, will give the results set forth in the last three columns. The price that will net the monopolist the highest return is fourteen cents per unit. He can sell more units if he lowers the price, but his net revenue will be less. He can make a bigger profit per unit if he advances the price beyond fourteen cents, but his sales will fall off sharply, and his net revenue will also be less.

DETERMINATION OF MONOPOLY PRICE

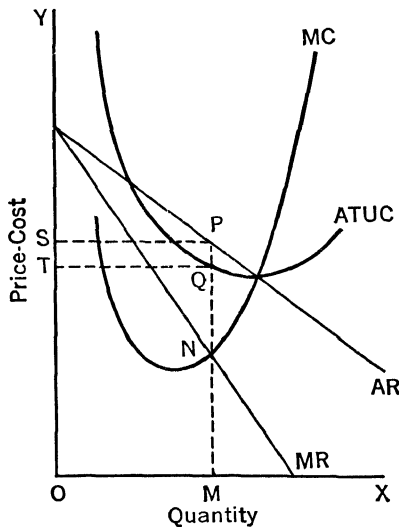
<i>Number of Units</i>	<i>Selling Price per Unit</i>	<i>Cost per Unit</i>	<i>Total Gross Receipts</i>	<i>Total Costs</i>	<i>Net Revenue</i>
1,000	\$.55	\$.17	\$ 550.00	\$ 170.00	\$ 380.00
1,350	.45	.16	607.50	216.00	391.50
2,000	.35	.15	700.00	300.00	400.00
4,000	.30	.13	1,200.00	520.00	680.00
6,000	.25	.12	1,500.00	720.00	780.00
10,000	.20	.11	2,000.00	1,100.00	900.00
20,000	.15	.105	3,000.00	2,100.00	900.00
25,000	.14	.10	3,500.00	2,500.00	1,000.00
27,000	.13	.095	3,510.00	2,565.00	945.00
30,000	.12	.09	3,600.00	2,700.00	900.00
35,000	.11	.085	3,850.00	2,975.00	875.00

While the monopolist's indicated course of action seems clear enough from this simple illustration, it is not nearly so easy for him to decide what to do under the actual conditions of the market. He does not really *know* the demand at these various assumed prices, he can only *estimate* it. He lives in dread of the twin foes of monopoly, competition and control. He cannot afford to make profits so great as to invite competition nor to arouse public clamor for regulation. Consequently he must temper his price policy to the winds that blow. At best his price-fixing can only approximate the price that will yield the highest net returns to him over a period of time.

PRINCIPLE OF MONOPOLY PRICE

The monopolist is not primarily concerned with the highest possible profit per unit of sales that he can make, whatever the price may be, for at this price his volume of sales may be light. What interests him most is setting the price of his product at such a figure in relation to the probable volume of sales that his aggregate profits will be largest. His problem is

to estimate the price at which his *marginal revenue* equals his *marginal cost*. By *marginal revenue* is meant the net addition to total revenue obtained from each successive unit sold, and by *marginal cost* the additional cost outlay resulting from an increase of one unit in the supply. It is to the monopolist's interest to increase his output as long as marginal revenue exceeds marginal cost. But inevitably a point will be reached after which the monopolist's profits will no longer increase with additional sales because marginal costs will increase and because marginal revenues will fall due to the necessity of lowering prices on all units sold in order to stimulate sales. The ideal output, if it can be estimated, is that output which equalizes marginal revenue and marginal cost.



DETERMINATION OF MONOPOLY PRICE

Since additional units of output and sales change both marginal costs and marginal revenues, they also change *average total unit costs* and *average revenues*. Total costs divided by the number of units produced, and total revenues divided by the number of units sold, give, respectively, the average unit costs and average unit revenues. Because the monopolist has alternative choices as to the quantity of his product that he may market and the price at which to sell it, curves may be drawn to illustrate these alternative conditions of price, revenue, and costs. The above diagram illustrates the elements that must be taken into consideration in the determination of monopoly price.

In accordance with the preceding analysis, the point at which marginal revenue and marginal costs are equal marks the output that will bring the

highest net returns. The marginal revenue (MR) and marginal cost (MC) curves intersect at N, which point read on the OX axis shows that OM is the output that will bring the highest net returns. It can be sold at a price of MP (P is the point on the average revenue or demand curve, AR, at which OM units can be sold). The average profit on each of OM units sold at MP will be QP, the difference at this price between average revenue and average total unit cost, as located on curves AR and ATUC. This average unit profit, QP, multiplied by the number of units sold, OM, equals the total monopoly profit. It is represented by the area, SPQT. It is the largest possible monopoly profit because at this point marginal revenue and marginal cost are equal. At any other point the monopolist would fail to make all that he can because either marginal revenues would be greater than marginal costs, or because marginal costs would exceed marginal revenues. In the former case he would fail to make all he can make; in the latter he would suffer a direct loss. The condition in which marginal revenues exceed marginal costs is shown by those parts of the MR and MC curves which lie to the left of MP. The condition in which marginal costs exceed marginal revenues is shown by those parts of the MC and MR curves which lie to the right of MP.

MONOPOLY PRICE AND PUBLIC POLICY

If a monopolist is to achieve the highest net returns, he must estimate the effect of his projected price upon the number of units of a good that he can sell, or the volume of business that he wants to do. While the monopolist controls the supply of a good he does not control the demand, if there are any available substitutes. He may seek to influence the demand but he cannot control it. Monopoly price, consequently, is not necessarily high price. The conviction and fear, however, that it may easily become such have strongly influenced public policy in relation to monopoly price.

In the United States public policy toward monopoly has two over-all objectives: to maintain competition against the encroachments of monopoly wherever possible, and when this proves impossible or socially undesirable, either to regulate or to socialize the monopoly concerned. The first is illustrated by the Sherman Anti-trust Act of 1890 and subsequent amendments, aimed at the suppression of monopoly and of combinations in restraint of trade.² The second is shown by the Interstate Commerce Act of 1887 and amendments thereof, aimed among other things at controlling the rates charged for the services of railroads and other public utilities.³ Both phases of this public policy are directed toward eliminating

² Cf. Chap. XL, "Government Regulation of Combinations in Restraint of Trade."

³ Cf. Chap. XXXIX, "Government Regulation or Ownership of the Public Utilities Within the Capitalistic System."

or curbing what control over price the monopolist has by virtue of his control over supply.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *madequate*.

1. Monopoly price is always high price.
2. Elasticity or inelasticity of the demand largely determines whether monopoly price will be low or high.
3. A monopoly of the salt industry would probably prove more profitable than a monopoly of toasted cornflakes.
4. Monopoly power may arise from either conditions of inelastic demand or of declining average total unit costs.
5. Average total unit costs which decline steadily as output increases are conducive to monopoly rather than competition.
6. Average total unit costs which increase steadily as output increases past a certain amount are conducive to competition rather than monopoly.
7. Under conditions of pure competition, all the units of the produce made by one producer are substitutable for those of other producers.
8. Under conditions of pure monopoly there is little substitutability between those items produced by the monopolist and similar items made by other producers.
9. A monopolist's ability to produce at low costs may be due both to the technical efficiency of his productive plant and to the efficient manner in which he has organized his plant and its personnel.
10. The costs of production under pure monopoly are always less than under pure competition.

B

1. In a certain market for a given commodity there could be sold:

2000 units at 95¢ per unit,	costing 34¢ per unit
2700 units at 90¢ per unit,	costing 32¢ per unit
4000 units at 70¢ per unit,	costing 30¢ per unit
8000 units at 60¢ per unit,	costing 26¢ per unit
12,000 units at 50¢ per unit,	costing 24¢ per unit
20,000 units at 40¢ per unit,	costing 22¢ per unit
40,000 units at 30¢ per unit,	costing 21¢ per unit
50,000 units at 28¢ per unit,	costing 20¢ per unit
56,000 units at 26¢ per unit,	costing 19¢ per unit
60,000 units at 24¢ per unit,	costing 18¢ per unit
70,000 units at 22¢ per unit,	costing 17¢ per unit

- a. Determine the price the monopolist would set under these conditions of the market.
- b. Upon the assumption that the demand and supply remain unchanged, determine the monopoly price if a tax of \$500 is levied upon the industry as a whole.
- c. Upon the assumption that the demand and supply remain unchanged, determine the monopoly price if a tax of 1 per cent is levied on the net profits.

- d. Determine the monopoly price if a tax of 5 cents is levied on each unit sold.
- 2. A division of the Everlight Electrical Company produces one type of floor lamp under the following conditions of revenue and cost:

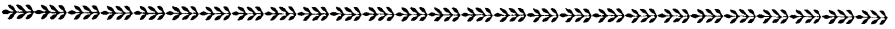
<i>Number of Lamps</i>	<i>Total Unit Costs of Production (daily)</i>	<i>Average Total Unit Costs of Production (daily)</i>	<i>Marginal Costs of Production (daily)</i>	<i>Total Revenue Expected from Sales (daily)</i>	<i>Average Revenue Expected from Sales (daily)</i>	<i>Marginal Revenue Expected from Sales (daily)</i>
1	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00
2	90.00	45.00	30.00	113.13	56.57	53.13
3	105.00	35.00	15.00	159.38	53.13	46.25
4	112.50	28.13	7.50	198.76	49.69	39.38
5	118.75	23.75	6.25	231.26	46.25	32.50
6	124.38	20.73	5.63	256.89	42.82	25.63
7	129.69	18.53	5.31	275.64	39.38	18.75
8	134.85	16.86	5.16	287.52	35.94	11.88
9	139.93	15.55	5.08	292.52	32.50	5.00
10	144.97	14.50	5.04	290.64	29.06	- 1.88
11	149.99	13.64	5.00	281.89	25.63	- 8.75
12	155.00	12.92	5.02	266.26	22.19	-15.63
13	160.00	12.31	5.01	243.76	18.75	-22.50
14	165.00	11.79	5.00	214.38	15.31	-29.38
15	170.00	11.33	5.00	178.13	11.88	-36.25

- a. Graph the average total unit cost, marginal cost, average revenue, and marginal revenue schedules.
- b. Determine the selling price per lamp, the output, and the average profit under conditions of monopoly.
- c. Compare the demand curve facing the individual firm under conditions of competition with that under monopoly. How does the shape of the demand curve influence the degree of monopoly control over price and output?

(For Suggestions for Further Reading see close of Chapter XX.)

CHAPTER XX

Price Under Monopolistic Competition



· MONOPOLY, DUOPOLY, AND OLIGOPOLY CONTRASTED

PURE MONOPOLY¹ is rare. With the exception of the regulated public utilities and the socially created monopolies, most monopolies are partial rather than complete. Instead of a production and price situation dominated by a single seller, we more commonly have a market situation in which several sellers, while not getting maximum monopoly profits as just described, nevertheless frequently seem able to sell at prices higher than those that would be sanctioned by competition. There are few material products and services supplied by any firm for which close substitutes cannot be supplied by some other firm. In those relatively scarce instances in which pure or true monopoly does exist, the firm and the industry are identical since the monopolistic firm is the sole seller of the product.

Duopoly, literally, is a market situation in which there are only two firms comprising the entire industry. They may be producing and selling a standardized product, or products only slightly differentiated from each other. Oligopoly describes a market situation in which there are only a few sellers of comparable standing. They may deal in a standardized product or in products differentiated from each other. Each of the leading firms under oligopoly produces a significant part of the total supply. There may be many more smaller firms under oligopoly but they operate as "hangers-on" to the leaders. The few leaders of comparable standing produce much the greatest part of the output—such as 90 per cent of the total. In an industry such as steel manufacturing in the United States there may be over one hundred firms, but hardly more than half a dozen leaders. Because under oligopoly each of the leading firms produces a significant part of the total output, each of the key firms can directly influence price by altering the amount of the goods that it offers for sale.

Some important consequences follow from the fact that under both duopoly and oligopoly firms can influence the price of a standardized good by their decisions to expand or contract output and sales. Let us

¹ Monopoly is derived from two Greek words, *monos* (alone or single), and *polein* (sell). The verb form also appears in duopoly and oligopoly, the prefixes meaning two and a few, respectively.

assume that under duopoly a certain industry is restricted to firms A and B. If A were the only firm in the industry, it would be a monopoly and its price policy would be guided by the principle of monopoly price. Because B has entered the industry, however, and can furnish a sizeable part of the supply, the price situation is unstable or indeterminate. If B should decide to sell all or part of his output at a price lower than that quoted by A, the latter might lose a good part, if not all, of his business to B. But it is unrealistic to expect that A will permit his business to slip away to B without a struggle to retain it. In retaliation A may match B's lower price or may offer his goods at a still lower price. This may prove the beginning of a "price war," the nub of which is a somewhat sustained undercutting of each other's prices. Unless such a "price war" does develop, however, in which sometimes even costs are without influence on price, the lower limit to the selling price is set by cost of production and the upper limit by the law of monopoly price. Within this range, price is uncertain or indeterminate. It depends upon the policies and acts of the firms that comprise the duopoly.

Under oligopoly similar consequences follow. Two major factors influence each producer's decisions. First, he must try to anticipate the output and pricing plans of his competitors. Secondly, he must try to estimate what effects his own production and pricing decisions will have on his competitors. Again price will be indeterminate within the described limits of cost of production and monopoly price, but probably under oligopoly will more nearly approximate cost of production. Historic experience, however, seems to show that agreements, both informal and explicit, arise among the producers, on the basis of which production is restricted and profitable prices are set.

MONOPOLISTIC COMPETITION BASED ON OLIGOPOLY AND PRODUCT DIFFERENTIATION

Oligopoly with product differentiation is one form of what Edward Chamberlin has called "monopolistic competition."² The term "monopolistic competition" seems self-contradictory, since pure competition and monopoly have been described as opposites. What the term means to suggest is that the price situation which it describes contains both competitive and monopolistic elements. The market situation which best typifies monopolistic competition is characterized by the presence of a few sellers of fairly

² The term "monopolistic competition" is credited to Edward H. Chamberlin in his *The Theory of Monopolistic Competition* (Cambridge, Harvard University Press, 1933). His are also the terms "pure competition" and "product differentiation," used elsewhere in this chapter. For the pioneering treatment of this whole subject, the reader is referred both to Chamberlin's work and to Joan Robinson, *The Economics of Imperfect Competition* (New York, The Macmillan Company, 1933).

comparable standing (a situation called oligopoly) and the differentiation of their products. Under pure monopoly, in contrast, there is a single seller, and under pure competition there are many sellers, with standardization of product in both cases. If there is differentiation of product, each seller has a monopoly of his own product, but must face the competition of others who offer what he regards as a more or less imperfect substitute. Speaking of product differentiation, Chamberlin says:

Differentiation may be based upon certain characteristics of the product itself, such as exclusive patented features; trade-marks; trade-names; peculiarities of the package or container, if any; or singularity in quality, design, color or style. It may also exist with respect to conditions surrounding its sale. In retail trade, to take only one instance, these conditions include such factors as the convenience of the seller's location, the general tone or character of his establishment, his way of doing business, his reputation for fair dealing, courtesy, efficiency, and all the personal links which attach his customers either to himself or to those employed by him.³

To the extent that sellers can create the impression, which they hope will ripen into widespread conviction among prospective buyers, that their products are "something different" and that for these there are no adequate substitutes, they have succeeded in establishing a quasi-monopolistic position for themselves. "Accept no substitutes"—for there are no real substitutes—is the constant admonition of their advertising departments or agencies. Such product differentiation is widespread and well known. In the low-priced automobile field, the Ford Motor Company, the General Motors Corporation, and the Chrysler Corporation dominate the business with their Ford, Chevrolet, and Plymouth cars. Each claims to have a product that is different, even though all three are in the same price class, and hopes thereby to obtain and retain a clientele of satisfied customers. The same is true of the producers of the leading brands of cigarettes,—Camels, Chesterfields, Lucky Strikes, and Old Golds. In the manufacture and marketing of radios and refrigerators, of brands of gasoline and tires, the producers are endeavoring to sell on a quality and service basis, and thus to differentiate their products in the minds of buyers. Whether this product differentiation is more monopolistic or competitive, depends upon its effect on price. Product differentiation is described as monopolistic competition if the product of any seller, for any reason real or imaginary, is preferred over other varieties of the same general product offered by other sellers, whether offered at the same or at a somewhat lower price. Under monopolistic competition of this sort, competition is not exclusively on a price basis, as it is under pure competition. The

³ Edward H. Chamberlin, *The Theory of Monopolistic Competition*, 3d ed. (Cambridge, Harvard University Press, 1938), p. 56.

prospective purchasers of a differentiated product buy not only the product itself, but also certain "services" of the producer in marketing it. Perhaps the most important factor in helping to differentiate products in the public mind and in building up a distinctive demand for them is persistent advertising. Advertising accentuates, if it does not create, product differentiation.

MONOPOLISTIC COMPETITION BASED ON PRICE LEADERSHIP

While product differentiation is the best known form of monopolistic competition, there are other practices to which the term is applied. One of these is "follow the leader," or "price leadership." Price leadership, assumed by the dominant producer in a given industry, becomes effective when the rest of the producers (or most of them) accept as their own the prices announced by the leader. They usually know that they cannot long undersell the leader, and fear the consequences to themselves of a protracted price-war. In the steel industry, the United States Steel Corporation has long been the dominant leader. Its price leadership, however, has not been asserted with reference to all steel products. There have been different leaders for different products. The cement, paper, and farm machinery industries in the United States are other fields in which monopolistic competition through price leadership has prevailed. There is reason to believe that in these, as well as in other fields, prices have been not only fairly uniform but also monopolistic. Prices, however, may be set at figures that are lower than those that will yield the largest profits if some other purpose is to be served thereby. This purpose may be to "kill off" undesirable rivals, to prevent the entry of new competitors, to forestall governmental prosecution, or to gain the good will of the public.

Monopolistic competition is neither predominantly competition nor largely monopoly. It is something of both, a hybrid both in theory and in practice. It occupies the territory between pure competition on the one side and pure monopoly on the other. If the number of firms in an industry is small, or market leadership of one is preëminent, output and prices are apt to suggest monopoly more than competition. On the other hand, the more numerous the firms in a given industry producing differentiated products, the less effective will be the differentiated product in furnishing some measure of monopoly power.

MONOPOLISTIC COMPETITION AND PRICE POLICY

The significant fact about monopolistic competition, however, is neither the variety of its forms nor the extent of its existence, but rather its possible effect upon price. Since the purpose under both monopoly

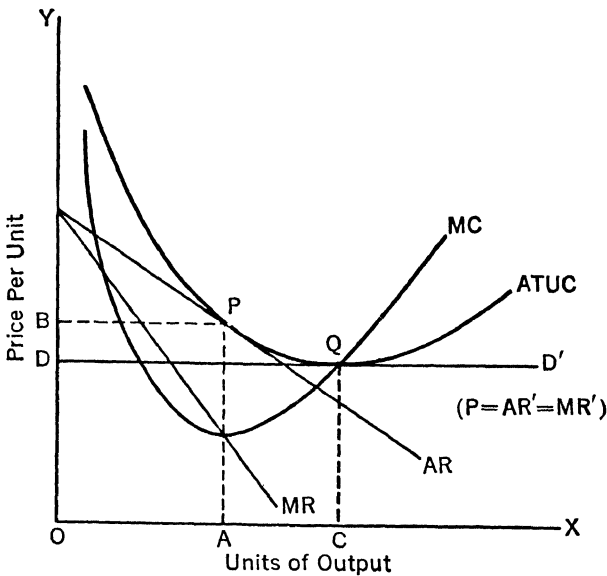
and monopolistic competition is to obtain maximum profits for the business firms enjoying the monopoly position, the price problem is comparable in the two situations. In both cases it is a matter of estimating the point at which anticipated marginal revenue will equal marginal cost. There is this characteristic difference, however: the pure monopolist has no other active producer to worry about, while the monopolistic competitor must keep a "weather eye open" to observe and deduce the probable price policies of his rivals who are producing substitutes for his product. The presence of rivals, each of whom is producing a differentiated product of his own but which may be offered as a close substitute for the others, has a restraining influence upon the price policies of the monopolistic competitors. It makes the demand for the differentiated product of any one business enterprise more elastic than it would otherwise be.

It is the shape and slope of the demand curve facing the individual seller under monopolistic competition which most characteristically distinguishes it from pure competition. Under pure competition it is assumed that the demand curve for the product of any individual seller is perfectly elastic, since no single seller is assumed to control so large a part of the supply as to have any appreciable effect on the market price. Consequently, there is no motivation to reduce output in order to advance prices. But under monopolistic competition, and of course under monopoly, too, the demand for the product of any single seller is less than perfectly elastic.⁴ The result is that by varying his output he can alter the price. More can be sold, by an individual seller under monopolistic competition, at a lower price, and less at a higher price. His problem is to decide upon that output and price which will bring him the highest possible net returns. His monopoly power is greatest when there are few and inadequate substitutes. Under such conditions, if he sets a high price upon his product, he may drive some customers away, provided they cannot pay the price and can dispense with his product, but he will still be able to sell his goods to others, though his turnover will be slower. But if he sets a high price upon his differentiated product, for which there are fairly close substitutes, he will probably lose more of his customers altogether.

The accompanying diagram labeled "Determination of Price Under Monopolistic Competition" shows that there is a tendency for the struggle among the monopolistic competitors to force the price down to a figure

⁴ The demand curve facing an individual seller under pure competition is a horizontal straight line, indicating perfect elasticity. On the other hand, the demand curve facing the individual seller under monopolistic competition slopes down and to the right. It is described as a negatively sloping demand curve, because it is less than perfectly elastic.

at which it just covers fixed and variable costs. This is shown by point P in the diagram, the point at which the average revenue (AR) and average total unit cost (ATUC) curves touch, and the former just covers the latter. If the average revenue were higher than the average total unit cost, it would indicate monopoly profits. Such monopoly profits would furnish an incentive for firms which can sell a similar, even if differentiated, product to enter the industry and thereby to increase the supply. For example, although a ball-point pen made by firm B is not identical to one made by firm A, it may be a close enough substitute to be generally ac-



DETERMINATION OF PRICE UNDER MONOPOLISTIC COMPETITION

ceptable. As the number of firms with differentiated though substitutable products grows there is a stronger tendency to force prices down. The early ball-point pens were sold for \$12.50 and more. Similar pens can now be bought for less than one dollar. While production and selling costs may differ from firm to firm, each firm will tend to sell at a price that at least covers the costs of producing and selling the item—and as much more as circumstances and its monopolistic competitors permit it to charge.

Although price or average revenue (AR) tends to equal average total unit cost (ATUC) it should be pointed out that monopolistic competition may not be as advantageous in this respect to the consumer as pure competition. The demand curve under monopolistic competition is the down-

ward-sloping line labeled AR, while under pure competition it is the horizontal line, marked DD', which runs parallel to the OX axis. If we keep the general rule in mind that firms maximize profits when they adjust their output so that marginal revenue (MR) and marginal cost (MC) are equal, and if we further assume that the average costs (ATUC) are similar, certain contrasts between monopolistic competition and pure competition become evident.

First, the output under monopolistic competition will be lower than under pure competition. It will be OA rather than OC. With the sloping demand curve (AR) under monopolistic competition, a firm earns its greatest profits when it produces OA units of output. Under pure competition with the demand curve represented by the perfectly elastic DD' curve, MR' (which is the marginal revenue, average revenue, and demand curves of pure competition) would touch the marginal cost (MC) curve at point Q, and the output under competition would be OC.

Secondly, price under monopolistic competition would be OB (which equals AP), compared with the purely competitive price OD (which equals CQ). This is true because under monopolistic competition output is halted at OA units, where the average revenue just covers the average total unit cost. If the firm had continued to produce, the average total unit cost would have declined to its lowest possible point Q. Here under pure competition OC units would be produced at a price of OD; at this point the average revenue (AR'), marginal revenue (MR'), marginal cost (MC), and average total unit cost (ATUC) curves all intersect.

SELLING COSTS IN MONOPOLISTIC COMPETITION

In earlier chapters of this book costs, fixed, variable, and marginal, have been described as playing an important rôle in the determination of price under competition. They were the costs incurred in supplying the good for the market—in growing or raising it, in making it, or in otherwise producing it. They are sometimes thought of as *production* costs in contrast to *selling* costs, which are incurred in getting the good into the hands of the person who wants it. While selling costs are also production costs, since a good is not fully produced until it has reached the final consumer, there are certain selling costs which are of unique importance in markets dominated by monopoly or oligopoly, and of negligible importance under competition. They are such selling costs as are particularly directed toward increasing the demand for a firm's products.

Under pure competition with its perfect elasticity in the demand for the product of a single firm, there need be no selling costs to persuade prospective customers to buy the product of a given firm rather than of

some other firm. The market will readily absorb the given firm's product. All it need do is to stand by and "take orders." Price is all that matters. Customers are drawn by lowering prices. But the situation is different under monopolistic competition. Here the product itself is differentiated in the expectation that a clientele of loyal, even partisan, customers can be built up who will regularly buy the product even though close substitutes are available at the same or even at a lower price. To achieve this coveted relationship between seller and customers, large and long-continued selling costs may be necessary. Persistent advertising, special marketing campaigns, persuasive and sometimes "high pressure" salesmanship are the usual means resorted to in building up product differentiation in the minds of the buying public. The advertising pages of any magazine with nation-wide circulation are striking exhibits of how it is done. Advertising in particular, "selling costs" in general, may lead to product differentiation in the public mind. On the other hand, some gadget or other product that is "really different" and technologically superior in its kind to anything the public has had may require selling costs to acquaint the buying public with its merits. In either event, the purpose in making all such selling expenditures is to influence the demand for the product of a given firm and to retain this newly-won patronage. Graphically, an increased demand means that the position of the demand curve is moved upward and to the right. Loyalty to a firm's differentiated product would be indicated by a more inelastic (less horizontal) demand curve. The selling costs must justify themselves. The test is, do they bring a larger and more profitable volume of business? Optimum expenditures for such purposes are the amounts which bring the monopolistic competitors the highest possible net returns.

CHECKS ON MONOPOLY AND MONOPOLISTIC COMPETITION

While it is commonly supposed that a monopolist can set his price at his own pleasure and maximize his profits at will, the preceding discussion of monopoly-price determination does not support this belief. The monopolist does not control the demand, and consequently seeks to adjust supply to his estimate of anticipated sales at various prices so as to obtain the highest possible returns. It is also commonly supposed that monopoly price is high price, and price under monopolistic competition only more moderately so. This is doubtless more often true than false. There is no reason for concluding that monopolistic enterprise can produce more cheaply than competitive enterprise in the same field, if both types of enterprise make full use of all the advantages of large-scale production, and that even if it could, these economies would necessarily be reflected in lower prices.

Perhaps the principal restraining influence felt by sellers operating under conditions of monopoly or monopolistic competition is the elasticity in the demand for their products. After all, total gains under such conditions depend not only upon the price obtained per unit of product sold, but also upon the number of units sold. The slope of the demand curves under both monopoly and monopolistic competition reveals declining estimated sales with advancing prices. The consumer himself supplies one check upon the price policy of the monopolist. A second is furnished by the threatened appearance of new producers, if monopoly profits are attractive and entrance into the productive field is possible. And finally, the check of governmental intervention, regulation, or possible prosecution under anti-monopoly laws has a moderating influence upon monopolists in the shaping of their price policies.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. A principal distinction between monopoly and monopolistic competition is the relative substitutability of the product of one producer for those of other producers.
2. Pure competition is "price competition," whereas monopolistic competition is "product competition."
3. Product differentiation may be on the basis of a real difference in the products of certain producers, or may be on the basis of an imaginary difference created by vigorous advertising.
4. Price under conditions of monopolistic competition is always higher than under pure competition, but lower than under pure monopoly.
5. Production costs under monopolistic competition are always lower than under pure competition, but higher than under pure monopoly.
6. Pure monopoly may be distinguished from monopolistic competition on the basis of the elasticity or inelasticity of the demand for the product.
7. Pure monopoly may be distinguished from monopolistic competition on the basis of the number of firms in an industry.
8. Product differentiation as practiced under monopolistic competition is primarily for the purpose of increasing net sales rather than improving the quality of the product.
9. Both price leadership and product differentiation as monopolistic competition devices decrease in effectiveness as the number of firms concerned increases.
10. Under conditions of monopolistic competition the demand for the product of the individual firm is less elastic than under conditions of pure competition.

B

1. A division of the Sturdiemoost Furniture Company produces one type of office chair under the following conditions of cost and revenue:

Number of Chairs	Total Unit Costs of Production (daily)	Average Total Unit Costs of Production (daily)	Marginal Costs of Production (daily)	Total Revenue Expected from Sales (daily)	Average Revenue Expected from Sales (daily)	Marginal Revenue Expected from Sales (daily)
1	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00
2	100.00	50.00	40.00	115.00	57.50	55.00
3	130.00	43.33	30.00	165.00	55.00	50.00
4	155.00	38.75	25.00	210.00	52.50	45.00
5	177.50	35.50	22.50	250.00	50.00	40.00
6	202.50	33.75	25.00	285.00	47.50	35.00
7	232.50	33.21	30.00	315.00	45.00	30.00
8	272.50	34.06	40.00	340.00	42.50	25.00
9	332.50	36.94	60.00	360.00	40.00	20.00
10	432.50	43.25	100.00	375.00	37.50	15.00
11	612.50	55.68	180.00	385.00	35.00	10.00
12	952.50	79.38	340.00	390.00	32.50	5.00

- Graph the average total unit cost, marginal cost, average revenue, and marginal revenue schedules.
- Determine the selling price per chair, the output, and the average profit under conditions of monopolistic competition.
- Compare the demand curve facing the individual firm under conditions of monopoly with that under monopolistic competition.

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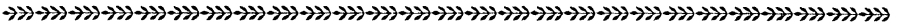
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CHAPTER XXI

Price Under Regulation by Public Authority



GOVERNMENT is playing a rôle of increasing importance in the determination of prices. The intervention of government as a price fixer, however, is nothing new in the economic history of mankind. In the Middle Ages, for example, both the canonical writers and the political law makers wrestled with the problem of what constitutes a "just or fair" price. Their usual conclusion was that it was a price set by customary costs of production, chief among which were labor costs, and to such price the government often sought, directly or indirectly, to give legal sanction. The growth and rapid spread of the capitalist methods of production focussed attention upon other elements of cost and price than labor costs. Rapidly changing economic conditions rendered prices fixed by custom or established by government obsolete. In spite of frequent changes in the legal prices, the government could not effectively control the prices of the market-place. Prices that had long been under the domain of custom and the law fell under the sway of competition. Gradually both the power and inclination of government to fix prices declined. But while governmental price fixing languished during most of the period of *laissez faire* (the nineteenth century was the most important part of this period), it never died. With the drift toward totalitarianism in some parts of the world, the power of government over prices was revised. War-time conditions also accentuated and extended the regulation or fixing of prices by government. But even under peace-time conditions, particularly in the period since the First World War, there was a marked tendency for the government not only to control certain kinds of prices but to try to affect the course of prices as a whole. It seems apparent that the world is heading for a new era of government domination of economic life in which some control of production and prices is bound to be of major importance.

PRICE-CONTROL OVER THE PUBLIC UTILITIES

In the United States the most extensive and persistent form of price-control is furnished by the governmental regulation of the rates of the

public utilities. While most forms of business enterprise escaped governmental regulation of the prices which they charged the public, this has not been true of the public utilities for many years. Businesses furnishing us with such goods as railway transportation, street car and bus transportation, water, gas, electric light and power, the telegraph and the telephone are peculiarly "affected with a public interest," and consequently their prices are subject to government regulation or control. The compelling reason for such regulation lies in the fact that these businesses are inherently monopolies. While they are engaged in productive enterprises which are more or less essential to the public, their most distinctive economic characteristic is that they operate most successfully under conditions of monopoly or in fields in which competition has proved ineffective as a regulator of prices. Where competition is either non-existent or non-effective in the determination of price, there, sooner or later, government regulation appears.

Two major problems have confronted public authority in the task of regulating the charges of public utilities: what specific rates to permit on various kinds and classes of public utility service, and what general level of rates to authorize.¹ As far as specific rates on various types of public utility service are concerned, many interesting price questions arise both for the operating companies and for the regulating government. What rate differentials, if any, shall be recognized in the transportation charges for such goods as silk and sand, or coal and cattle, even though the weight and distance hauled are the same? Shall any differences be made and allowed between rates charged for the day-time and night-time use of the telegraph and the long-distance telephone? Is it discriminatory or reasonable to set one price on the use of electricity for lighting and another for heating and power, even though the current is generated and delivered by the same plant? Two theories of rate-making underlie the answer to such questions: the one emphasizes the value of the service to the consumer, and the other stresses the cost of the service to the producer. Neither theory can be applied exclusively. The value of the service to the user constitutes the maximum, and the additional direct cost to the producer constitutes the minimum rate that can be charged. Between these upper and lower limits the operating company and the public authority must set the actual price at which the service will be offered to the public.

In fixing the aggregate of specific rates, due consideration must also be given to the general level of rates which is established and allowed.

¹ Cf. discussion of specific rates based either on the principle of charging what the traffic will bear or on the cost of the service, and of the general level of rates, in Chap. XIII, "Transportation," pp. 365-370. Cf. also Chap. XXXIX, "Government Regulation or Ownership of the Public Utilities Within the Capitalistic System," pp. 868-873.

Unless the general level of rates, and the volume of business done under it, yield revenues that will cover both operating and fixed expenses, financial troubles lie ahead. In passing upon the reasonableness of the general level of rates of a public service corporation, public authority must give due consideration to the company's need of revenue in order to provide uninterrupted service, and to provide a reasonable return on the fair value of the property devoted to such service.

What constitutes a reasonable rate of return, and how to ascertain the fair value of the invested capital to which this reasonable rate of return is to be applied, have been highly controversial issues in the government's attempt to regulate the prices charged by public utility companies. Rates of return on capital invested in public utilities have, in general, been regarded as reasonable if they approximate the rates of return on capital invested in competitive enterprises of comparable risks. Of course the acceptance of such a standard of comparison implies belief in the reasonableness of competitive rates.

A reasonable rate of return, however, must be applied to some valuation as a base in order to ascertain what volume of earnings may be regarded as a fair return on the invested capital. In the protracted discussion as to what constitutes the best standard for determining the fair value for rate-making purposes of the property of a public utility, a spirited controversy has been waged over the relative merits of some form of cost of reproduction or of historical cost.²

Public utility rates have come under the regulation of government because of the widespread fear that, in the absence of regulation, they would obey the law of monopoly price. The uncontrolled private monopolist would set the charges for public utility service at the price that would bring him the highest net returns. How effective governmental price fixing in the public utility field has been cannot be stated with anything approaching exactness. There can be no doubt, however, that the exercise of public authority over prices has had a moderating influence upon public utility rates. If public utility commissions have been slow to reduce rates during periods of falling prices, they have also been reluctant to advance them in periods of rising prices. It is probably true that over a period of years consumers have enjoyed lower public utility rates, as a result of public price fixing, than would otherwise have been the case. At the same time the government has had some instructive experience as to how complicated and expensive is the administrative task of effectively controlling prices in the public utility field.

² For meaning of these terms as standards for measuring fair capital value, cf. Chap. V, "The Business Organization of Production," pp. 98-101. On the controversy as to their use in determining the fair value for rate-making purposes of the invested capital of a public utility, cf. Chap. XXXIX, "Government Regulation or Ownership of the Public Utilities Within the Capitalistic System," pp. 868-873.

PRICE FIXING IN AGRICULTURE

In striking contrast to price fixing in the field of the public utilities stands price fixing in the field of agriculture. The intervention of public authority was inevitable in the former because of the monopolistic nature of the public utilities, and because unregulated private monopoly might become a serious menace to democratic government. But in American agriculture, individualism and competition were more dominant than in any other segment of our economic life. Here the intervention of public authority to control production and prices was not to protect the consumer but to increase the share of the farmer in the national income.

The policy of price fixing in American agriculture was the aftermath of the First World War. That conflict had made extraordinary demands upon American agriculture. Millions of acres of land were brought under cultivation that had received less intensive utilization before. New techniques of production were used which increased the yield of the land. Land values in some sections of the country rose to fantastic levels. But when the war was over and the competition of foreign lands was restored, it was soon discovered that, as far as the capacity of the markets to absorb was concerned, there now was an overdevelopment of productive capacity in agriculture. To remedy it quickly, drastic readjustments should have been made in the supplies of agricultural products, including the less intensive utilization of some of the lands and the abandonment of the poorest land. But this was a hard way for farmers who had invested heavily in land and in the necessary capital equipment to operate it. Moreover, during the war the government had encouraged them to expand their farming operations, the government had "pegged" the price of wheat, and now they looked to the government for aid. Important agricultural groups insisted that the government had long protected industry through the erection of tariff barriers, and that it was now time "to do something for agriculture." What they wanted was a better balance of prices: higher prices for farm products in relation to the expenditures of farmers for other goods, the net effect of which would be to increase the farmer's real income. The movement was too strong to withstand, and in consequence the government embarked upon a series of measures ultimately designed to control agricultural production and prices.

Federal Farm Board of 1929. The first important step was taken in 1929 with the passage of the Agricultural Marketing Act and the creation of the Federal Farm Board supplied by the federal government with working capital of \$500,000,000 and directed to engage in stabilization operations. The prices of agricultural products are subject to greater fluctuations than are the prices of the products of industry. Because of the

vagaries of the weather, man cannot control agricultural production as readily as he can control production in manufacturing, for example. What production control there had been until the government entered the field was highly individualistic; decisions as to what and how much to grow were left to millions of scattered producers. Moreover, shifts in the productive agents were less easily accomplished in agriculture than in most other forms of productive enterprise. It was not surprising that severe fluctuations characterized agricultural prices. The underlying theory of the legislation creating the Federal Farm Board was to minimize these price fluctuations by providing for the more orderly marketing of basic farm products. It was held that if the government, through agencies created for the purpose, would buy the surplus of cotton and wheat that could not advantageously be marketed either at home or abroad, market prices for the rest of the supply could be raised. But higher prices stimulated further production since there was no control over farm production. It was thought (or hoped) that ultimately in some way the government agencies would be able to dispose of their accumulated supplies without "breaking" or even unduly depressing the market price. The disturbing events of the greatest depression in our history, which began in 1929, caused these hopes to crumble. Nothing could stop cotton and wheat prices from falling to lower levels than they had reached in 1929, and the Federal Farm Board had ultimately to accept a loss of about 345 million dollars on its 500 million dollar revolving fund.³

The AAA of 1933. The Federal Farm Board (a product of the Hoover Administration) was succeeded in 1933 as a production and price-control agency by the Agricultural Adjustment Administration (the well-known AAA of the Roosevelt Administration). The basic theory of the Agricultural Adjustment Act of 1933 was control of production for the purpose of controlling prices. The immediate objective was to raise the prices of farm products and to bring them into alignment with the prices of the goods the farmer had to buy. The prices of basic farm products were to be raised enough until they again had the purchasing power over other goods which they commanded in the selected pre-war period, August, 1909, to July, 1914. This goal came to be known as the "parity of farm prices." Each basic farm commodity at any given time had its "parity price"—the price which gave it the same command over other goods that it had in 1909 to 1914. But the calculation of these parity prices was an intricate affair. Each month thousands of farmers, and merchants supplying farmers all over rural America, filled out questionnaires for the United

³ A special Senate Agricultural subcommittee (appointed to inquire into the Federal Farm Board activities and headed by Senator Charles McNary), reported that "the actual and prospective losses to the revolving fund of \$500,000,000, which Congress created in 1929, amounted to \$344,900,000 at the end of the fiscal year, June 30, 1935."

States Department of Agriculture. These brought out the prices received by the farmer for his main products, and also the prices paid by the farmer for "commodities used in living" and "commodities used in production." From them the Department constructed national averages of "prices received" and "prices paid" by farmers. The Department kept on file the average price received for each farm crop in the base period, 1909-1914, and also the average price paid in the same base period for the commodities the farmer had to buy. To determine what any current parity price should be it was necessary first of all to compare the current prices paid by the farmer with those he paid in the base period. If, for example, the prices paid by the farmer currently were 50 per cent higher than they had been in 1909-1914, then parity required that the current prices received should also be 50 per cent higher than they had been in the base period. If cotton sold for 12 cents per pound in the base period, its parity price would be 18 cents per pound at a time when the farmer was paying 50 per cent more for what he bought. The formula applied may be expressed in the proportion, Prices to be Received in a Given Year: Prices Received in the Base Period :: Prices Paid in a Given Year: Prices Paid in the Base Period. Each month the Department of Agriculture announced a new parity price for each basic farm commodity covered by the act. If the announced parity price for cotton was 18 cents per pound and the actual market price was only 14 cents per pound, the argument was laid for a subsidy payment to cover the difference between parity price and actual price—if the funds of the Treasury allotted for the purpose had permitted.

The attempt to attain the goal of parity prices was based on the co-operation of farmers in reducing output. Farmers who coöperated in reducing the acreage planted to such basic crops as wheat, corn, cotton, and tobacco were offered contracts by the Secretary of Agriculture calling for payments by the government to compensate them for such reduced plantings. The payment took the form of rent paid for land withdrawn from cultivation, or bonuses paid for reduced planting on lands kept under cultivation.

These benefit payments, all designed to increase the farmer's income, were financed by so-called "processing taxes." Upon the first conversion or processing of the commodity into some other good (wheat into flour, cotton into cloth) a tax was imposed, which, through power conferred upon the Secretary of Agriculture, could be high enough to make up the difference between the parity price and current average market price of the commodity concerned.

The Agricultural Adjustment Act of 1933 became effective with the President's signature on May 12, 1933. The processing tax feature, however, which supplied the funds to operate the entire AAA program, was declared unconstitutional by the Supreme Court of the United States on

January 6, 1936, on the familiar ground that such regulation of agricultural production was an invasion of states' rights.⁴ The tax, the Court held, was an indirect way of doing what the Congress had no right to do directly, namely to regulate intra-state production and commerce.

Soil Conservation Act of 1936 and the AAA of 1938. Congress and the Administration were not dissuaded from their production and price-control activities as a result of this adverse decision of the Supreme Court. Not all of the powers of the Agricultural Adjustment Administration were even invalidated by the Court. In order to continue to regulate agricultural production, Congress turned to new devices. It found them in combating soil erosion and in providing for soil conservation, necessary and laudable projects in themselves, but also projects which lent themselves admirably to regulating production. Under the Soil Conservation Act of 1936 (which amended and enlarged a previous statute on the subject) the government proceeded to reward farmers who practised soil conservation—and incidentally restricted the crops which they ordinarily converted into cash. To help avoid another possible verdict of unconstitutionality, the Act provided that beginning in 1938 federal payments on account of soil conservation practices were to be made only to those who operated under plans authorized by the states and approved by the Secretary of Agriculture. But as a result of the renewed business recession which began in 1937, and the sharp drop in the prices of farm products, the whole soil conservation program was incorporated into another Agricultural Adjustment Act—the act of 1938. In spite of differences in detail it had the same objectives as the act of 1933, set up much the same sort of administration, and conferred similar powers upon it. Instead of relying upon processing taxes for the financing of the program, Congress had to make annual appropriations from funds in the Treasury, if agriculture was to be aided.

Among the more important provisions of this Act, which is still on the statute books even though in abeyance on account of the unrestricted production of the war years, are those pertaining to crop control through soil conservation, parity payments, commodity loans, and marketing quotas. Crop control is practised through payments to farmers who do not exceed their allotted acreage for the soil-depleting crops (principally cotton, corn, wheat, tobacco, and rice), and who practise soil conservation by planting soil-building crops, such as certain grasses and legumes. Parity payments may be made to the producers of the five principal crops just mentioned in accordance with the plan previously described and upon the assumption that Congress has made the necessary appropriations. But appropriations have never sufficed to make full parity payments. Benefit payments on the parity principle, however, are now described as a means

⁴ *United States v. William M. Butler et al*, *Receivers of Hoosac Mills Corporation*, 297 U.S. 1 (1936).

to a larger end: the attainment of a net income for the farmer that will bear the same ratio to current non-farm income that the farmer's income bore to non-farm income in the base period, 1909-1914. Commodity loans, since they are "loans without recourse," are in effect a device to guarantee minimum prices for the crops on which the loans may be made. If the government estimates show that the current crop of wheat or corn or cotton exceeds the domestic consumption and foreign exports of a normal year, the government may make loans to farmers against crops stored either on the farms or in approved warehouses. Withdrawing supplies when crops are abundant, and releasing them when crops are more scarce are supposed to provide us with an "ever-normal granary." In practice, such loans to farmers "without recourse" of the government against them, amount to guaranteed minimum prices. The borrowing farmer forfeits the crop that he puts up as security if the price falls below the price given him by the government in a commodity loan, and he claims the crop, and pays off the government, if the price rises above the commodity loan price. Marketing quotas, like commodity loans, may be established in the event that the Secretary of Agriculture finds that current supplies of the five basic commodities exceed a stated percentage of what is needed for domestic consumption and export. The proposed quota is subject to a referendum of those producing the commodity, and is non-effective if opposed by one third or more of those participating in the referendum. Once the quota system has been declared effective, any farmer marketing in excess of his prescribed amount is subject to a fine for each excess pound or bushel marketed. By these various methods the government seeks to control production in agriculture, to influence prices, and to affect the income of the farmer.

That the production-control policies of the government were an important factor in the determination of farm prices during the past decade must be conceded. How effective they were it is impossible to say, because one cannot usually study the effect of one factor in isolation from the rest. It is altogether probable, for instance, that the great drought of 1934 in the United States had more to do with the immediately subsequent advance of the prices of farm commodities than did the crop-restriction policies of the AAA. On the whole, the intervention of public authority in this price field resulted in an advance of prices, but without any very startling effects. There was nothing in the farm program of the nineteen-thirties to bring about any very fundamental readjustment of the supplies of agricultural products to the changed demand under existing world conditions. The program of the Federal Farm Board of 1929 to 1933 was predominantly a price stabilization program through some control over the marketing of agricultural products. While the policies of the Agricultural Adjustment Administration beginning in 1933 were directed toward control over

production in order to advance the prices of farm products and to increase the real income of the farmer, benefits were paid to all producers alike who complied with the program. There was no special inducement or other reason for the retirement of either poor land or poor farmers, of either marginal land or marginal producers. What was needed under the changed conditions affecting the demand for American agricultural products, was a re-allocation of agricultural resources and the shifting of some agricultural workers into other pursuits. The farm-program of the thirties, with its emphasis upon production controls and price controls, was a temporary device rather than a long-term solution of an acute economic problem. The coming of the Second World War, however, temporarily reduced the need for any drastic readjustment of American agricultural resources.

So extraordinary was the demand for whatever American farms could produce that it was possible to remove practically all restrictions on production. And by October, 1942, price ceilings were placed on farm products in order to hold down the cost of living! Farm prices and farm income had undergone a great transformation from one World War to the next.

The price-support program has been continued through the post-war years. While the war was still on, American farmers were promised a production- and price-control program which would guarantee them prices that were 90 per cent of parity prices, and guarantee them for two years after the officially declared end of the war. Before this guaranty expired on December 31, 1948, Congress extended the system of agricultural price-supports in 1948 and then followed through with even more sweeping provisions in 1949. In this latest legislation the parity formula is even more favorable to farmers, and the wages which the farmer pays for hired labor are included in the formula along with other prices that he pays. The Secretary of Agriculture is authorized to set price-supports on basic commodities within a range of 80 to 90 per cent of parity prices (except for tobacco which must be supported at 90 per cent), and this authority runs for another five years.

Originally, in the depression years of the thirties this price-support program applied to only six "basic" crops—corn, cotton, peanuts, rice, tobacco, and wheat. Now there are considerably more than a score of commodities whose prices are thus supported. American agriculture has a "floor" under a considerable part of its product-prices, but consumers are without the protection of a "ceiling."

PRICE FIXING IN INDUSTRY

Indirect governmental price fixing. Except in war-time, more governmental price fixing has been indirect than direct. Laws establishing mini-

imum rates of pay and maximum hours of work, credit control to make it easier or harder to obtain credit, currency management in order to affect prices, laws that are enforced against combinations in restraint of trade, laws and institutional controls to preserve competition against the encroachments of monopoly, protective tariffs that provide sheltered markets for favored goods and producers—these are some notable ways in which government has indirectly affected production and prices. And then there are several impressive attempts which governments have made to affect prices by setting up production controls. Some of these controls, of course, have affected not only industry but also agriculture. The coffee valorization plan of Brazil, the so-called Chadbourne sugar plan participated in by various sugar-producing countries, the Japanese silk control, the restriction of rubber production in the East Indies under the Stevenson Act, and an attempt to prorate oil production under an interstate oil compact in the United States, are examples of production controls either attempted by government or blessed by government for the purpose of aiding troublesome price situations.

Direct governmental price fixing under NIRA. The direct intervention of public authority in American industry for the purpose of fixing prices has been rare and on the whole confined to emergency situations. An interesting experience of the sort, although it was incidental to the main purpose of the act, was furnished by the National Industrial Recovery Act, which became effective June 16, 1933, and was declared unconstitutional by the Supreme Court of the United States on May 28, 1935.⁵ While the primary purpose of the act was to promote industrial recovery by spreading and increasing both employment and purchasing power, it also came to be used as a price-fixing device.

The codes of fair competition, which industries were encouraged to draw up through their trade associations, contained provisions concerning such matters as maximum hours and minimum wages, but also in hundreds of cases provisions to control prices. When approved by the President these codes had the effect of laws for industry. Among the attempts to control prices, which were most frequently incorporated in the codes, were the fixing of minimum prices, the establishment of open-price agreements, and the prohibition of destructive price-cutting by selling under costs of production. Acceptance of the minimum price idea was the negation of competitively established prices (as discussed earlier in this book). Under the system of open-price plans the members of any industry operating under a code filed their prices and contemplated price changes with the code authority, which revealed them to all members of the association.

⁵ Cf. discussion of the act and decision of the court in Chap. VI, "Labor Organizations and Their Policies in Production," p. 139.

Designed to prevent destructive price-cutting, these open-price plans also worked to maintain prices by directing the opprobrium of the industry against members who showed signs of an inclination to lower prices. Some codes made it punishable for a member to sell below a specified minimum price, a price often camouflaged as "modal cost," "lowest reasonable cost," or "cost of the lowest cost representative firm." Merchants were similarly prohibited from trying to stimulate sales through the well-known practice of "loss leaders," that is, selling some goods that were well advertised at a loss in order to attract patronage for other goods.

There is little doubt that while they lasted, the effect of the codes was to permit output restriction and price fixing—all with the tacit approval of the government. It is fair to say, however, that the inclusion of production and price controls in the codes did not always lead to their use, or to their effective use when they were tried. But that the whole NIRA program operated to raise prices is generally admitted—and of course that was one of its purposes.

Direct governmental price fixing under the OPA. The most extensive program of price fixing in industry ever undertaken by the federal government began with the establishment of the Office of Price Administration in 1942. The legislative sanction for this governmental price-fixing came with the enactment of the Emergency Price Control Act of January, 1942. Its opening section reads as follows:

It is hereby declared to be in the interest of the national defense and security and necessary to the effective prosecution of the present war, and the purposes of this Act are, to stabilize prices and to prevent speculative, unwarranted, and abnormal increases in prices and rents; to eliminate and prevent profiteering, hoarding, manipulation, speculation, and other disruptive practices resulting from abnormal market conditions or scarcities caused by or contributing to the national emergency; to assure that defense appropriations are not dissipated by excessive prices; to protect persons with relatively fixed and limited incomes, consumers, wage earners, investors, and persons dependent on life insurance, annuities and pensions, from undue impairment of their standard of living; to prevent hardships to persons engaged in business, to schools, universities, and other institutions, and to the Federal, State, and local governments, which would result from abnormal increases in prices; to assist in securing adequate production of commodities and facilities; to prevent a post emergency collapse of values; to stabilize agricultural prices; and to permit voluntary cooperation between the Government and producers, processors, and others to accomplish the aforesaid purposes.

An Office of Price Administration was established and the Price Administrator was clothed with certain powers to bring about the enforcement of the provisions of the Act.

A few months later (April, 1942) the Office of Price Administration

issued its first comprehensive order on prices, the General Maximum Price Regulation (popularly referred to as "General Max"). This placed ceilings on most prices charged by retailers, wholesalers, manufacturers, and the producers of raw materials. There were important exceptions, including prices on many farm products, the fees of professional persons, the wages of labor, and the prices charged for food and drinks in hotels, restaurants, and cafés. Under the order no seller could legally charge more for a commodity or service than the highest price which he charged in March, 1942. Ceiling prices, consequently, were not uniform. They varied from store to store, but no more than they had varied in March, 1942. Stores that had been able to sell at lower prices than their competitors in the base month were allowed to continue to do so under the price ceiling system.

The exemptions that had been made, notably the prices of many farm products and the wages of labor, led to a spirited and somewhat heated controversy as to the possibility of success of the entire price control program. It was argued that unless farm commodity prices and the wages of labor were also reasonably stabilized the roof would be blown off the whole price structure. Congress finally agreed and on October 2, 1942, passed "An Act to Amend the Emergency Price Control Act of 1942, to Aid in Preventing Inflation and for Other Purposes." This Act sought to include farm product prices and wages within the price ceiling structure, and thus to hold costs of production in check and to prevent increases in purchasing power that might prove inflationary. The following day President Roosevelt issued an executive order under the Act which was aimed at stabilizing the cost of living. It provided for the appointment of a director of economic stabilization with control over "civilian purchasing power, prices, rents, wages, salaries, profits, rationing, subsidies, and all related matters." The order provided for the stabilization, so far as practicable, of the prices of raw and processed agricultural commodities at the prices prevailing September 15, 1942.⁶ The order forbade any increase in wage rates above the levels of September 15 and any decreases below the highest wages paid between January 1 and September 15, 1942, unless approved by the National War Labor Board. This board, it was stated, however, "shall not approve any increase in the wage rates prevailing on September 15, 1942, unless such increase is necessary to correct maladjust-

⁶ The Emergency Price Control Act, as amended, contained a provision that no ceiling for farm product prices should be set which did not express the higher of two price levels—either parity prices for agricultural products, or the highest prices for them reached between January 1 and September 15, 1942. In his executive order President Roosevelt interpreted this provision to mean that appropriate deductions could be made from parity prices on account of any soil conservation payments, parity payments, or governmental subsidies extended to produce the commodities concerned.

ments or inequalities, to eliminate substandards of living, to correct gross inequities, or to aid in the effective prosecution of the war." As far as salaries were concerned, no restrictions were placed on increases in salaries below \$5,000 per year. Increases in salaries above \$5,000 per year were prohibited, except in instances in which the individual had been assigned to more difficult or responsible work, and then only with the approval of the designated governmental agency. Decreases in the salary for any particular kind of work below the highest salary paid for this work between January 1 and September 15, 1942, were forbidden, "unless to correct gross inequities and to aid in the effective prosecution of the war."

The Emergency Price Control Act as amended, together with the executive orders based upon it, on the whole proved effective, even though the established price ceilings at times did not hold, and some persons defied the law by trading in "black markets." The important fact is that the cost of living was held in check. It did not advance more than approximately 30 per cent by the close of the war.⁷ The Office of Price Administration was unquestionably an important factor in the achievement of this objective. Soon after the close of the war Congress provided for the termination of the OPA on June 30, 1947. Some price controls were lifted earlier through powers conferred upon the President, and at least one, rent control, still survives.

As a result of the Korean crisis and of uncertainties concerning the future, Congress in 1950 passed a so-called "Defense Production Bill." Under this Act the President "may seek voluntary cooperation of industry and labor to keep down prices and stabilize wages." If he finds that prices in a particular industry or industries are rising at unreasonable rates, he has the authority to set up compulsory controls. But if he puts a ceiling on prices in a given industry he must also "freeze" wages. And if such a drastic step becomes necessary "he may call for blanket price and wage controls covering all industry, and must set up an agency similar to the Office of Price Administration in World War II in order to carry out the price regulations."⁸ Early in 1951 the government was engaged in setting up again price and wage stabilization agencies.

DIFFICULTIES IN GOVERNMENTAL PRICE FIXING

The problems confronting government in its varied attempts to fix or to affect prices in the field of the public utilities, in agriculture, in industry, and in other fields as well, are numerous and difficult. If prices are to be based on costs there is the familiar difficulty of deciding what costs and whose costs are to be normative. Shall it be average or marginal costs?

⁷ Based on cost of living index of the Bureau of Labor Statistics (1935-1939 = 100).

⁸ *New York Times*, September 2, 1950.

Shall it be the costs of producing the entire market supply or only the so-called "bulk-line costs"?

If prices are to be set so as to afford a reasonable rate of return on invested capital, how shall the reasonable rate be established and the value of the invested capital be measured?

One of the most striking things about the price system is that it is composed of many interdependent prices. Fixing the price of some goods upsets the price of other goods. Stabilizing one price situation may lead to maladjustments in others. Mistakes made in one price-fixing operation may have cumulative and wholly unexpected results in others. There are those who contend that governmental price fixing must be fairly general within a country, if it is to succeed. The government that fixes certain prices, but not all, is often baffled by the appearance and development of substitutes, for which no prices are fixed.

Governmental price fixing runs the risk of resulting in great concentration of political power, the development of political pressure groups, the emergence of dictatorial bureaucracies, and the possible triumph of politics over economics.

PROBLEMS

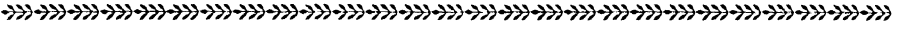
Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Government regulation of prices is unwarranted interference with the free interplay of demand and supply.
2. Indirect price controls are more effective and less disturbing than direct price fixing.
3. Price fixing in industry in World War II was handled in accordance with the same principles as the regulation of public utility rates by public authority in times of peace.
4. The control of production and prices in American agriculture was for the same purpose as the intervention of public authority in the regulation of public utility rates.
5. What the government sought to accomplish through the NIRA and the AAA was stimulation of demand and restriction of supply in order to create a better balance in our economic life.
6. Prices can be fixed by public authority without considering underlying conditions of demand and supply.
7. Government price fixing is quite simple, since all that is necessary is to have prices cover costs and a fair rate of profit.
8. Farmers are no more entitled to parity prices than are other groups in our population.
9. Since the OPA proved effective in checking advances in the cost of living during the war, there is no reason for thinking that it cannot be equally effective during years of peace.
10. The more quickly all restrictions on industrial prices are removed, when war or other emergency has passed, the better.

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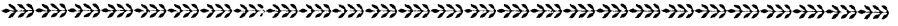
PART IV



DISTRIBUTION

CHAPTER XXII

Wages



FUNCTIONAL AND PERSONAL DISTRIBUTION OF INCOME

IN THIS and the following three chapters the analysis of price is continued, as we turn successively to the determination of the wages of labor, the interest of capital, the rent of land, and the profits of business enterprise. The preceding price analysis has largely been concerned with the valuation of commodities and the prices they command in the markets. The analysis that follows is concerned with the pricing of the factors of production, or with the valuation of the functions which man performs in the productive process. The two pricing problems are closely related, for the price of commodities, on the cost side at least, turns on what has to be paid for the factors and functions essential to the production of commodities. The demand for productive agents, however, is a derivative demand; it is derived from the consumption goods which they create. It is the valuations placed upon consumption goods that must ultimately sanction the prices paid for productive services. If they fail to do so, some entrepreneur has guessed badly and must take a loss.

What is known in economics as the theory of distribution concerns itself with the total revenue or gross income of an enterprise, and its apportionment among the several factors instrumental in creating it. Functional distribution concerns itself with the principles underlying the determination of wages and interest, rent and profits. Distribution as a process of apportioning the value of any product among the agents or activities of man contributing to its production is essentially a process of valuation—the process of placing a value upon the functional services of man in producing the desired goods. If a newly manufactured automobile ultimately sells for \$2000, what part of the sale price represents the total labor cost of making and selling the car? What part is the cost of the materials? How much is absorbed by the overhead costs, including interest on the invested capital, depreciation, and taxes? What percentage is taken in profits? More important than the mere determination of the size of these shares is the explanation of what makes wages and interest, rent and profits, what they actually are. Only through such explanation is it possi-

ble to arrive at a judgment concerning their adequacy or necessity. It is such practical price cases, literally without end, that constitute the raw material for theories of distribution.

Closely related to this fundamental problem of *distribution as a process of apportionment* is the further problem of the distribution of income and wealth among the persons and social groups composing the population of a country. It is obvious that the incomes men receive, whatever their specific form, ultimately affect the *personal distribution of wealth*. Functional distribution of income is basic to an understanding of the personal distribution of wealth. Differences in income give rise to inequalities of wealth. Within limits the process is cumulative, for the possession of capital adds to the income of those that possess it. But the economic incompetence of some owners of capital, losses due to economic causes beyond their control, and the taxation policies of government are leveling forces that cannot be denied.

No problems in economics have greater theoretical or practical interest than the problems of distribution. Men cooperate in the production of goods in order that there may be much to distribute. They fight over the distribution of goods in order to increase their own shares as much as possible. Individuals bargain as effectively as they can, organized groups apply whatever pressure they can command, and frequently such economic action, whether individual or collective, is supplemented by political measures affecting the distribution of income and wealth. In the post-war years particularly, both in Europe and in the United States, political steps have repeatedly been taken to provide direct relief, doles, and work relief, to affect the size of the distributive shares, and through taxation to bring about a redistribution of wealth.

The process of distribution, whether effected by economic action or affected by political measures, bristles with difficulties. What constitutes a fair wage? Should minimum wage rates be established by law? Is it desirable to maintain private property in capital goods and thus to perpetuate the private receipt of interest? Is it fair to legalize an interest rate of $1\frac{1}{2}$ to 3 per cent per *month* on the small loans of highly necessitous borrowers when large borrowers with ample credit can borrow whatever they want for 4 or 5 per cent, or less, per *year*? Is the private receipt of rent justifiable, when land is the gift of God to man, or should the government appropriate for the common use all the so-called economic rent? Is the individual entitled to the unearned increment in land values? If the institution of private property in land is maintained, should society compensate a landowner for any unearned decrements in land value which befall him through no fault of his own? Is there any real upper limit to fair profits? May society justifiably appropriate all the so-called excess profits over the returns of years that are regarded as normal? These are a few of

the many searching questions involved in the economic and political consideration of the distribution of income and wealth. No answers have been suggested that have elicited unanimous approval.

THE NATURE OF WAGES

The distributive share that provides income and purchasing power for the largest number of persons is wages. Wages, usually expressed in money, are the compensation received by workers for rendering their productive services during specified periods of time. Some workers receive salaries instead of wages. Psychologically, there is a considerable difference; logically, both wages and salaries are returns for the rendition of human services in production.¹ Wages are computed by the piece or short unit of time, such as the hour, day or week; salaries are usually based on the work of a year. In considering the subject of money wages it is important to distinguish between *wage rates* and *yearly wages*. Wage rates may be set at a given price per unit of time, as when a carpenter is paid two dollars per hour. Or they may be set at a stipulated price per piece of work completed, as in some branches of the clothing industry. Whether wages are paid by the hour or the piece, and whether they are relatively high or low, it is even more important to know how steadily workers are employed at these rates. If unemployment is periodic and protracted, high wage rates may still yield only low annual incomes. Of course it is the amount of his yearly wages that determines a worker's scale of expenditures and standard of living. The determination of wages, whether on a time rate or piece rate basis, presents a special problem of price. The total distributive share of labor is both a matter of price and of regularity of employment.

From the standpoint of the laborer's well-being it is also important to distinguish between *money wages* and *real wages*. Money wages are nominal wages; they are merely payments reckoned in the monetary unit of the country concerned. Real wages are the purchasing power of the money wages received. To convert money wages into real wages it is necessary to divide the money wages by an index number of the prices the worker has to pay for the goods he customarily buys. If such an index number is not available an index number of prices in general may serve the purpose of showing the trend of real wages. Index numbers of prices are relative numbers in which the prices of some year or other period

¹The word "salary," derived from *salarium* (L.), has a lowly origin. Salt was once a valuable commodity. According to Webster's Dictionary salary payments were salt money, "money given to the Roman soldiers for salt, which was part of their pay." It is still said of a man who gets more than he earns, "That man isn't worth his salt."

of time are taken as the base of 100, and the prices of a given year or other period of time are computed as percentages of the base. If average prices during the five-year period, 1935-39, are made the base of 100, prices in 1949 were almost 170 per cent of what they were in the base period, that is, 70 per cent higher. The index number of prices for 1949 was 170. (Actually, the cost-of-living index number for 1949 calculated by the United States Bureau of Labor Statistics on the 1935-39 base was 169.1.) If we assume that a group of workers had average annual earnings of \$3400 in both the base period and in 1949 it is obvious that there was no change in their money wages. With a relative index number of prices of 170 in 1949, however, it is equally evident that real wages had declined. ($\$3400 \div 1.70 = \2000). According to the assumptions \$3400 in 1949 bought no more than \$2000 did in 1935-39. Since the prices of food, clothing, housing, and other necessities, as well as comforts and luxuries, change materially, and since money wages may not fluctuate correspondingly, there is often a wide variation between the nominal wages and the real wages. Money wages may rise while real wages fall. Less frequently

NET SPENDABLE AVERAGE WEEKLY WAGES IN MANUFACTURING
IN THE UNITED STATES

Year	Average Weekly Money Wages (dollars)	BLS Cost of Living Index (1935-1939 = 100)	Real Wages
1939	23.58	99.4	23.72
1940	24.69	100.2	24.64
1941	28.05	105.2	26.66
1942	31.77	116.5	27.27
1943	36.01	123.6	29.13
1944	38.29	125.5	30.41
1945	36.97	128.4	28.79
1946	37.65	139.3	27.03
1947	42.76	159.2	26.89
1948	47.83	171.2	27.95
1949	48.09	169.1	28.44

United States Bureau of Labor Statistics, *Monthly Labor Review*, Vol. 71 (July 1950), money wage data taken from p. 178, index numbers from p. 179. The figures for the real wages were calculated from these data. Spendable wages mean wages after social security and income taxes have been deducted. An income tax based on one personal exemption has been deducted.

and only temporarily money wages may remain stationary or fall while real wages advance. The preceding table shows the actual money wages and the trend of real wages for a selected group of workers in the United States for the decade 1939-1949.

FUNCTIONING OF THE LABOR MARKET IN THE DETERMINATION OF WAGES

Wage rates like commodity prices are set in the market. There are many labor markets, each with its own wage rates and wage scales. Whenever and whenever workers offer their services to interested prospective employers for a price, a labor market may be said to exist. The labor market may be local, small, and unorganized, such as may be witnessed in the employment office of a canning factory which has advertised for workers whom it wishes to employ during the short vegetable canning season. Or it may be a large-scale and highly organized labor market, such as is furnished when a group of coal operators meet representatives of the organized miners and bargain collectively concerning the wage scales that shall prevail in the coal-mining industry for a designated period of time. Both of these illustrations suggest the essential fact about a labor market: a common meeting-ground for prospective employers and employees to effect a purchase and sale of human services if the terms are mutually acceptable. Usually employer and employees meet in person or by proxy through designated representatives. At times communication is established through some other means. A given labor market is neither a market for labor in general nor for any kind of labor that workers can do, but a market for the services of men able and willing to do the available types of work. The functioning of a market is evidenced by the transactions that take place within it. The number or magnitude of its transactions attests the importance of a market.

The wage transactions of the labor market are contracts. To every such contractual transaction there are parties: actual, prospective, and regulatory. The actual employer and employee are the contracting parties. But typically the transaction is effected and influenced not merely by two but by five parties.² The terms of the actual contracting parties are affected by the presence of other potential employers or employees who have alternative work to offer or services to render. In addition the state through government provides the institutions that make such contracts enforceable and frequently itself limits their terms.

The prospective parties to a wage transaction, both employers and employees, formulate their subjective prices, which represent the terms on which they are willing to become the actual contracting parties in a wage transaction. Usually in a transaction of any importance these are carefully formulated in advance. Much investigation and study may have preceded their precise expression. In labor controversies over wages both employers

² Cf. John R. Commons, *Legal Foundations of Capitalism* (New York, The Macmillan Company, 1924), pp. 65-68.

and employees may announce their terms and then fight to make them prevail in the market. At other times one party or the other, usually the employee, accedes to the terms of the stronger party in the wage transaction. In so doing he makes the employer's subjective price his own for the purpose of the immediate transaction. Subjective prices in the labor market, or in any other market, are simply the terms on which men are willing to do business. These subjective prices find expression in the demand for and supply of labor. The important question at issue is: What determines the subjective prices of prospective employers and employees?

Wage theory largely consists in setting forth as adequately as possible the determinants of the subjective prices of the parties to a wage transaction. These determinants are both general (institutional) and specific. The general determinants make up the institutional setting of the labor market. The strength or weakness of custom, the exercise or non-exercise of public authority, the presence or absence of monopoly, the effectiveness or non-effectiveness of competition, and the strength or weakness of bargaining associations have much to do in the determination of the subjective prices of prospective employers and employees. Customary wage rates in a community, such as seventy-five cents per hour for unskilled labor, influence the subjective prices in future transactions of both employers and employees. Public authority may intervene and for certain types of work set a lower limit to the wage scale, as it has in some states that have enacted minimum wage laws for women and as it does under the Federal Fair Labor Standards Act of 1938. If the prospective employer has a partial local monopoly in the labor market or the employees have such a monopoly, this fact affects the subjective price of the party having the monopoly. If competition for workers is keen, the wage rates offered tend to rise; if competition between workers for jobs is sharp, the wage rates accepted will tend to fall. When workers are organized into effective bargaining associations the subjective prices of labor are apt to be materially higher than when bargaining is individual and weak. These institutional determinants of the subjective prices of prospective employers and employees are powerful influences in the labor market in helping fix the rates at which human services are bought and sold. But there are even more important specific controlling determinants provided by what the employer can afford to pay and the employee is willing to accept. These set the limits of the wage bargain and constitute the core of wage theory.

Whatever interaction of forces results in the establishment of a given wage rate, the prevailing market wages (the "going" rates) in turn influence the subjective prices of both employers and employees in subsequent wage transactions. The interaction of subjective prices results in the establishment of present wage rates; the rates so established in turn affect future subjective prices.

The approach to the problem of wage determination that has just been suggested may be conveniently summarized as involving a study in sequence of the

Labor Market

Wage Transactions

Parties

Subjective Prices (Comprising the Demand and Supply)

Determinants

General (Institutional)

Specific

Wage theory seeks to set forth the specific and general determinants of the subjective prices of parties to wage transactions in a given labor market.

EXPLANATION OF THE DEMAND FOR LABOR

The explanation of wage rates, like the explanation of every other price problem, necessitates an adequate analysis of demand and supply. It is a commonplace observation, familiar to persons unversed in economics, that if the demand for labor in a given market at a given price is in excess of the supply, wages will rise; and if under the same conditions the supply exceeds the demand, wages will fall. Cobden long ago quaintly expressed the relationship when he said: "Whenever two workmen run after one master, wages fall; whenever two masters run after one workman, wages rise." True as this is, it does not help materially in explaining prevailing wage rates. Wages are of course a resultant of the interaction of the demand for and the supply of labor in a given market. The unanswered question, however, is: What specifically determines the demand and the supply? What makes the demand and the supply what they are at any particular time? The answer to this question must take the form of a qualitative analysis of both the demand for and the supply of labor.

By the demand for labor is meant the number of workers whose services are wanted in a given market at a specified price. Some of this demand for labor comes from consumers who hire workers for personal services in the direct satisfaction of wants. The labor of many professional men is largely of this class. But the great bulk of the demand for labor comes from entrepreneurs who hire workers on account of their productivity in helping create goods that can subsequently be sold. Labor is wanted, as equipment and raw materials are wanted, because under the guidance of entrepreneurs it can be used in producing goods of value. It is the values produced by labor that prompt the demand and ultimately provide the funds out of which wages can be paid. Employers must of course have purchasing power in the form of adequate working capital out of which to advance wages and so make their demand for labor effective.

How much of the purchasing power at his disposal can an employer afford to pay for the services of a particular worker? What the consumer-employer can afford to pay, or at least is willing to pay, is determined by the marginal utility of the service to him. The labor that he employs creates no product to be subsequently sold and thus to reimburse the employer for the wages paid. In employing labor it is wholly a matter of the importance to himself of having or of dispensing with the services in question. The same principles apply in buying such human services as obtain in acquiring any other consumption goods. What the producer-employer can afford to pay for the services of labor is determined by his estimate of the productivity of labor.

Productivity as a specific determinant of the demand for labor. Every entrepreneur is confronted with the practical problem of so conducting his business that there will be sufficient income to cover the necessary outgo represented by the expenses of production. As long as the employment of additional labor and capital yields income at least large enough to cover the additional costs of production it is good business judgment to employ them. What the entrepreneur is interested in is maximum net profits. Consequently, he constantly studies the prices he can obtain through the marketing of his goods in relation to the cost of producing them. Rising prices coupled with lagging costs, or unchanged prices linked with reduced costs, mean larger profits to him.

What can the employer afford to pay labor or any other productive agent? It is the proportionate contribution of labor or any other factor in production to the ultimate realized value of the product which fixes the maximum that the employer can afford to pay in wages or other returns. If the competition for labor is active, the chances are that he will be compelled to pay an amount that is close to what he can afford to pay. But how can an employer measure the productivity specifically attributable to labor and apart from the productivity of the other factors in production? How does he know what he can afford to pay? As a matter of practice he cannot know precisely. What he does know is his total business income and costs, and whether he is operating at a profit or a loss. If his costs are too high in comparison with those of his competitors he may not be able to sell his products, and then there will be no value productivity out of which to pay wages or any other return. His product, moreover, is not created by labor alone but by labor working with the aid of other agents. Just what part of the eventual joint product is attributable to each factor in production is a matter of imputation, difficult at best. What is more, the productivity specifically attributable to labor varies with the proportionality of the other factors employed—with the amounts and efficiency of the capital and natural resources used. The productivity of workers engaged in excavating for the foundations of a modern office

building is very different, if they are equipped only with spades, from what it is if they are operating with one or more steam-shovels. The American worker operating a "bulldozer" can accomplish hundreds of times as much work per day as a Chinese laborer equipped only with pick and shovel. Because he can accomplish so much more in a day's work, the value of his productive service to the employer is much greater. The fact that the American industrial worker's job has behind it an investment of nearly \$10,000 in tools and equipment in 1949 helps to account for his productiveness, which is much greater than it would be if he were materially less well equipped. Whether in the distribution of the product the entrepreneur-employer pays labor all that he can afford, or more than he can afford, in relation to the claims of other factors cannot be accurately computed. All that the entrepreneur-employer can do is to *estimate* the productivity of labor and other factors. In doing so certain principles of value productivity, diminishing productivity, and marginal productivity are germane and of decisive importance.

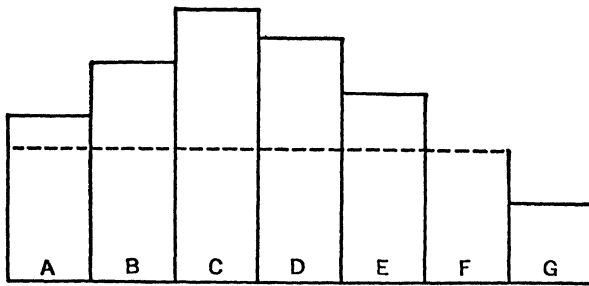
Value productivity of labor. It is not the mere physical productivity but rather the value productivity of labor that creates the funds out of which wages are ultimately paid. Whatever the nature and volume of the physical products may be, it is the price they bring when sold in the market that determines the possible compensation to labor. Under given circumstances of time and place a worker's productivity in the physical sense may be represented by a tool which it has taken him one day to make. The tool may sell for \$5. Under other circumstances it may sell for \$10. The physical product is the same in the two cases, but the value product is different. Wages are gauged by value productivity, the value the product of labor will have when sold in the market.

Commonly the product created by labor does not have its full value until some time in the future when it gets into the hands of consumers. But workers cannot wait until then for their compensation because their weekly wages are usually their only, or at least their principal, source of income. They must have immediate payment in order to live. In our modern organization of production it is the function of the entrepreneur-employer to advance the wages and to seek reimbursement with interest when he succeeds in selling the output of his enterprise. But if the employer must advance the wages and wait for his own returns, the most that he can afford to pay now is the present value of the anticipated future value product. He discounts this estimated future value product to the present and pays the worker something less than the ultimate value of this product. If he is able to gauge the business situation with some degree of certainty, the present value of labor's future value product represents his maximum subjective price.

The law of diminishing productivity as applied to labor. In formulating estimates of the future value productivity of labor, the employer (and for that matter the worker too) is affected by the law of diminishing productivity and the margin of employment, though he may not have heard of either. Labor, like all agents in production, is subject to the law of diminishing productivity. If the number of workers in a given establishment is increased, all other factors remaining the same, within limits the total product may be somewhat increased; but sooner or later the point of diminishing productivity is reached—the point beyond which the product per worker decreases as the number of workers is increased. The essence of the law of diminishing productivity as applied to labor is this: when successive equal units of labor are combined with a fixed supply of the other productive factors, a point is reached after which further units of labor will yield only steadily declining products per unit of labor employed. With a constant amount of capital an entrepreneur cannot expect to hire an indefinite number of workers and to escape the experience of their decreasing effectiveness. To maintain their output he must properly vary the amounts of capital used, for the output of every business is a joint product of all the agents of production. The specific productivity of any one is distinctly limited by the productive efficiency of the rest. But in any given economic situation the inescapable fact is that no employer can indefinitely expand the number of his workers, while all other factors remain the same, without experiencing a decline both in the physical productivity and the income attributable to the employment of any one worker.

Although the law of diminishing productivity limits the number of workers that can advantageously be employed with a given combination of other factors, the employer does not stop hiring workers as soon as he knows that the point of diminishing productivity has been reached. To stop as soon as the employment of an additional worker increases the aggregate product by an amount less than the last preceding worker added would frequently mean to stop short of making maximum returns. Eventually, however, a point is reached where an additional worker will add a product no greater than the cost of his labor, *as determined by other considerations*. This is the margin of employment beyond which it is unprofitable to proceed. The law of diminishing productivity as applied to labor recognizes that wages cannot be maintained at a given level if the number of workers is greatly increased while the capital with which they work remains unchanged. A worker's best chance for high returns lies in working under conditions that offer relatively large supplies of capital per worker. If the law of diminishing productivity correctly describes an inevitable tendency in our economic life, it is also true that the associated concept of marginal productivity is logically inescapable.

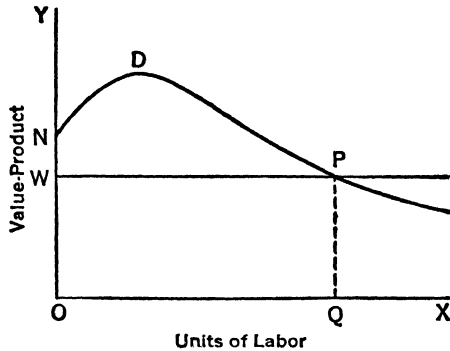
The relation between diminishing productivity and marginal productivity may be illustrated by the following diagram in which the successive rectangular areas, A to G, represent the value productivity imputed to an enterprise using a constant supply of capital but a variable supply of labor. Area A represents the value-product of the enterprise when a given amount of capital is used with a single worker. The addition of a second worker, with no change in the other factors, increases the value-product by Area B. It is apparent that productivity per worker increases rather than diminishes until after the employment of the third worker but falls sharply



THE PRODUCTIVITY OF LABOR

beginning with the employment of the fourth. The early increase in proportionate productivity may be due to the advantages of coöperation or to better balancing of all the factors of production involved. It soon disappears. Area F in the diagram may be assumed to be the marginal productivity of labor, a value-product just large enough to provide acceptable compensation for labor. If the value-product represented by Area F is required to pay the wages of a single worker, and if the workers are all equally efficient and consequently interchangeable, the area below the dotted line of A to F inclusive will represent the value-product that can be paid as wages. The rest of the product, shown by the area above the dotted line, is what is available as a return to the other productive factors. Worker G would not find employment in this enterprise, unless conditions were such as to compel all workers to accept no more than Area G as wages. If instead of an enterprise employing a half dozen workers, we assume one employing many workers (or preferably, hiring many units of labor), the rectangular areas attributed to the employment of successive units of labor all working with a constant supply of capital may be thought of as vertical lines. In the graph below value-products are measured on the OY axis, and units of labor employed are indicated on the OX axis. Perpendicular lines dropped from the curve NDP to the OX axis measure the productivity of successive units of labor working with a constant supply of capital. D marks the point of diminishing productivity, and NDP the

curve of diminishing productivity. PQ represents the marginal productivity of labor, OQ the number of units of labor hired, and the area OQPW the total product required to meet the labor costs. The significance of marginal productivity in the explanation of some wage rates is considered next.



THE DIMINISHING AND MARGINAL PRODUCTIVITY OF LABOR

The marginal productivity of labor in relation to wages. The principle of marginal productivity as an explanation of wage rates is both helpful and confusing. It is helpful when properly applied to account for wages that obtain within a homogeneous group of similarly employed workers, in an enterprise that is showing distinctly diminishing productivity per worker, but confusing and misleading when too much is claimed for it. The simplest way of stating what is meant by the marginal productivity of any fairly comparable group of laborers is to say that it is the value product attributable to the employment of one worker more or one worker less in a given enterprise. If the workers of a given group are all assumed to be of equal efficiency, and so interchangeable, and if the quantities of the other factors with which they work remain unchanged, the difference in the value of the product occasioned by a change of one worker in the number employed represents the marginal product of labor. Still another way of expressing the same idea is to say that the product gained or lost through the efforts of one worker of a homogeneous group is the marginal product of the labor of such group. Usually the marginal laborer is the worker who finds employment under conditions least favorable to his productiveness. The reason for these unfavorable conditions lies not in the worker, for he is assumed to be as efficient as any of the others, but in the fact that there is a limit to the number of men that can advantageously be employed on a given job with given amounts of capital. If an entrepreneur working with a given amount of labor and capital finds that by dispensing with the services of one worker his value-product is

diminished \$10 per day, the marginal productivity of the labor concerned may be considered as \$10. The marginal productivity of labor is not the specific productivity of labor in the sense that it is exclusively attributable to labor apart from the other agents in production. Labor works with capital. Both total productivity and marginal productivity are the combined productivity of all the productive factors involved. But if the employment of an additional worker or the release of a single worker results in a change of output, without any change in the capital equipment used, it is reasonable to regard this output change as a measure of what the single laborer is worth to the enterprise. The marginal product of labor represents what labor is worth to the employer. In the preceding illustration, to avoid losing the services of one worker the employer can afford to pay him the present value of the ten-dollar marginal product.

Most economists make the marginal productivity of labor the core of their theory of wages. According to this marginal productivity theory of wages, wages tend under competitive conditions to equal the marginal product of labor. What any entrepreneur-employer can afford to pay a worker is the present value of this marginal product, the product that he would lose through dispensing with the services of one worker. If he fails to pay it, some competing employer will. On the other hand he need not pay more, because all that he would lose through dispensing with the services of one worker is this same marginal product. If a given worker refuses to accept it, competing workers can be obtained who will take it. If the workers of a given group are all assumed to be equally efficient in production, and so interchangeable, the marginal productivity of the group determines the wages that can be paid to any one of the workers within the group. At best the theory explains the wages that can and need be paid under competition to any laborer within a particular group: wages tend to equal the marginal product of labor.³

³ J. R. Hicks offers a succinct statement of the argument of the marginal productivity theory of wages in the following passage:

"The conventional proof of the marginal productivity proposition is simple enough. It follows from the most fundamental form of the law of diminishing returns that an increased quantity of labour applied to a fixed quantity of other resources will yield a diminished marginal product. Thus if the employer were to take on a number of labourers so large that their marginal product was not worth the wage which has to be paid, he would soon find that the number was excessive. By reducing the number he employed, he would reduce his total production, and therefore (under competitive conditions) his gross receipts. But at the same time he would reduce his expenditure; and since the wage was higher than the marginal product, he would reduce his expenditure more than his receipts, and so increase his profits. Similarly, he would not reduce his employment of labour to such a point as would make the wage less than the marginal product; for by so doing he would be reducing his receipts more than his expenditure, and so again diminishing his profits. The number of labourers which an employer will prefer to take on is that number which makes his profits a maximum, and that number is given by the equality of wages to the marginal product of the labour employed. (*Cont'd.*)

The principle of marginal productivity guides the entrepreneur in deciding upon the possible employment of additional men. It measures the strength of his demand for workers. It is useful in explaining the wages that he can afford to pay to any one of a group of workers that find employment. But to explain wages wholly in terms of marginal productivity is to offer an unrealistic explanation. The chief reason is that the marginal productivity theory of wages assumes a perfection of competition which rarely exists. It assumes that competition among employers eager for workers will force a given employer to pay what he can afford to pay, and that competition among workers eager for the job will prompt them to accept the offered wages. It relies upon competition to induce workers to accept what the employer offers. The theory also assumes full employment of those seeking any given type of work. But there are too many frictions of the market to enable competition to work with such nicety in the determination of wages. If both employer and employee were able to estimate with a fair degree of accuracy the value productivity out of which wages must be paid, if labor were perfectly mobile to take advantage of the best market for its services, if there were full employment, and if competition worked smoothly and quickly, the principle of marginal productivity would have more direct and immediate bearing in the explanation of market wages. Only to the extent that the frictions of the market can be overcome and competition prevails is there a tendency for the wages of a homogeneous group of workers to equal the discounted marginal product of their labor.

When the relation between marginal productivity and wages is expressed, as it frequently is, by saying that an employer will hire additional workers until the marginal product of their labor about equals their wages,

“It is thus clear that the wage at which equilibrium is possible will vary in the opposite direction to changes in the total number of labourers available. If the number of labourers available on the market had been larger, the wage must have been lower; since the additional product secured by the employment of one of these extra labourers would be worth less than the previously given wage, and consequently it would not pay to employ these men unless the wage-level was reduced. If the number had been less, employers would have had an incentive to demand more labourers at the given wage than would actually have been available, and their competition would therefore force up the level of wages. The only wage which is consistent with equilibrium is one which equals the value of the marginal product of the available labour.

“This ‘Law of Marginal Productivity’ is regarded by most modern economists as the most fundamental principle of the theory of wages. Nothing will be said here to contradict that view. Nevertheless, care has been taken in framing the above statement of the law to bring into clear relief the extremely abstract assumptions on which alone it is rigorously true to say that wages equal the marginal product of labour. A long road has to be travelled before this abstract proposition can be used in the explanation of real events.”

—*The Theory of Wages* (London, Macmillan and Company, Ltd., 1932), pp. 8-10.

a "going" rate of wages is assumed. But a real wage theory must explain and not assume "going" rates of wages. If the marginal productivity theory of wages is stated in such a way as to assume market wages, it is of course a species of circular reasoning as a general wage theory. What the marginal productivity principle properly does is to express the fact that the employer's demand for labor is measured by the value-product dependent upon the use of one worker in a group of like workers, or the value-product lost through dispensing with the services of one worker in such group. Such productivity determines the wages he can afford to pay. The individual employer, to be sure, usually merely decides whether he can and will pay the "going" rate of wages of the market. The "going" rate of wages itself, however, expresses the decisions of many employers to hire or not to hire, to employ as many or as few as possible, and thus records their judgment that the "going" rate is within their ability to pay as conditioned by the productivity of workers. Thus stated and applied, marginal productivity is very useful in the explanation of wages.

Preponderantly marginal productivity ⁴ is an explanation of the effective demand for labor. It offers no comprehensive explanation of the supply. But it is reasonable to ask, What compels the workers of a group to accept as wages the marginal product of their group? Is it merely competition for the job? Why should any worker become or remain a member of a given group, if the marginal product which sets the upper limit of his wages is unsatisfactory to him? Such considerations suggest that wages are not only a matter of what the employer can afford to pay but also of what the worker is willing to accept. The margin of employment is fixed by all the forces that affect both the demand for and the supply of labor. It is obvious that, if wages are to be relatively high, marginal productivity must be high. The marginal productivity of labor depends not only upon its own efficiency but also upon the efficiency of management in the proportioning of the other factors of production with which labor works. If labor is scarce in relation to the other agents in production its marginal productivity will be high; if it is plentiful or superabundant its marginal productivity will be low. In general it may be said that the factor of production which is relatively scarce receives the largest returns. Since the marginal productivity of labor is conditioned upon the number of workers offering their services and finding employment, the explanation of wages requires a qualitative analysis of the supply of labor as well as of the demand for it.

⁴ It is important to note that in the discussion that follows, the term "marginal productivity" is used to refer to the productivity dependent upon a single unit of the labor supply rather than to the marginal productivity theory of wages. Recognition of the *fact* of marginal productivity does not necessarily mean acceptance of the *theory* of marginal productivity, since marginal productivity is usually only one among several determinants of the wages paid in an actual labor market.

EXPLANATION OF THE SUPPLY OF LABOR

Like the demand for labor, the supply of labor always means something specific. Although size of population is the ultimate limiting factor of the labor supply, the two are not identical. Labor supplies are always relative to given markets. By the supply of labor is meant the number of workers who are able and willing to offer their services in a given market at a specified price. The amount of labor offered varies with the price, but not as sharply as is the case with other supplies. There is at any given moment a fairly constant population which cannot be quickly changed in response to rising wage rates of the market.

The wage worker is a seller of his services. In marketing his services during fixed hours and a stipulated period of time the worker practically places himself under the control of his employer. His services cannot be dissociated from his person. He gives himself with his service. This fact has led to many aggressive demands for adequately compensating wages.

Another characteristic of the labor supply which directly affects the terms at which human services are offered in the market is the comparative immobility of labor. Labor is not as free to seek the best market for its services as the theory of free competition assumes. While material commodities may be shipped to any available market, workers cannot so easily pull up stakes wherever they live in order to find better jobs elsewhere. Local ties they have established, including the homes they occupy and the interests of the family in the community, often inhibit such migration and restrict the choice of workers to local opportunities. In considering moving to a more favorable location, where higher wages prevail, there is also the question of the expense of moving, of the possible temporary nature of the wage differential, and of the chance of finding employment.

In setting a price upon their own services workers are confronted by the fact that their withholding power is decidedly limited. For one thing the worker has a perishable service to sell; labor that is not marketed today is lost forever. For another, the worker usually has little power to withhold his services from the market at whatever price they will bring, because he has no adequate reserves upon which to fall back while he bargains for acceptable wages. If he has reserves, either through his own individual efforts or through the coöperative action of the union to which he may belong, his bargaining power is greatly strengthened.

Productivity as a specific determinant of the supply of labor. Although the employer has a decided advantage in estimating the value productivity of the worker as a basis of the wages he can offer, productivity is by no means a negligible factor in accounting for the subjective price of the prospective employee. Long experience aided by accounting data and statistical analysis of his business operations may enable an employer to

calculate with some degree of certainty what an employee is worth to him. Usually neither such technique nor such wealth of experience is available to guide the employee in estimating his own productivity. He may merely resort to rough rule-of-thumb methods. He may be guided by what he knows he can earn in a comparable job, or by what he knows comparable workers are receiving from their employers. If organized with others and represented by those more skilled in such matters, he may substitute more accurate estimates for rough guesses and approximations. In any event labor realizes as well as the employer that wages cannot be unrelated to the productivity of the workers. If the worker has reason to believe that his productivity is increasing, that he is growing more valuable to the business, he is apt to ask for higher wages. One thing that makes him more valuable is experience in the work he is doing.

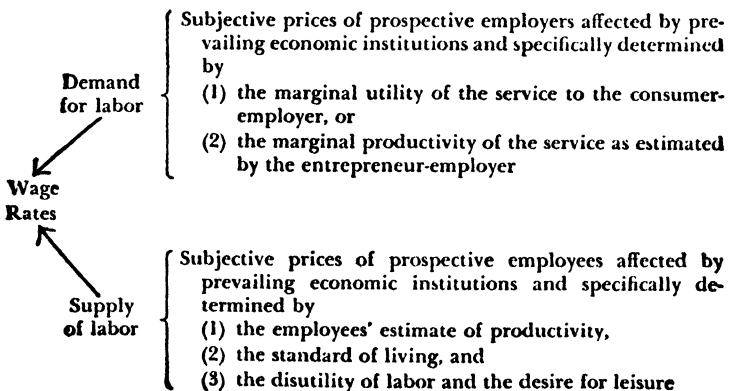
The standard of living as a specific determinant of the supply of labor.

The determinant of wages, however, which appeals most strongly to labor as both desirable and just is the standard and cost of living, particularly if the standard of living used is a high standard. But is there any real connection between the worker's standard of living (those habits of consumption which so largely establish his social status) and the wages he can hope to obtain? Is not the standard of living more the result than the cause of the wages that are paid? In analyzing the influence of the standard of living upon wages it is necessary to distinguish between its short-time and long-time effects. In the short run a high standard of living may serve as a spur to labor in driving the best possible wage bargain. The worker's standard is of great importance in determining what he will accept, provided he has any real option in the matter and sufficient withholding power to enable him to bargain with some effectiveness. To protect their customary standards of living workers will usually strenuously oppose threatened reductions in their wages. It is also true that a worker's productive efficiency, which sets a limit to the wages he can hope to receive, is itself affected by the standard of living he is able to maintain. Particularly is this true with respect to the elementary necessities of wholesome food, adequate clothing, and decent housing. The depression of the nineteen thirties furnished many striking illustrations of low productive efficiency on work-relief and other projects because the standard of living of the workers was so low. When inefficiency can be shown to be due to low wages rather than to any short-coming of the worker himself, the payment of higher wages, even though temporarily greater than the marginal productivity of the labor concerned, can be justified. The popular doctrine of the "economy of high wages" held in some American industrial circles is partly based upon the idea that high wages justify themselves because they make possible a higher standard of living, which in turn makes for greater productive efficiency. The employer, who defends his low wage-

scale by saying that his employees are worth no more than the wages he is paying, may be expressing an entirely accurate judgment. It may still be true, however, that higher wages and the resulting higher standard of living will so step up efficiency as to create the greater productivity, which is the only permanent source of the higher wages.

In the long run the chief relation between the standard of living and wages lies in the effect of the standard upon both the age at marriage and the birth-rate. The standard of living is a positive factor in controlling numbers. There is no doubt that much restriction of population is today deliberately intentional, and that the desire to attain or maintain a high standard of living is the important motivating influence in the matter. Whatever checks the growth in population ultimately affects the labor supply. The growing scarcity of labor in relation to other factors in production tends to raise the marginal productivity of labor and so to increase its wages. While restriction of numbers does not *per se* bring about higher wages, it is the scarcity of labor in relation to the other factors in production which determines the possibility of higher wages and the attainment of a higher standard of living.

Disutility of labor and the desire for leisure as a specific determinant of the supply of labor. Still another specific determinant of the supply of labor is the disutility of labor and the desire for leisure. Work is normally enjoyable unless man's psychophysical organism is overtaxed. But there is increasing disutility of labor as work is continued without adequate opportunity for recuperation. Leisure is needed for mental and physical relaxation. The disutility of long-continued labor and the desire for leisure are the basis of the demand for higher wage rates when "overtime" work and work on Sundays and holidays are expected. In labor-union industries wage rates equal to one and one-half the regular rates have been common



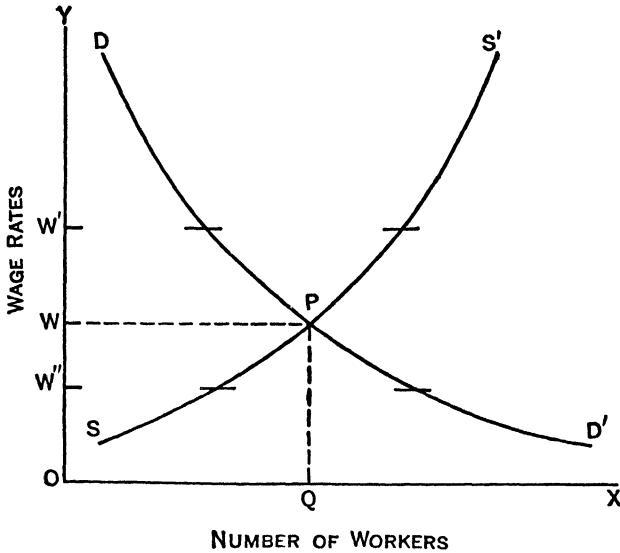
for overtime work, and double the regular time rates for work done on Sundays and holidays.

The foregoing qualitative analysis of the demand for labor and the supply of labor in any selected labor market may in its essentials conveniently be summarized in the preceding diagram.

THE WAGE BARGAIN UNDER FREE COMPETITION

Limits of the wage bargain. The interaction of the demand for labor and the supply of labor in the determination of wages, whatever may be the precise influence of the institutional and specific determinants just considered, ultimately finds expression in the wage contract. The wages actually paid are fixed by agreement between the employer and the employee. Whenever the subjective price of the prospective employer is equal to or greater than the subjective price of the prospective employee, a wage agreement is possible and a wage rate can be established through bargaining. The most that the employer can afford to pay, usually set by his estimate of the productivity of the worker, and the least the employee is willing to accept, usually set either by what he can make in an alternative employment or by his minimum standard of living, fix the natural limits of such a wage bargain. The precise rate of any particular wage contract is a matter of the relative bargaining ability of the employer and the employee and of the character of the labor market in which they operate. Since the employer is usually a better judge of the productivity of labor than is the worker, and because the hiring of a particular worker is usually optional with the employer, it is not surprising that the wages actually paid are often closer to the worker's minimum than to the employer's maximum. If the labor market concerned is highly competitive, however, the competition of employers for men will force a given employer to pay close to what he can afford to pay, and the competition of workers will keep wages within this limit. The more frictionless the market and the more precise the knowledge of the market situation, the more closely will actual wages approximate the marginal productivity of labor.

Wages, a price effecting equilibrium between demand and supply. In a competitive labor market the rate of wages will tend to be established at a price which will effect an equilibrium between the demand for and the supply of labor in such market. There will be a distinct rate for each kind of labor. Only an equilibrium price offers stability. If the wage rate is not such as to equate the demand and the supply of the market, it will be upset either by an excess in the demand or the supply at such price. As long as an entrepreneur-employer can secure workers for less than they are worth to him, as measured by their productivity, he will have an inducement to demand more labor. The competition of other employers



DEMAND AND SUPPLY IN A GIVEN LABOR MARKET

similarly situated will tend to raise wages. If wages are above what employers can regularly afford to pay, unemployment will result and the excess labor supply will drive wages down.

It is possible to represent by graphs the interaction of demand and supply in the establishment of wages in a free and competitive labor market. In the accompanying diagram wage rates are indicated on the OY axis and the number of workers on the OX axis. The curve DD' is the locus of the subjective prices of prospective employers—the rates at which they stand ready to employ the indicated number of workers. Similarly, the curve SS' is the locus of the subjective prices of prospective employees—the rates at which the indicated number of workers stand ready to deliver their services. Each curve shows the relation between wage rates and the amount of labor wanted or offered at such rates. If the curves correctly represent the facts of a given labor market, any point on the demand curve may be read by dropping perpendicular lines to both the OY and OX axes. The point of intersection with the OY axis indicates the wage rate, and the point of intersection with the OX axis the number of workers wanted at such rate. Together they constitute the ordinate and abscissa of the selected point on the demand curve. In the diagram, point P, which is common to both the demand and supply curves because it is their point of intersection, represents a wage rate measured by OW and a demand at this rate for OQ workers. The supply curve may be similarly read. It is obvious that in the market represented by this diagram QP (which

equals OW) is the only wage rate at which the demand for labor (OQ) exactly equals the supply of workers (OQ) willing to render their services at such rate. It is the wage rate which effects an equilibrium between demand and supply. If a higher wage, such as OW' , is assumed, it can be seen that in this particular market the demand would be less and the supply greater, thus creating a situation of some disequilibrium. The competition of workers for the limited jobs would tend to lower the assumed rate. If a lower wage rate than OW is thought possible, such as OW'' , it is equally apparent that this is another but the reverse situation of instability; the demand for workers exceeds the number willing to offer their services at such lower rate. The competition of employers for the limited number of workers would tend to raise the assumed rate. Only when the wage rate is such as to equate the demand for labor and the supply of labor in a highly competitive market is a state of market equilibrium achieved.

THE WAGE BARGAIN UNDER IMPERFECT COMPETITION

The preceding analysis of the general principles underlying the determination of wages is based upon assumptions which often are not warranted by the conditions prevailing in particular labor markets. These assumptions, it will be recalled, include homogeneity, and consequently interchangeability, of the units of labor supplied by the group of workers whose wages are to be explained; mobility of labor to take advantage of the best available market; full employment of those seeking work; and such perfect competition of employers for workers, and of workers for jobs, that an equilibrium wage rate is set at a figure that represents the marginal productivity of the type of labor concerned. If these conditions are not realized in labor markets, wages will not be closely measured by the marginal productivity of labor. *At most the marginal productivity principle expresses an approximation of the truth concerning wages under competitive conditions.*

But competition, as pointed out earlier in this chapter, is not the only institutional determinant of wages. Custom, public authority, monopoly, and bargaining associations are other institutional determinants. Any one of them may bring about wage scales that will be different from what they would be under conditions of free competition. The inertia of custom may prompt employers to offer and employees to accept wages that are not closely gauged by the productivity of workers. Public authority may regulate the level of wages or actually control their amount. Monopoly is the antithesis of free competition in its determination of wages as well as of other prices. Bargaining makes the wage contract human and personal rather than a mathematical resultant of cold impersonal competitive forces.

All of this does not mean that wages will be set without reference to the marginal productivity of labor, but rather that the resulting wages will be modified by prevailing institutional conditions.

If an employer has monopoly power in a given labor market, such as the employer who controls the only opportunities for certain types of employment in a given locality, he may be able to reduce wages below what they would be under competition. His ability to do so depends upon the opportunities for other types of employment open to workers in the same locality, or their ability, willingness, and means to take advantage of possible alternative opportunities in other markets. If the assumed employer is also the producer of a monopolized product his position to influence wages may be even stronger, though again subject to the limitation that workers may find other types of private or public employment.

Sometimes the monopoly power may be exercised by a strong labor organization which dominates a particular labor market. Unions in given trades or industries may so restrict the supply of available labor as to affect the wages of those who find employment. By insisting upon the payment of higher wages, wages that may not be justified by the current productivity of labor, they may compel the employer to recast the proportioning of his productive forces. If the labor supply is restricted, or the wages demanded seem prohibitively high to the employer, there is strong reason for getting along with as little labor as possible. The employer may turn to labor-saving machinery and other cost-cheapening devices in order to prevent his costs from getting too far out of line with those of his competitors. If they do, he may be forced out of business altogether. His employees will then, at least temporarily, be out of jobs. If his competitors are confronted by the same aggressive labor union demands, and cannot offset the higher wages demanded by other reductions in costs, there will have to be an advance in the price of the finished product. If the demand for this is elastic, rising prices will reduce the demand and so create some unemployment. It is true that the workers who are lucky enough to retain their jobs will now find their marginal productivity increased, since a smaller labor force is now working with either the same or increased units of the other productive agents. But this gain for those that remain employed is achieved at the expense of those who become unemployed. It is only when the aggregate taken remains unchanged and so sanctions the advance in wage costs, that all the workers concerned benefit. Temporarily, wages can be set beyond the marginal productivity of workers, but ultimately the latter must be increased to sustain the advance in wages. The wisdom of pushing wages up then depends, for both workers and employers, upon the effect of the advance on the demand for the finished product. If this keeps up in spite of advancing prices, the marginal productivity of labor will be increased and em-

ployment will not be diminished. From the social point of view, total wage payments are more important than wage rates.

Aggressive collective bargaining may occasionally cause wages to poach upon the domain of profits. Rather than face the prospect of a strike to secure higher wages, the employer who does not wish to suspend operations may temporarily yield to the demands of the union, even though the demands are not warranted by the productivity of the workers, and even though granting them means reducing other distributive shares. Such cases are exceptional, however, and of unstable duration because of the resistance of the recipients of the other shares.

As a result of weakness rather than of strength in bargaining power, wages for a given number of workers often not only fail to keep pace with the marginal productivity of labor but actually fall below it. Workers are not thoroughly enough organized and sufficiently mobile to secure their full marginal worth to the employer, and it is only human nature for the employer to secure his labor for less if he can. Due to unequal bargaining power between labor and employers, it is much more common for labor to get less than it is to get more than its marginal product. In general it may be said that the more unique or exceptional a worker's job, the greater is his opportunity to bargain successfully concerning his compensation.

There may be exceptional and temporary economic circumstances, too, which prompt an employer to pay higher wages than the productivity of the workers warrants. Every depression creates such situations. An employer naturally, in his own interest, seeks to keep his experienced workers as long as possible in the hope that conditions will improve, even though for the time being their productivity does not warrant the wages he is paying them. Apart from their own interests, employers are not all, or always, either callous or completely indifferent to the economic needs of their workers.

The foregoing analysis of wages does not offer any simple unitary principle as the explanation of wages. However attractive such a theory might be, the facts do not warrant it. It is a pluralistic, not a unitary, explanation. It recognizes the importance in wage theory of the productivity, standard of life, and bargaining principles, and gives due weight to the modifying influence of the economic institutions of time and place. It concedes that commonly neither the mobility of labor nor the effectiveness of competition among employers and workers is such as to establish that uniformity of wages in a given market which a strict application of the marginal productivity principle implies. What is an undoubted tendency under given conditions may be obscured by the frictions of the actual market. This does not invalidate the principle, however. Since wages, like every other market price, arise out of the meeting of human

minds, they are not fixed by the operation of immutable forces. The demand and supply of the labor market through which wages are established are after all merely composites of subjective prices—the terms on which human beings are willing to hire the services of others or to render their own. There is, in short, plenty of latitude in wage transactions for the exercise of initiative on the part of both employers and workers as well as room for social control.

In summary it may be said that the explanation of wages here offered (like the theory of commodity prices) is based on five principal ideas: the demand and supply mechanism; the institutional framework of the society concerned; the contractual transaction, individual or collective, in which a wage bargain is struck between employer and employee; what it is that specifically determines the limits to both sides of that transaction; and the adjustment of the demand and supply in the market concerned.

THE WAGE BARGAIN UNDER GOVERNMENT REGULATION

Social control over wages in the United States was largely confined to the enactment and administration of minimum wage laws, until extraordinary economic conditions during the period of the Second World War temporarily necessitated more drastic action.

Extent of minimum wage legislation. English-speaking countries, more than any others, have been the home of minimum wage legislation; New Zealand, Australia, Great Britain, Canada, and a majority of the American states have enacted such measures since New Zealand in 1894 and the Australian State of Victoria in 1896 blazed the way. When first enacted such legislation applied only to women.

In some states the minimum wage is a “flat rate” set by law for designated industries. More frequently the law provides for the creation of a board whose duty it shall be to fix the minimum wage in the industries affected after a careful study of the facts and the wage thus set is usually obligatory upon the employer.

While there had been some question about the constitutionality of such legislation in the United States, the Supreme Court seemingly settled the issue when in 1917 it upheld the constitutionality of the Oregon law, on the ground principally that it was a legitimate exercise of the police power of the state.⁵ In 1923, however, the Supreme Court declared the District of Columbia minimum wage law unconstitutional,⁶ and in 1925 the same fate befell the Arizona law. The court now held that the principle of the

⁵ *Stettler v. O'Hara et al.* (constituting the Industrial Welfare Commission), 243 U.S. 629 (1917).

⁶ *Adkins et al., as Minimum Wage Board of District of Columbia v. Children's Hospital*, 261 U.S. 795 (1923).

minimum wage represented invalid interference with the right to contract and also deprived persons of property without due process of law. The effect of these decisions was to render virtually all compulsory minimum wage laws inoperative in the United States. In 1937, however, the Supreme Court reversed itself and held that the State of Washington's minimum wage law for women was constitutional.⁷ The Court again affirmed, as it did in the Oregon case, that the legislation in question was a proper exercise of the police power of the state. The Court in its five-to-four decision stated:

What can be closer to the public interest than the health of women and their protection from unscrupulous and over-reaching employers? And if the protection of women is a legitimate end of the exercise of State power, how can it be said that the requirement of the payment of a minimum wage fairly fixed in order to meet the very necessities of existence is not an admissible means to that end?

The Legislature of the State was clearly entitled to consider the situation of women to employment, the fact that they are in the class receiving the least pay, that their bargaining power is relatively weak, that they are the ready victims of those who would take advantage of their necessitous circumstances. . . .

There is an additional and compelling consideration which recent economic experience has brought into a strong light. The exploitation of a class of workers who are in an unequal position with respect to bargaining power and are thus relatively defenseless against the denial of a living wage is not only detrimental to their health and well-being, but casts a direct burden for their support on the community. What these workers lose in wages the taxpayers are called upon to pay.

Under the National Recovery Administration and until the code-making authority was declared unconstitutional, the principle of the minimum wage was written into all the industrial codes approved by the President.

The most sweeping legislation with reference to minimum wages was embodied in the Fair Labor Standards Act of 1938. It applies to those engaged in interstate commerce, but exempts specific occupations such as agriculture. For the first year of operation of the act, a minimum wage of twenty-five cents per hour was established. The law advanced the minimum wage to thirty cents per hour for the next six years (October 24, 1939, to October 24, 1945), and made it forty cents per hour thereafter, unless Congress should decide otherwise. Actually, the forty cents per hour minimum wage was established in 1943, two years ahead of the regular schedule. In 1949 Congress changed the minimum wage rate to seventy-five cents per hour. Regional differentials in wages are permissible, and may be made by the administrator, entrusted with the enforce-

⁷ *West Coast Hotel Company v. Parrish*, 300 U.S. 379 (1937).

ment of the measure, on the advice of special committees in each industry which he is authorized to appoint.

Theory underlying a legal minimum wage. The basic assumption in minimum wage legislation is that the groups affected need the protection of the law. They need it for two chief reasons: first, because the level of wages in many occupations is too low to permit workers to maintain themselves decently without the aid of others; secondly, because it has proved impossible to organize these low-paid workers into unions for effective collective bargaining. In the case of girls and young women this situation is largely attributable to their inexperience, to the large numbers seeking certain types of employment, to the fact that three fourths of them are partly supported at home, and to the further fact that their occupation is a stop-gap between the conclusion of formal schooling and marriage. Payment of less than a living wage imposes a burden upon someone. It may be society in increased expenditures for hospitals, relief work, or reformatories. It may be the workers themselves in impaired health and efficiency. It may be their families who have other means of support. In any case the products of the underpaying industries are subsidized.

Higher wages on the contrary, it is argued, not only avoid these bad effects but also provide an incentive to increased efficiency. The employer is stimulated to effect improvements in organization and management in order to reduce other-than-labor costs. The employee is enabled to render better service as a result of his improved physical condition and mental outlook.

On account, therefore, of the need of protecting workers, of the bad effects of low wages, and of the positive benefits of high wages (so runs the argument), a legal minimum wage is desirable.

Objections to a legal minimum wage. Many economic objections have been raised to the principle of a legally established minimum wage, but for the most part the gloomy forebodings of opponents have not come true in experience. It has been argued, for instance, that to fix a legal minimum wage means higher wages, which inevitably result in higher prices to consumers, including wage-earners. What this argument overlooks is that the increase in wages does not necessarily require an equal increase in prices and that, if prices must be advanced, the increase is borne by all consumers and not by wage-earners alone.

The argument has also been made that the establishment by law of minimum wages would increase unemployment, because the employer could not afford to run his business on philanthropic principles and consequently must dismiss workers whom he cannot profitably employ at the legal minimum. To meet the problem of the sub-standard worker, most statutes provide for the employment of such less efficient workers at lower wages provided such action meets with the approval of the regulating

board. In practice there has been no considerable and permanent displacement of workers as a result of minimum wage legislation. Soon after the Fair Labor Standards Act was put into operation in 1938 some unemployment developed, because certain industries such as pecan-shelling, the lumber mills, and the telegraph declared that they could not afford to pay the required minimum. The administrator of the law, however, estimated that less than one half of one per cent of the workers affected by the act were laid off as a result of a prohibitively high minimum wage.

It has frequently been contended that in practice the minimum wage would become the maximum. But this *a priori* assumption has also proved groundless in experience. After the new lower limit has been set and time allowed for adjustments, variations in wages between the more and the less efficient workers have continued to exist. If the minimum wage were actually to become the maximum, the better workers might lose some of their incentive to do good work, which would be to the detriment of industry. No minimum wage law contemplates fixing wages; it merely as a protective measure sets the lower limit below which wages shall not fall.

Organized labor itself has often been none too friendly to minimum wage legislation. Some of its leaders have feared that the labor-union movement might lose prestige with the workers if wage gains could be secured without the aid of the unions. This fear, too, has proved gratuitous.

Results of minimum wage legislation. What limited experience we have had with the minimum wage leads to the conclusion that such legislation tends to raise the level of wages without effecting an equal rise in prices. Experience until recently, however, has largely been restricted to the poorest-paid women workers.

Minimum wage laws have tended to make "parasitic" industries self-supporting. If improvements in production cannot be made or the consuming public will not pay the price necessary to permit a living wage, the industry deserves to perish.

Such laws have removed the handicap of the enlightened employer, who was willing to pay higher wages but was restrained from doing so by the necessity of meeting the competition of producers paying low wages.

The legal compulsion of paying a minimum wage has focused attention upon the whole problem of low wages, including the incapacity of some individuals to earn a minimum wage as well as the reputed inability of some industries to pay it. This in itself is a social service of no mean importance and of much promise.

War-time control of wages. The Government of the United States was compelled during the period of the Second World War to exercise firm control over wages and salaries in order to curb inflation and to prevent as much advance in the cost of living as possible. The National War

Labor Board had jurisdiction over wages and the Salary Stabilization Unit of the Bureau of Internal Revenue in the Treasury had control over salaries. Their approval was a prerequisite to any proposed advance in wages or salaries that were subject to their jurisdiction. Perhaps the best known wage-control device of the war period was the so-called "Little Steel formula." This was announced by the War Labor Board in connection with its handling of a wage controversy arising in certain steel plants. It stated that wage increases were to be limited to 15 per cent above the rates effective in January, 1941, this being the approximate advance in the cost of living between January 1, 1941, and May 1, 1942. Congress also passed a price stabilization act on October 2, 1942, in which it directed that so far as practicable wages, salaries and prices should be stabilized as of the level of September 15, 1942. In April, 1943, President Roosevelt issued his "hold-the-line order" to halt inflation. He directed that there should be "no further increase in wages or salaries except such as are clearly necessary to correct substandards of living," and excepting such changes in wages within the Little Steel formula as may be made to compensate for the rise in the cost of living between January 1, 1941 and May 1, 1942. In issuing his order the President further stated that prices which had already risen above their 1942 levels "should be rolled back." Obviously it was the intention of the government to permit wage increases equal to the rise in the cost of living as defined in the Little Steel formula and to the extent that this was greater than the stated 15 per cent to reduce the cost of living by rolling back prices. While the war-time attempt of the government to hold wages and prices in check did not meet with uniform success (or coöperation), it undoubtedly contributed greatly to the prevention of much sharper advances in prices and the cost of living than actually took place.

With the close of the Second World War such governmental controls over wages ceased except for minimum wage legislation. But when in the summer of 1950 the United Nations rushed to the defense of South Korea, and the United States was called upon to supply the major part of that defense, Congress re-established emergency powers over both commodity prices and wages.

FACTORS CREATING WAGE DIFFERENTIALS

The more important determinants, both general and specific, of the terms on which employers and workers are willing to enter into current wage contracts have been indicated in the preceding analysis. But there are important long-term factors affecting particularly the relative numbers of workers in various lines of productive effort and the marginal productivity of labor, which help to account for differences in wages.

Proportioning the factors in production. Most important among these is the proper proportioning of the factors in production. Labor does not work alone. Its productiveness directly depends upon the amounts and efficiencies of the capital and land with which it works, and upon the skill of management in coördinating all the factors in production. When labor is relatively scarce and the other productive factors are abundant, wages are apt to be high. This has notably been true in the United States through many years of our history. But when the other factors are scarce relative to the labor supply, wages are bound to be low. Most of the Orient furnishes a good illustration. When inexpert management combines labor with something less than the most effective combination of capital and land, wages are certain to suffer. When skilful management, on the other hand, combines labor with the most efficient combination of the other factors in production, wages stand to benefit. Whatever social changes cause the labor supply to increase faster than the supply of other productive agents will bring about a reduction in wage rates. Conversely, whatever causes the accumulation of capital or the supply of available natural resources to increase more rapidly than the labor supply will lead to a rise in wage rates. The underlying reason for the results indicated in each of these situations is supplied by the *principle of proportionality*. Whatever causes an increase in the ratio of labor to the other factors of production employed with it tends to lower the marginal productivity of labor and the wages based thereon. Similarly, whatever causes a decrease in the ratio of labor to the other productive agents associated with it, tends to raise the marginal productivity of labor and the wages based thereon. If an increasing number of workers must share a fixed supply of capital goods and natural resources, the aggregate social income may be increased, but the marginal productivity of labor will fall.

What the management of business enterprise is constantly doing, if it is alert, is to work for the combination of factors that will allow production to proceed at the lowest cost per unit of output. If labor costs are high and there is the possibility of substituting labor-saving machines for some of the labor, this will be done. If capital costs are high in relation to labor, the introduction of new capital goods will be deferred, and more labor will be employed. Equilibrium in the demand for the factors of production is not reached until there is nothing further to be gained by changing the proportion of these factors.

The effects of changes in the technology of production upon the status of the worker have already been partly discussed.⁸ A distinction was drawn between the short-time and the long-time effects of the introduction of improved machinery and other methods of production. The

⁸ Cf. Chap. VI, "Labor Organizations and Their Policies in Production," pp. 154-155.

short-time effects may be highly prejudicial to the interests of the affected workers, while the long-time effects may prove beneficial. New inventions may radically alter the most advantageous proportioning of the factors in production; this may result both in the unemployment of some previously employed and in the greater productivity of those that succeed in retaining their jobs. Much depends upon the elasticity in the demand for the products of labor and so for labor itself. If the new techniques in production lower unit costs and prices, they may stimulate a greater volume of demand and so help to maintain both wages in the aggregate and wage rates. But if the demand is not elastic, opposite results will follow: some workers will be discharged, and will have to compete for available jobs elsewhere. On the whole, however, improvements in the technique of production have worked out beneficially not only for society in general, but for labor in particular. After all, there are few goods for which the demand is highly inelastic. Improvements in production which substantially lower costs usually not only stimulate a greater aggregate demand for the good concerned, but also create new types of employment, such as those involved in the production of labor-saving machinery.

Division of labor supply into non-competing groups. The productivity of labor is affected by the fact that the labor supply of a modern people is stratified into numerous non-competing groups—the unskilled, semi-skilled, and skilled manual workers, clerical workers, business and industrial executives, members of the professions. This somewhat reduces the intensity of competition within each group. If everyone were able to do the work of everyone else, if there were perfect mobility of labor from occupation to occupation, the marginal productivity of labor in most occupations would be much less than it is. But of course there is no such mobility and free substitution of one person for another. Differences in natural ability, training, and force of circumstances limit the competition of most workers to their own occupational groups. Skilled workers and professional men do not normally compete with unskilled laborers for their jobs, although there were numerous instances of such competition during the depression of the thirties. Gifted artists stand by themselves. Many men become so eminent in their professions that they have no real competition. There are striking differences in the hereditary endowments of men which affect the type of work they can do. There are enormous differences in environment, particularly of home, school, and other training agencies which largely determine the opportunities men will have. Such differences in endowed capacity, training, and environmental opportunity inevitably lead to great differences in wages and other forms of compensation. To the extent that these differences persist from generation to generation, the labor supply will continue to consist of non-competing groups. In a democratic society capable individuals may rise from group

to group, but the groups themselves persist. Marginal productivity, it is true, has much to do with the determination of wages, but marginal productivity varies from group to group, and some of the groups are non-competing. Whoever can produce a highly differentiated product that society badly wants, whether it be a commodity or a service, is in a position to command a high price for his work. The highest wages are paid to those in small non-competing groups, whose services are in great demand. The fabulous sums sometimes paid to great artists, and even to champion prize-fighters, illustrate the principle. "There is always room at the top" is the familiar way of saying that there is little competition when one is at or near the top of one's profession, and the prospect of large rewards is correspondingly great.

The nature of the occupation. The character of the occupation has much to do with the number of workers seeking to enter it and their possible productivity. Relative scarcity of workers is apt to mean large marginal productivity, which makes possible the payment of high wages. Some wage differentials are largely explicable in terms of the occupation itself.⁹ The work of some occupations is more attractive than that of others. The greater psychic income of the more agreeable occupations is an offset to lower wages actually received. University professors sometimes receive lower salaries than are commanded by men of equal ability and training in other professions. The profession is alleged to enjoy such prestige, flexibility of hours, shortness of the working year, opportunity for scholarly achievement, and great joy in "teaching the young idea how to shoot" that men are willing to accept lower salaries to occupy professorial posts. For the same reason many men are willing, at least temporarily, to give up lucrative private positions for the opportunity of filling the higher governmental posts. The glamour of office, the distinction it confers, the spot-light of publicity, and the thrill of power conspire to make governmental positions highly attractive to some men. Again there are men who prefer the lower pay of certain clerical jobs ("white collar" jobs) to the higher pay of skilled labor which they might perform, because the former type of work is more agreeable to them and impresses them as more dignified. Similarly, girls working in factories and retail stores work for less than the total income they might receive in many parts of the United States as domestic servants. If there were perfect mobility of labor, the more agreeable occupations would be crowded and the wages earned would be lower than in the less attractive occupations. Sometimes the more disagreeable occupations do yield higher rates of pay. Adam

⁹ Cf. Adam Smith, *Wealth of Nations*, Book I, Chap. X, for a suggestive treatment of this subject in 1776. An excellent modern discussion is presented in F. W. Taussig, *Principles of Economics*, 3d ed. (New York, The Macmillan Company, 1921), Vol. II, pp. 131-152.

Smith observed, "The most detestable of all employments, that of public executioner, is, in proportion to the quantity of work done, better paid than any common trade whatever." Usually, however, the coarse, dirty, hard, heavy work of the world, socially necessary as it is, does not command any premium over the easier and more agreeable work. The reverse is true: the more agreeable work is better paid. The reason is that many more persons are capable of performing the less agreeable common labor, and are not free, through lack either of ability or of means, to choose the more agreeable occupations.

Some occupations cannot offer great regularity of employment. Coal-mining unfortunately still belongs in this class. Members of certain crafts in the building industry, such as bricklayers, stonemasons, and plasterers, do not find as steady employment even when the construction industry is active as do their fellow-craftsmen whose work is less seasonal. Perhaps one reason why football coaches commonly receive higher salaries than their academic colleagues in less colorful subjects lies in the fact that the employment of the former is frequently short-lived. Other occupations are attended by great danger. Not many persons care to risk their lives either as steeple-jacks or deep-sea divers. Still other occupations necessitate protracted preparation and extensive outlays to enable workers to qualify for them, which is true of most professions. In all cases the effect is to restrict the numbers of persons able and willing to offer their services, which leads to greater productivity per worker for those that find employment in such occupations.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. It is possible to increase the value productivity of labor by decreasing its physical product.
2. Since the efficiency of workers does not usually decrease during depressions, changes in the productivity of labor cannot be used to explain why employers are willing to pay only greatly reduced wages at such times.
3. The fact that wages have been raised by collective bargaining shows that in practice employers can pay more than the marginal product of labor.
4. Collective bargaining for the purpose of obtaining higher wages is futile, since according to the marginal productivity theory of wages workers will tend to receive the value productivity of their labor.
5. In the long run the mechanization of industry tends to raise wages for those that find employment.
6. The option of free land in the United States long had a beneficial effect upon wage levels in this country.

7. The supply of highly skilled labor is inelastic for both the short run and the long run.
8. The upper limit of the wage-bargain is established by the marginal productivity of labor.
9. The standard of living desired by the workers, rather than their present level of living, establishes the lower limit of the wage-bargain.
10. The basis for the division of the total labor supply into non-competing groups is the lack of perfect mobility of labor from occupation to occupation.
11. Diminishing productivity is only a tendency and does not work out in practice because inventions are always being made which increase productive efficiency.
12. If the same amount of labor in a particular industry can now produce twice the quantity of goods that it did ten years ago, the workers in that industry are now entitled to double the wages they were receiving then.
13. The standard of living is not a factor in the determination of future wages, but is a result of past wages.

B

I.

	<i>Average Weekly Earnings</i>			<i>Consumers' Cost-of-Living Price Index (1935-39 = 100)</i>
	<i>Textile Workers</i>	<i>Rubber Workers</i>	<i>Paper Workers</i>	
January, 1949 .	\$44.89	\$56.89	\$55.54	170.9
January, 1950 .	47.36	60.56	57.52	166.9

- a. Compute the real wage of each of the above groups of workers for 1949 and 1950.
- b. Which of these three groups of workers was better off in 1950 than it was in 1949?
- c. What is the percentage change in money wages for each of the above groups of workers from 1949 to 1950?
- d. What is the percentage change in real wages for each of the above groups of workers from 1949 to 1950?
2. The ABC Radio Corporation is one of fifty independent companies manufacturing radio receivers for use in the home. These fifty companies are the only ones producing this particular type of radio receiver. Except for slight differences in the cabinets, the radios made by all of the firms are essentially the same. The employees of all of the firms in the industry belong to one big radio workers' union. The entire economy is operating at very near full employment.
 - a. With respect to the ABC Radio Corporation, would a substantial increase in the legal minimum wage be most likely immediately to affect the profits of the company, the selling price of the radios, or the number of workers employed by this firm?
 - b. Would the answer to the above question differ if: (1) conditions of less than full employment prevailed? (2) none of the workers

in the industry were organized? (3) instead of fifty companies there were only two?

3. A furniture manufacturer has a division of his plant which produces only one type of office chair; this chair has a market price of \$50.00. The employees in his establishment are members of a furniture workers' union which has an agreement with the manufacturer calling for the payment of \$300.00 per worker per month. In this instance all of the workers are considered to be of about equal efficiency. His production records indicate a variation in output of this division of his plant as follows:

<i>Number of Workers Employed</i>	<i>Total Number of Chairs Produced per Month</i>	<i>Number of Workers Employed</i>	<i>Total Number of Chairs Produced per Month</i>
0	0	8	150
1	9	9	171
2	21	10	189
3	36	11	204
4	54	12	216
5	75	13	225
6	99	14	231
7	126	15	234

- Under the wage conditions stipulated above, how many workers would this manufacturer hire to produce office chairs?
- What is the maximum return (after deduction of labor costs) that this manufacturer could expect?
- Graph the "wage rate" and the "value of the marginal product" curves.

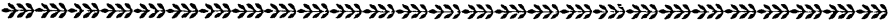
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CHAPTER XXIII

Interest



NATURE OF INTEREST

PERHAPS THE MOST persistent and pervasive price problem in the entire field of economics is the problem of what determines the rate of interest. In practical economic matters we are constantly assuming the operation of interest rates. When we use average net earnings, for example, as a base for determining the fair capital value of a business enterprise, we must assume some *rate* of return. When net earnings are capitalized they must be capitalized at some rate, and the determination of this rate involves the interest problem. If the average annual net earnings of a business are \$80,000, and 8 per cent is considered a fair rate of return in such business enterprises, we say that the fair capital value of the business is $\$80,000 \div .08$ or \$1,000,000. But why is 8 per cent assumed to be a fair rate of return? Why is not 6 per cent fair enough, or 10 per cent just as equitable? The answer to such questions is based on the existence of market interest rates. In the discussion of bank loans, discounts and rediscounts, the rates of international exchange, the general level of railway rates and specific rates based on cost of service, cost of production as an element in price, the discounting of the value productivity of labor—all topics discussed in previous chapters of this book—interest rates were taken for granted. No question was raised as to where they came from or what set them at one level rather than at another. In subjects still to be considered such as the capitalization of the economic rent of land, general price changes, the cyclical movement of business, and insurance premiums, interest rates will again figure. Since the rate of interest is not only an important element in the cost of doing business, but is also basic to the rates of return assumed in many business valuations, it is evident that the theory of interest is important in explaining many valuations of the market. The present chapter is largely concerned with an analysis of the interacting forces which result in the establishment of rates of interest.

Interest is the price paid or imputed for the use of capital. Whether the owner of capital lends it to someone else or employs it in his own business is immaterial as far as the fact of interest is concerned. In either

event capital is worthy of its hire. Some owners of capital are either unable or unwilling to assume the risks of entrepreneurs; they prefer to lend their capital to others and to accept interest payments in return. Such interest is called *loan interest*. Others prefer to use capital in their own business enterprises, properly attributing part of the business earnings to the invested capital and allowing interest for its use. This is *imputed interest*. Conventionally, the value of capital is expressed in money, and both *loan interest* and *imputed interest* are amounts which are computed as a percentage (5 per cent, for example) of the capital value measured in money. The annual interest on \$100,000 borrowed from an investment bank may be \$5,000, which is 5 per cent of the value of the borrowed capital. A direct investment of \$100,000 in a business by its owners may yield a return of \$8,000, which is 8 per cent of the value of the invested capital. Part of this return is imputed interest; the rest, as will be explained in a later chapter, may be profits. Since it is in the market for loanable funds that the forces determining interest most clearly reveal themselves, it is more instructive to begin with a study of loan or contractual interest than to try at once to explain the yield on invested capital that has not been borrowed at all, that is, to explain imputed interest.

It will further expedite our understanding of the interest problem and interest rates if a distinction is made between *gross interest* and *net or pure interest*. The ordinary interest paid on a loan is gross interest. It includes not only a payment for the cost of saving, which is pure interest, but also payments for risk, and for services in connection with the making and supervision of the loan interest contract. The savings necessary to carry on the lending business of the world are not made without cost to someone. The risk in loan interest contracts may be due to the possibility of losing the investments in part or whole because of the inability of borrowers to make payments, or because the payments may possibly be made in a monetary unit of smaller purchasing power. In the making of loans, whether by banks or pawnbrokers, there are necessary expenses in conducting the lending business, which must be covered in the loans made.

It is a common mistake in discussing loan interest to speak about "*the* interest rate," as if there were but one. Whatever may be true about net interest, there are many different rates of gross interest. Loan interest rates vary enormously from market to market, and with the character of the loans. Toward the close of 1950 bankers' acceptances were quoted in New York at $1\frac{3}{8}$ per cent; commercial paper, at $1\frac{1}{2}$ per cent; call money, at $1\frac{3}{4}$ per cent; and time money, maturing in ninety days, at $1\frac{3}{4}$ per cent. Ordinary customers' loans, on the other hand, in many interior cities were bearing interest rates of 4, 5, or 6 per cent per annum, and on the so-called "small loans" of personal or household finance companies rates as high as $3\frac{1}{2}$ per cent per month or 42 per cent per year were quoted.

FORMER DISREPUTE OF INTEREST-TAKING

The taking of interest was long in disrepute. This is not surprising, for the recognition of capital as a distinct factor in production and its use on the colossal scale that we know today are comparatively recent developments. What is more, the extensive use of borrowed capital in the conduct of business operations is distinctly modern. When borrowing was largely for the occasional exigencies of life or the necessities of personal expenditure, the asking and taking of interest were usually condemned. Aristotle had said, "Money does not breed," and also, "Money is intended to be used in exchange, but not to increase at interest." Both the Old and the New Testament condemn the exaction of usury, as interest was formerly called. In *Deuteronomy* 23:20 we read: "Unto a stranger thou mayest lend upon usury; but unto thy brother thou shalt not lend upon usury." "Lend, hoping for nothing again," was the admonition of Jesus as recorded in *Luke* 6:35. The authority and teaching of the Church were against the taking of usury. Shakespeare's Antonio in *The Merchant of Venice* reflected the prevailing view of the time. Antonio, seeking a loan of 3,000 ducats for his friend Bassanio, about to depart on the great adventure of winning Portia's hand, goes to Shylock, who in an aside remark says to the suggestion of a friendly loan:

How like a fawning publican he looks!
I hate him for he is a Christian;
But more for that in low simplicity
He lends out money gratis, and brings down
The rate of usance here with us in Venice.

Antonio in arguing for the loan says to Shylock:

If thou wilt lend this money, lend it not
As to thy friends: (for when did friendship take
A breed of barren metal of his friend?)
But lend it rather to thine enemy;
Who, if he break, thou mayst with better face
Exact the penalty.

Gradually the views of men concerning the nature of interest and the propriety of taking it changed. As a concession to traditional views, however, the taking of interest was at first cleverly camouflaged. It was sometimes regarded as a fine for failure to repay the loan when it matured; but there was frequently a *sub rosa* agreement that there should be delay in the repayment of the loan in order that interest as a fine might properly be imposed and collected. When money could be used productively, interest came to be regarded as compensation for the sacrifice of possible opportunities by the lender in letting others employ his money instead of using it himself. Ultimately, interest was justified whenever the recipient

of a loan employed it in a profit-making venture. For when borrowed capital funds are no longer primarily used for consumption purposes but rather in acquisitive enterprises, why should not the owner of the funds receive some reward? As the demand for loanable funds greatly increased with the steady growth in the capitalistic character of modern industry, the old view of interest as taking advantage of a man's necessities gave way to the modern conception of the necessity of interest as compensation for waiting or saving. Neither the payment nor the taking of interest is any longer in dispute. Shylock, who took interest when it was counter to the prevailing custom of his age, was merely hundreds of years ahead of his time.

FUNCTIONING OF THE LOANABLE FUNDS MARKET IN THE DETERMINATION OF INTEREST RATES

Loan interest rates are prices set in the markets for loanable funds just as commodity prices and wages are set in their respective markets. Wherever borrowers and lenders congregate a loanable funds market may operate. Usually such markets function in the offices of banks, investment houses, insurance companies, and kindred lending institutions. Borrowers usually approach the lenders for the use of funds, though in times and at places of redundant funds lenders may take the initiative in finding desirable borrowers. Loanable funds markets are of two great types: money markets and capital markets. The distinction between them is mainly the distinction between commercial banking and investment banking; between the short-term and long-term placing of funds; between investments in readily liquidated loans and in more permanent commitments. In these markets a great variety of loans is daily negotiated at widely different loan interest rates depending upon the character of the loan and the degree of risk involved. The structural set-up of loanable funds markets is similar to that of the commodity markets already considered. The *market* is a series of *transactions* between *parties* whose *subjective prices* are the terms on which they are willing to become borrowers or lenders. These subjective prices, which in the aggregate constitute the demand and supply of any market, are affected by certain *general* and *specific determinants*. Loan interest theory seeks to set forth these specific and general determinants of the subjective prices of parties to interest transactions in a given money or capital market.¹

The theoretical problem involved in a transaction of the loanable funds

¹ For a description and analysis of the functioning of the commodity market cf. pp. 400-403; of the labor market, cf. pp. 497-499. In the analysis of the loanable funds market in the present chapter the broad outlines of the functioning of a market are not again sketched. Only distinctive variations from the commodity and labor markets are here indicated.

market may be suggested by the following situation. A merchant who has good credit standing goes to his bank for a loan of \$10,000 for six months. He gets it and agrees to pay the bank interest at the rate of 4 per cent per annum. When the maturity date arrives he promptly pays the bank the principal sum of \$10,000, which he had borrowed, plus interest amounting to \$200. In the explanation of the interest problem in this typical transaction three questions are involved. How is it possible for the merchant to pay his bank not only \$10,000 but \$200 besides? Why is it necessary for him to pay the bank this extra sum called interest? What determines the rate of interest he must pay? The interest might conceivably be either higher or lower. The answer to the last question involves answers to the first two. Theoretical analysis of the rate of interest necessitates consideration of both the possibility of paying interest and the necessity of doing so.

As in the commodity and labor markets, so in the market for loanable funds there are both general and specific determinants of the subjective prices of the actual and prospective borrowers and lenders. Custom is notably strong in its influence upon what is known as the customers' loan rate. This accounts to a large extent for the persistence of a 6 per cent interest rate in many communities even when economic conditions warranted a change. Public authority in the United States usually sets an upper limit to the legally collectible interest rate. Any rate greater than the legal maximum, 10 per cent for example, is usury. Sometimes a local and temporary monopoly of loanable funds has permitted lenders to place their rates abnormally high, as in the call money market for example. For the most part, however, the loanable funds market is highly competitive. Money funds are the most mobile of the productive agents and consequently can readily take advantage of changes in the demand for them by seeking the best market. While these general determinants of the subjective prices of prospective borrowers and lenders are influential in helping set the price for loanable funds in the market, there are even more important specific controlling determinants. These fix what the borrower can afford or is willing to pay, and the minimum that the lender can afford to receive. Analysis of the price-offers of prospective borrowers and of the reservation prices of prospective lenders, and of how they interact in the establishment of a market interest rate, is one task of interest theory.

Again it must be pointed out that we live in a world of prices, including interest rates. We do not have to work them out each day as if they had never been established before. Prevailing interest rates, the "going" rates of any market, strongly influence the subjective prices of prospective borrowers and lenders. Any given interest rate, to be sure, is the resultant

of the market demand and supply, but the "going" rate so established affects future demand and supply, and so the interest rates of tomorrow.

EXPLANATION OF THE DEMAND FOR LOANABLE FUNDS

The explanation of interest, like the explanation of wages and commodity prices, necessitates an adequate analysis of demand and supply. Loan interest is simply a special kind of price, controlled by the forces of demand and supply as are other prices. Whatever makes up the demand for funds, whether the necessities of consumers, the needs of the government, or the productive opportunities of entrepreneurs, and whatever conditions the supply of funds, whether the savings of individuals or the accommodation of banks and other institutions, have a bearing upon the interest problem and the explanation of interest as a market price. Market prices emerge at the points of adjustment between demand and supply. Interest is no exception, and consequently whatever factors are operative in the loanable funds market must be taken into consideration. Some factors are much more important than others; some principles are more inclusive than others, but none offers an exclusive explanation of all the problems involved in the determination of market interest.

Meaning of the demand for loanable funds. The demand for loanable funds is the amount that prospective borrowers are ready to take at specified prices in a given market at a given time. Of the total demand for loanable funds at all possible rates, some is translated into an actual market price through the conclusion of a loanable funds transaction, while some remains potential awaiting more favorable conditions to become actual. The demand, whether actual or potential, expresses the subjective prices of prospective borrowers. The immediate task in loan interest analysis is to set forth what determines these subjective prices of prospective borrowers.

The desire for loanable funds, however urgent, is not equivalent to effective demand. If the desire of prospective borrowers is to have any market significance, it must be supported by purchasing power in the form of good credit standing capable of making it effective. A borrower's credit turns on both his character and his capacity and, in the case of larger loans, upon the amount of his free capital assets or the security that he can offer as collateral. A potential borrower at a bank may establish his credit standing by filing a statement of his assets and liabilities. If this is satisfactory to the bank, he will be given a line of credit entitling him to borrow up to the maximum credit extended him by the bank. If he prefers to pledge collateral security for any loan to which he becomes a party, this is also acceptable to any lender. The borrower's credit is of

importance to the lender as assurance that the loan with interest will be promptly paid when it matures.

There are two main sources of demand for loanable funds. One is the demand of consumers who want funds in order to be able to acquire certain highly desired goods at once. The other is the demand of entrepreneurs who want funds in order to be able to use them in production. Both consumer-borrowers and entrepreneur-borrowers may have to borrow at times for the purpose of meeting other maturing loans.

Demand for private consumption loans. Consumers having intense present wants and inadequate present income but anticipating greater future income, and consumers having a hazy view of the importance of future wants, due either to their ignorance or to their natural improvidence, enter the market as prospective borrowers. Consumption loans were once the rule rather than the exception. Although such loans are now overshadowed by production loans, they are still of large importance in the aggregate market demand. The large business of the small loan companies and the survival of pawnbrokers and "loan sharks" are evidence of this. A good many mortgage loans and collateral loans are also made for consumption purposes. Instalment purchases, in which interest-bearing notes or contracts are signed for unpaid balances, are other examples. While some borrowing for consumption is by those lacking providence and foresight, much of it is due to straitened financial circumstances which prompt the borrowers not only to pledge their resources but also to strain their credit.

Perhaps this type of borrowing may be seen under the most justifiable circumstances when a loan is negotiated to provide for some family emergency, such as medical service, surgery, and hospitalization. A consumer-borrower in this situation may be said to have a high degree of preference for present funds over future funds. Present dollars will enable him to do something for the stricken member of his family; future dollars may come too late. The marginal utility of the services which the borrowed dollars will command is very great. Accordingly he is quite willing to pay a premium for the use of these funds now. His *time-preference*, as his preference for present goods over future goods of like kind and number is called, may be represented by saying that he is perfectly willing to pay \$1,060 or more a year from now for the immediate use of \$1,000. Such consumption use of borrowed funds creates no surplus out of which interest can be paid. Consumer-borrowers must simply mortgage their anticipated future income from whatever sources derived to pay back the borrowed funds with interest. Consumption loans are not self-liquidating. The possibility of paying interest on such loans turns entirely on the adequacy of income from service and investment sources other than the purpose for which the borrowed funds were spent.

Demand for public consumption loans. Much governmental borrowing must be classified as consumption loans. The expenditure of the borrowed funds does not create income out of which to repay the loans with interest, and so they too are not self-liquidating. Borrowing to help provide the funds for carrying on a war is borrowing of this type. Loans necessary to pay the soldiers' bonus in the United States and loans amounting to billions of dollars in order to provide direct relief during the depression of the thirties are other examples of governmental loans made for consumption purposes. The United States Treasury was the dominant factor in the loanable funds market during the periods of both the First and the Second World Wars, and for a time it was the only really large-scale borrower during the depression of the nineteen-thirties. During the years following the Second World War one half to two thirds of all loans and investments made by the nation's banks were represented by United States Government obligations. The United States Treasury is still the largest factor in the loanable funds market and bids fair to remain such for a long time to come. And most of this borrowing is for public consumption purposes, past or present. The possibility of repaying all such loans with interest depends upon the ability of governments to levy and collect taxes. By resorting to the public credit governments may postpone for a time the necessity of raising revenues large enough to meet current expenditures.

Not all government borrowing, of course, falls into the class of consumption loans. Governments, like individuals and business units, may borrow to invest the funds in productive enterprises.

Demand for production loans, private or public. In times of prosperity the great bulk of the demand for loanable funds comes not from consumers but from producers. Entrepreneurs demand loanable funds because they believe that they can convert these funds into capital goods which will prove sufficiently productive "to pay their own way." They think they see attractive opportunities for investment. The entrepreneur's higher valuation of present dollars than of future dollars is due to the fact that they enable him to engage in the profitable roundabout processes of production.² What the entrepreneur is primarily interested in is the probable

² It was Bohm-Bawerk, the great Austrian economist, who in developing his own *agio* or premium theory of interest (present goods command a premium over future goods of like kind and number) included what he called the "technical superiority of present goods" as a cause of interest. What he meant by this term was that present goods enable one to undertake the more roundabout or capitalistic processes of production, which are more productive than the direct methods, that do not employ them. Such technical superiority of present goods, he argued, must be included in the explanation of why men put a higher estimate upon present goods than they do upon future goods. Cf. Eugen v. Bohm-Bawerk, *The Positive Theory of Capital*, tr. by William Smart (London, Macmillan and Co., Ltd., 1891), Book V, Chap. IV.

course of business, the trend of costs and prices, and the prospect for profits. If the economic outlook in these respects is promising, business men will be tempted to borrow in order to produce at capacity and perhaps to expand their operations. As long as the prospect of profits is alluring and anticipated receipts look amply large to cover all necessary costs including interest, the desire to borrow will be strong in entrepreneurs, who are the professional risk-takers of business. It is hopes and anticipations that make borrowers out of business men.

The entrepreneur's demand for loans depends upon his expectation concerning the productivity of capital.³ The productivity of capital does not mean mere physical productivity, such as the larger output of wheat or cotton cloth that results from the use of the best capital equipment. This is important but not conclusive as far as the demand for capital is concerned. Merely to prove that the use of capital goods results in a quantitatively larger product is not sufficient proof of the desirability of employing capital goods from the entrepreneur's point of view. He can only afford to borrow provided the use of capital results in a more *valuable* product than he could obtain without it. Out of this more valuable product he is able and willing to pay interest and ultimately to retire the loan. Such value productivity of capital helps to explain the demand for loans.

The productivity of capital, like that of every other agent of production, is subject to the law of diminishing productivity, and is measured by its marginal productivity. If the amount of capital in a given establishment is increased, all other factors remaining the same, within limits the total product may be somewhat increased; but sooner or later the point of diminishing productivity is reached—the point beyond which the product per unit of capital decreases as the number of units is increased. There is an ultimate decreasing effectiveness in the use of capital in any enterprise, just as there is in the use of labor, which affects the total value productivity of capital. What every entrepreneur strives to achieve is that particular combination of capital with the other agents in production which will enable him to produce most efficiently and to sell most cheaply. He may be able to use more capital to get a better balance. He may need it and want it not to duplicate or multiply his existing tools, machines, and other equipment and materials, but to substitute better capital goods for those already in use. Sooner or later, however, he achieves such a balance that he can no longer use additional capital as advantageously as his earlier instalments, even if he can use it at all. Under such conditions, if the productivity of new capital is to be maintained or even increased, other uses for it must be found.

³ Capital is not productive at all except as it is employed by labor. There is no separate and independent productiveness of capital. The productivity of capital arises when capital goods are used by labor in producing want-satisfying goods.

If we may assume an economic society in which capitalistic methods of production are generally employed and competition is effective, the subjective price of producer-borrowers tends to be measured by the marginal productivity of capital. It is the least effective or marginal use to which he puts or can put a unit of capital that determines what the producer-borrower can afford to offer for it. The more adequately supplied he is with capital, after a certain point in its utilization has been reached, the lower is its marginal productivity. On the other hand, scarcity of capital makes for higher marginal productivity. The marginal product of capital represents what capital is worth to the entrepreneur, what a producer-borrower can afford to pay for its use. It guides him in deciding upon the possible use of additional units of capital. The marginal productivity principle expresses the fact that the entrepreneur's demand for loan-capital is measured by the least productive but nevertheless worthwhile use to which the capital can be put. Some economists have sought to explain interest in terms of the marginal productivity of capital. To explain interest wholly in terms of the marginal productivity of capital, however, is to offer an unrealistic explanation. Such a theory assumes a perfection of competition, a degree of mobility, and a knowledge of conditions which usually do not exist. At most the principle of marginal productivity explains the demand for production loans and the source of interest on such loans. It offers no explanation of the demand for consumption loans. It furnishes no adequate analysis of the supply, or of the equilibrium between demand and supply which sets the market interest rate.

The demand for loanable funds from whatever source derived—private consumption, public consumption, or production (private or public)—in interaction with the supply, advanced by individuals or business institutions, sets the market interest rate. Without such demand there might still be a psychological preference for present goods over future goods, but there would be no market interest rate. With such demand effective there is the possibility of paying interest.

EXPLANATION OF THE SUPPLY OF LOANABLE FUNDS

Meaning of the supply of loanable funds. The supply of loanable funds in a given market at a given time is the amount that prospective lenders are willing to lend at specified prices. Like the supply of commodities and labor, the supply of loanable funds available in a given market tends to be larger at the higher rates. The supply of loanable funds ultimately rests on the savings of a people. For the accumulation and placement of loanable funds in the market there must be confidence in the future security of savings, which implies stability of government, at least relative stability

of the currency, and stability of basic economic institutions and laws. The necessity of paying interest arises because the supply of loanable funds, which convey immediate purchasing power, is limited. If it were literally unlimited and could be had for the asking, no loan interest would have to be paid.

The principal sources of the supply of loanable funds are the savings of individuals, corporate savings, advances by the government, and lending by banks. What limits the supply of each and the conditions under which it will be forthcoming in the market are considered next.

Loanable funds supplied by individual savings. The volume of individual savings depends both upon the size of the income of persons and upon their willingness to forgo present enjoyments for future satisfactions. There is a relatively small number of individuals in most countries whose incomes are so large that saving for them is the easiest thing they do. Saving for such individuals is both painless and effortless. But this is not true of the great majority of people because their disposable incomes do not permit much of any margin beyond providing their necessities. A study of American consumption and savings for 1929 (the year before the severe depression of the thirties and the year in which the national income was highest until we reached the incomes of the Second World War period) showed that the aggregate savings of the 27,474,000 families in the United States amounted to \$15,139,000,000.⁴ This was out of an estimated aggregate income of approximately \$77 billion, or approximately \$2,800 per family. The average number of persons per family was just a fraction over four. The median family had an income of \$1,700; that is to say, there were as many families with incomes less than \$1,700 as there were with incomes in excess of that amount.”⁵ Since almost no American family of four would experience any insuperable difficulty in spending the modest sum of \$1,700 or even \$2,800 each year, provided they had it to spend, it is entirely safe to conclude that saving for the great mass of persons definitely involves effort and cost.

This conclusion is even more strikingly supported by the study made on *Consumer Incomes in the United States* by the National Resources Committee. A nation-wide sample of the incomes in the twelve-month period from July, 1935, through June, 1936, of more than 300,000 families and individuals provided estimates for 39 million consumer-units—29 million families and 10 million “single” individuals. The report estimates that 69 per cent of all these consumer-units received less than \$1,500 for the year. The median income of the entire group was \$1,070 per consumer-unit and the arithmetic mean was \$1,502.

⁴ Maurice Leven, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume*, (Washington, The Brookings Institution, 1934), pp. 93-94.

⁵ *Ibid.*, p. 52.

Even with a family median income in 1949 of \$3,100 and an arithmetic mean income of \$3,760, the same conclusion stands: saving for the majority involves effort and cost. Changes in the price level from 1929 to 1949, and large increases in federal individual income taxes, have not made the task any easier.

A *Survey of Consumer Finances* made under the sponsorship of the Board of Governors of the Federal Reserve System in 1949 shows that

The most frequently reported forms of saving were the same in 1948 as in earlier years—life insurance premiums, additions to liquid assets, U.S. Government bonds and checking and savings accounts, payments on home mortgages, improvements and additions to homes, and payments to retirement funds. . . . Approximately 32 million of the 50.4 million spending units in the population represented by the survey were positive savers in 1948, that is, spent less than their money incomes on consumption goods and services. More than 2 spending units in 10 in the population reported saving at least \$500 and about 4 of every 10 units saved at least \$200. . . . On a percentage basis, more than 3 units in 10 saved at least 10% of money income in 1948 and about 1 in 10 saved 30 per cent or more. In 1948, as in each of the earlier years surveyed, the proportion of positive savers was greater at upper income levels than at lower levels. Also, higher income spending units reported saving larger proportions of income, and of course, larger amounts than did units at lower income levels. More than 4 units in 10 with incomes of \$7,500 or more reported saving at least 20 per cent of income in 1948 and 6 in 10 saved \$1,000 or more. By way of contrast, only 1 unit in 10 with incomes of less than \$1,000 saved this large a proportion of income and none, of course, saved \$1,000 or more. . . . (A spending unit is defined as "all persons living in the same dwelling and belonging to the same family who pooled their incomes to meet their major expenses.")⁶

The extremely wealthy save because they cannot help it; they cannot possibly spend their entire incomes on consumers' goods. The middle income groups save because they have distinct economic objectives, including greater financial independence, and because their current incomes fairly easily permit them to save. For all others, saving involves extreme foresight and a careful balancing of present utilities against future satisfactions. Saving for them involves real postponement of consumption—what economists used to call "abstinence" and now more commonly designate as "waiting." The irksomeness of waiting limits the supply of loanable funds; and as long as the supply is limited in relation to the demand, interest must be paid. Interest from this point of view is a reward for past saving and an inducement for additional saving in the future.

Individual savings limited by time-preference. Psychologically, the saving of individuals is limited by what has come to be called the principle of time-preference. Present goods and future goods, even though of the same kind and amount, are appraised differently by the same individual at a given moment of time. Individuals differ greatly in the relative im-

⁶ *Federal Reserve Bulletin*, Vol. 36 (1950), pp. 14-17.

portance they attach to present goods and future goods. But at a given moment men as a rule value present goods more highly than identical future goods. This is the principle of time-preference. Frank A. Fetter, who coined the term, roots time-preference deep in the biologic nature of man. "To take and enjoy things as soon as the desire arises and the means are present seems to be a fundamental trait of men. The impulse to seek immediate gratification is rooted deep in man's biologic nature."⁷ Some men have what may be described as a positive rate of time-preference; in others this preference for present goods is much less urgent. Persons with high rates of time-preference will only save and lend if the interest inducement is sufficiently strong to overcome their high time-preference. Some persons, either because they are so well provided for in the present or because they anticipate that their future wants will be more keenly felt than are their present needs, actually prefer future goods to identical goods in the present. Their time-preference is negative rather than positive.

Another version of the time-valuation principle is the "impatience to spend income" doctrine of Irving Fisher.⁸ It puts the same emphasis upon time-preference as the central explanation of the rate of interest. Fisher says: "The essence of interest is impatience, the desire to obtain gratifications earlier than we can get them, the preference of present over future goods. This preference comes from a fundamental attribute of human nature. *As long as people like to have things today rather than tomorrow, there will be a rate of interest.*"⁹

In his earlier but closely related *agio* theory of interest, which has been most influential in the development of interest theory, Böhm-Bawerk sought to explain the reasons for this *agio*, premium, or preference for present goods. "Present goods are, as a rule, worth more than future goods of like kind and number. This proposition is the kernel and centre of the interest theory which I have to present," writes Böhm-Bawerk.¹⁰ The premium on present goods is the resultant of three causes. In the first place, there is a difference between wants and the provision for wants in both the present and the future. Most persons are less well provided for in the present than they hope to be in the future, and consequently they value

⁷ *Economic Principles* (New York, The Century Co., 1915), p. 240. Cf. Part IV of this book for Fetter's treatment of time-value and interest. An earlier edition had appeared in 1904. Cf. also his "Interest Theories Old and New," *American Economic Review*, Vol. 4 (1914), pp. 68-92, and his "Interest Theory and Price Movements," *American Economic Review*, Vol. 17 (1927), Supplement, pp. 62-105.

⁸ Cf. particularly his *Theory of Interest* (New York, The Macmillan Company, 1930), Chaps. IV, XVIII.

⁹ Irving Fisher, *Elementary Principles of Economics* (New York, The Macmillan Company, 1911), p. 344.

¹⁰ *Positive Theory of Capital*, tr. by William Smart (London, Macmillan and Company, Ltd., 1891), p. 237. Cf. all of Book V for the development of Böhm-Bawerk's theory of the "Present and Future."

present goods more highly. Secondly, men, both primitive and cultured, are apt to underestimate the future simply because it is the future. This underestimation of the future is due to the inability of the human mind to visualize the future as vividly as it can experience the present, to a defect or weakness in will since it requires strength of character to give up present pleasures for possible future satisfactions, and to the uncertainty of life itself, particularly over longer periods of time. Given the choice between \$10,000 now and \$100,000 seventy-five years from now, most persons old enough to choose intelligently would select the former. The hazards of the next three quarters of a century are apt to imperil the ultimate enjoyment of the larger sum. In some cases the time interval would not have to be nearly so long to elicit the same choice. Many persons in their attitude toward the future and provision for its wants are apt to be guided by the old Epicurean adage, "Eat, drink, and be merry, for tomorrow we die." A third reason for the *agio* or premium on present goods is the "technical superiority of present goods." Present goods enable those that command them to undertake, if they wish, the profitable roundabout processes of production. This, according to Böhm-Bawerk and many other expositors of interest theory, cannot be ignored in the higher valuations which men put upon present goods.

While much of the immediately preceding analysis of the estimates placed upon the present in comparison with the future may seem conjectural and lacking in precise psychological confirmation, there is abundant empirical evidence that most men have a positive time-preference. The almost universal practice of charging a premium for the loan of present purchasing power and the remarkable stability of loan interest at rates usually fluctuating between 3 and 6 per cent during the whole period of modern industrialism support the contention that there is a positive and definable time-preference.

The rate of time-preference may be looked upon as either a premium on present purchasing power or as a discount of future purchasing power. If \$100 of present purchasing power be exchanged for the promise of \$105 one year from now, \$5 may be regarded as a premium which the borrower is willing to pay if only he can have \$100 now, or as a discount on the \$105 which he expects to have one year from now. At 5 per cent \$100 is the present worth of \$105 due one year from now. Out of the comparison of the present desirability of having \$100 now or one year hence an interest rate emerges. The sum of \$100 of present purchasing power will not usually be exchanged for the same sum payable at some time in the future, except as a premium, known as interest, is added. This premium for at least some lenders measures the intensity of their time-preference. It is a reward for their waiting and an inducement for more waiting. As long as society is dependent upon a supply of loanable funds

and as long as their accumulation involves cost to someone, the payment of interest will be necessary.

Not only do most individuals have a positive time-preference, but many have, what John Maynard Keynes calls, "liquidity preference."¹¹ According to Keynes the recipients of income have two decisions to make: First, What part of current income shall be spent on present consumption? Secondly, How shall the income not spent on consumption be utilized? He regards both of these decisions as elements in psychological time-preference, but thinks that current theories based on time-preference have emphasized the first ("the propensity to consume") to the neglect of the latter (the disposition of income not spent). As for the income that is not spent, the individual must decide whether he wishes to hold it in liquid or illiquid form. If he prefers liquidity, he will hold money. As a businessman he may expect a rise in future interest rates; holding or hoarding money in idle bank deposits, for example, may enable him to avoid paying these higher interest rates in his business operations. Liquidity may be desired to meet emergencies in future consumption or business, or to retain funds for the purpose of buying securities in the future at some more advantageous level. High bond prices usually mean low interest yields. Consequently, if a person expects future prices of fixed-interest-bearing securities to fall and thus interest yields to rise, he will hold cash until some future date in order to buy at these lower prices. On the other hand, if he chooses illiquidity he may buy securities or other assets at once and in so doing earn interest. Interest is a reward for parting with liquidity. Liquidity preference sets the individual's interest rate, and sheds some light upon the supply of loanable funds.

Individual savings at the margin of time-preference or waiting. Not all potential lenders have time-preferences so urgent as to necessitate the payment of interest to induce them to save. Some saving would occur even if no interest were paid, and it is quite conceivable that some would go on even if those who saved had to pay others for the safe-keeping of their funds. There are motives prompting men to save other than the interest to be earned by investments. The pride and power of accumulated wealth, the security which it affords, and the opportunity it offers for the gratification of many wants that necessitate the expenditure of considerable sums at a given time would stimulate men to save even if no interest were paid. Such savings, however, might not be available for investments at all, and probably would not. Within limits hoarding might accomplish the purpose as well as allowing others the gratuitous use of the savings. To draw such savings into investment channels and to make sure that the supply will be adequate to meet the demand, interest is paid. There are

¹¹ *The General Theory of Employment, Interest and Money* (New York, Harcourt, Brace and Company, 1936), pp. 165-174, 194-209.

potential savers at the margin of indifference between spending and saving, who will not save and supply loanable funds except in return for an inducement. If their savings are necessary to meet the market demand for loanable funds, which are not unlimited in amount, interest must be paid. Paying marginal savers necessitates paying savers above the margin at the same rate. It is impractical to make a distinction in the paying of interest between those to whom saving is easy or effortless and those who accomplish it with difficulty. In the market the dollars saved look alike and must be treated the same.

Interest then is necessary as compensation for marginal time-preference, or as an inducement for marginal saving or waiting. To forgo the time-preferences of marginal savers is irksome and represents a real sacrifice or functional cost. Interest is the compensating result, and it must be high enough to reward marginal waiting. At this rate it is higher than necessary to reward super-marginal saving.

Loanable funds supplied by corporate savings. In contemporary economic society the supply of loanable funds and the interest rate are directly and indirectly affected by the savings of business enterprises, particularly corporations. Corporate saving turns on the judgments of boards of directors in deciding what part of the net income of corporations shall be distributed to the stockholders and what part shall be retained as surplus. The need of more capital, either for additions and betterments or as working capital, and the desirability of building up reserves in times of prosperity to function as shock-absorbers in times of depression largely account for the corporate savings. Usually the surplus is invested in the business of the corporation. Sometimes a large percentage of it is in cash or in forms readily convertible into cash for any of the purposes of the corporation. Business corporations with large cash reserves not constantly needed in their own business operations may lend them in the money market, thus directly affecting the supply of loanable funds. This is precisely what happened in 1929, when corporations lent hundreds of millions of dollars and made it correspondingly more difficult to develop any effective control over credit. Indirectly, the savings of corporations affect the money and capital markets because they lighten by so much the demands of the corporations themselves for funds. It is at least questionable whether the total savings would be as great if the corporations paid them out as dividends instead of retaining them as surplus.

Insurance companies are the custodians of the savings of millions of policy-holders. The reserves against life insurance policies run into billions of dollars. Neither the interest of the policy-holders nor that of the companies warrants keeping these funds idle. They are placed in the investment market and there exert an influence upon the interest rate. Insurance companies are among the largest lenders in the long-term market. Through

them policy-holders become investors in high-class bonds and real estate mortgages.

The rate of interest seemingly has little to do with the accumulation of these enormous sums of corporate savings. They are accumulated for other purposes than to procure the reward of interest. But they do exert a modifying influence in the loanable funds market. If corporate savings could meet the entire demand of the market for loans, interest rates would be lower. But they do not suffice. Savings only achieved through sacrifice and cost are still requisitioned to satisfy the demand. And such marginal waiting commands a price, which redounds to the advantage of all savers. Market rates fall, however, with increases in the supply in relation to the demand.

Loanable funds supplied through the advances of government. Governments are usually borrowers, not lenders, of funds. There are times, however, when the government may become a heavy lender and a powerful force in the loanable funds market, even though its own ability to lend may rest upon its greater ability to borrow. Ultimately, of course, the ability of a government both to lend and to spend depends upon its ability to collect taxes. Loans to the government, and what is uncollectible on advances by the government itself to private borrowers, must be met out of the revenues of government.

The most notable example in American history of large-scale lending by the federal government to other governmental agencies and to private enterprises is furnished by the Reconstruction Finance Corporation. This corporation was established in 1932, under the administration of President Hoover and has been extended and continued ever since. Loans to private borrowers included loans principally to banks, other credit institutions, and the railways. During the depression of the thirties and the years of the Second World War, this government corporation, directly and indirectly, lent and invested billions of dollars. The principal source of the assets of the Reconstruction Finance Corporation was the borrowings of the government, so that the ultimate suppliers of credit were the holders of government bonds. The Reconstruction Finance Corporation lent huge sums of money to institutions whose credit in the private loanable funds markets was impaired, so that they either could not borrow at all or could only borrow at rates that seemed prohibitively high. Loans at low rates of interest were essential to safeguarding the future solvency of some of these institutions.

A striking illustration of the effect of the operations of the Reconstruction Finance Corporation upon the capital market occurred in 1936 in connection with the refunding of over \$100,000,000 of 7 per cent bonds issued by the Great Northern Railway and maturing in that year. After the railway had made tentative arrangements with private investment

bankers for refunding the loan at 5 per cent plus substantial underwriting fees, the Reconstruction Finance Corporation offered to lend the money to the Great Northern Railway, whose credit was good, at 4 per cent and to eliminate the underwriting fees. The avowed purpose was the reduction of interest rates through the actual and potential competition of the government in the market.

Whenever a government whose credit is good seeks to bring such pressure to bear upon the loanable funds market, it can exert a powerful influence upon interest rates, provided its own credit does not suffer in the operations. On the whole, however, such interventions of government in the markets have been decidedly exceptional.

Loanable funds supplied through the extension of bank credit. The most generally available supply of loanable funds is furnished by the banks. All banks receive deposits, some of them subject to withdrawal on demand and others only after the lapse of a stated time interval. They also lend on the strength of their reserves. Since the lending usually merely takes the form of establishing a deposit credit in favor of the borrower (a simple bookkeeping entry), some puzzling questions arise. Is there any limit to the extension of bank credit and the bank-supply of loanable funds? Can one properly speak of time-preference or cost of saving on the part of banks? Is it economically necessary to pay interest on bank loans just as one must on individual savings and loans as a reward for waiting? What is the effect of bank loans upon the rate of interest?

For an ordinary bank in competition with other banks in its community, there is a practical limit to the volume of its loan-created deposits set by what its reserves will support.¹² Moreover, loan-created deposits constitute a potential drain upon the reserves of a bank. The reserves of a bank are built up by its depositors and stockholders, usually not without effort on their part. But since banks rarely lend up to the limit of their reserves, the possible supply of bank loans is not very directly affected by time-preference or cost of saving except as their assets are themselves savings which involved the overcoming of time-preference by their depositors and stockholders. Why then is it necessary to pay banks for the accommodation of a loan? The answer is that banks cannot operate without income, and earnings from loans and discounts are usually the normal principal source of such income. What is more, banks do not occupy the entire loanable funds field. There are many types of loans which they cannot make. To supply funds adequate to meet the demand of the market for loans necessitates calling upon lenders to whom saving or waiting does represent a cost—persons who have a positive time-preference. Paying mar-

¹² Cf. Chap. X, "The Credit System of Exchange," pp. 267-274, for a discussion of the lending capacity of individual banks and of the banking system as a whole upon the basis of any addition to their reserves.

ginal savers establishes a "going interest rate," which all lenders will claim and to which they are all entitled, since the funds they supply are equally effective and acceptable. As far as the rate of interest is concerned, superficially bank loans function in the same way as any other loans. Sudden and sharp increases in the supply of bank funds tend to lower the interest rate, and equally sharp decreases to raise it. These are temporary effects, however. In the long run a widespread expansion of bank loans without corresponding increases in the volume of production results in credit inflation, which means a rise in the price level, including higher interest rates.

The use of bank credit which has had the most far-reaching effects in the loanable funds markets has been that extended to the government during the period of the Second World War. The government has been a heavy and perennial borrower not only from individuals and other non-banking investors but from the commercial banks themselves. When the United States Treasury needed more money than was being collected in taxes, and even more than it could borrow from non-banking investors, it printed securities and sold them to the commercial banks. The banks paid for them by giving the government demand deposit credit. The government thereupon drew its checks against these loan-created deposits, and ultimately these checks were again deposited to the credit of someone's bank account. The net effect of the government's heavy borrowing from the commercial banks was an increase in deposit dollars (often referred to along with currency as the "money supply" of the country). By exerting its overwhelming pressures on both the demand and supply sides of the loanable funds markets the federal government has easily been the dominating influence in the determination of interest rates. Through the policy of the Federal Reserve System of buying government securities from the banks when these banks might be pressed for cash, and of practically pegging the prices of United States Government securities, the government has maintained its hold. It has kept interest rates at what are probably artificially low levels.

The supply of loanable funds from whatever source derived—individual savings, corporate savings, advances of government, or the extension of bank credit—in interaction with the demand for both consumption and production loans, sets the market interest rate. Of course this is a composite picture, because not all sources of demand for loanable funds nor all sources of supply of loanable funds are operative in every loanable funds market. In the preceding qualitative analysis of the supply of loanable funds attention has been called to the principal conditions necessary for savings and some of the factors or determinants affecting the terms on which they will be offered in the loanable funds market. Cost of saving as evidenced by the urgency of time-preference is the principal such determinant in accounting for an important part of the supply. Time-

preference largely controls the marginal part of the supply of savings, which is also the high-cost part of the supply. The necessity of paying interest for marginal savings brings about the same minimum payment for all savings, because the market cannot discriminate among savers who furnish the same purchasing power. But time-preference does not tell the whole story.

It is necessary to recall that contract or loan interest is not merely net or pure interest, that is, a reward for saving. Contract interest is gross interest, which involves payment for other factors than time-preference. Some of these factors are more important determinants of parts of the supply than is time-preference itself. These factors include payments for risk and for the service involved in making and supervising the loan. These payments for "risk and trouble" are superimposed upon the time-preference rate. Risks in loans vary greatly, and consequently some borrowers can obtain much more advantageous terms than others. They offer greater and better security. This is why strong and stable governments can usually command better terms than most private borrowers. Extraordinarily high rates are almost always indicative of exceptional risk. High rates to make it worth while for lenders to take the risks are the only terms on which some borrowers can obtain loans at all.

There is also a good deal of work involved in the business of making loans. Credit standing must be investigated, established, and kept current. Collateral or mortgage security must be appraised. Sometimes precautions must be exercised that the security does not become impaired. Papers must be drawn and executed. Loans themselves must be constantly watched. A large part of the lending and investment activities of banks and insurance companies consist of such servicing of loans. The supply-price of their loans reflects payments for service. The expense of lending may be so great as to constitute a reason for trying to maintain high interest rates as long as possible even in the face of a falling demand. Time-preference, risk, and loan-service or management all determine the price at which loanable funds will be offered in the market.

THE INTEREST RATE CONTRACT

Limits of the loan interest rate. The interaction of the demand for loanable funds and the supply of such funds, whatever may be the precise influence and weight of the institutional and specific determinants just considered, ultimately finds expression in a loan interest contract setting the interest rate and other terms of payment. Whenever the subjective price of the prospective borrower is equal to or greater than the subjective price of the prospective lender, a loan interest contract is possible, and an interest rate can be established by agreement. The limits of the loan

interest contract vary with the type of loanable funds market, whether a consumption loan market, a money market, or a capital market, and with the prevailing conditions of demand and supply. The demand for loanable funds for consumption purposes is limited by the urgency of the time-preferences of the prospective consumer-borrowers. If the marginal utility of the goods to be acquired with the borrowed funds is great, the time-preference will be high. Under such circumstances the prospective borrowers will be willing to pay more for loans—their subjective prices will be higher—than if the reverse is true. The demand for loanable funds which are to be converted into capital goods for production purposes finds its upper limit in the net productivity of the capital, over and above the cost of maintaining and replacing it. Both consumer-borrowers and producer-borrowers are influenced in what they are willing to pay for loans by the marginal uses to which they can put the borrowed funds—marginal utility in the one case and marginal productivity in the other. The former is a matter of the urgency of an unsatisfied consumer-want. The latter turns on the least productive but nevertheless worthwhile use to which the loanable funds can be put when converted into capital goods. Productivity stresses the source and size of the income out of which interest can be paid.

The lower limit of the loan interest contract is set by the time-preference costs plus risk and trouble payments of those whose savings are necessary to create a supply of loanable funds adequate to meet the demand of the market. These are the *marginal savers*. Their time-preference is the *marginal time-preference*. If a rate of 5 per cent is necessary to induce them to forgo the use of present purchasing power and to make it available to others in the loan market, 5 per cent is the *marginal rate of time-preference*. A considerable part of any given market supply would be forthcoming at lower rates, but not in amounts sufficient to meet the demand, and consequently in a competitive market the higher marginal rate of time-preference will prevail. Again in the loan market, as in other markets, the marginal part of the supply and the demand have distinctive significance.¹³ The marginal rate of time-preference required to make available any given

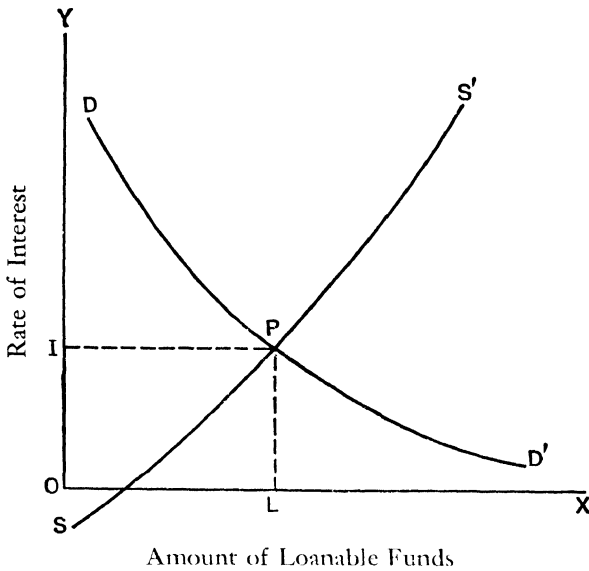
¹³ Cf. footnote on p. 421 of Chap. XVI, "Market Price Under Competition," for a comment on the diverse uses of the term "margin" in economics. In general it is useful to distinguish between the marginal importance of a good to an individual, be he buyer or seller, and the marginal part of the total demand or supply. To the individual, the marginal use is the least important use, whether from the standpoint of utility or productivity. This becomes the use of any *one* unit of a homogeneous supply on account of the free substitution of units for one another. The marginal part of the total demand is the demand necessary to dispose of an existing supply at a given price. The marginal part of the total supply is the supply necessary to satisfy an existing demand at a given price. As far as interest is concerned, individuals have marginal uses for loanable funds—their least important uses. There are also marginal borrowers and lenders responsible for the marginal part of the total demand and supply as indicated above.

supply of market funds sets the lower limit to contract interest rates. Corporations, banks, and other non-marginal lenders are not obliged to lend their funds for any less and will not ordinarily do so. While some saving would occur regardless of the interest rate, and while some persons would doubtless save even more if interest rates were lower in order ultimately to achieve the income from invested savings that they desire, it is marginal saving and marginal rates of time-preference that are the pacemakers of the market.

Loan interest, a price effecting equilibrium between demand and supply. In a competitive money or capital market the loan interest rate will tend to be established at a price which will effect an equilibrium between the demand for and the supply of funds in such market. Because of the ease with which loanable funds can be shifted from place to place to take advantage of the most favorable market, money and capital markets are apt to be more highly competitive than commodity and labor markets, which are often distinguished by imperfect competition. The interest rate, like every other price, is set in the market by the interaction and adjustment of demand and supply. Only a rate equalizing demand and supply offers any stability. If the interest rate is not such as to equate the demand and supply of the market, it will later be upset by an excess either in the demand or in the supply at such rate.

It is possible to represent by schedules and graphs the interaction of demand and supply in the setting of loan interest rates in a given market for loanable funds. Such schedules and graphs are largely hypothetical because they represent both potential and actual market demand and supply, and only the actual demand and supply are known. The demand schedule and curve show the amount of loans that will be taken at each of a possible schedule of rates; the supply schedule and curve, the amount of loans available at the same rates. In the following diagram of a given loan market, interest rates are indicated on the *OY* axis and the amounts of loanable funds on the *OX* axis. The curve *DD'* represents the rates at which prospective borrowers are ready to borrow the indicated sums. Similarly, the curve *SS'* represents the rates at which prospective lenders stand ready to offer the indicated sums. The supply curve *SS'* is shown beginning below the base line *OX*, which means that some savers would be willing to lend their funds at a negative interest rate, if necessary to protect their safety. If the curves correctly represent the terms on which prospective borrowers and lenders are willing to do business, any point on the demand curve may be read by dropping perpendicular lines to both the *OY* and *OX* axes. The point of intersection with the *OY* axis indicates the interest rate and the point of intersection with the *OX* axis, the amount of loanable funds wanted at such rate. The supply curve may be similarly read. In the diagram, point *P*, which is common

to both the demand and supply curves because it is their point of intersection, represents an interest rate measured by OI and a demand at this rate for OL in funds. When read on the supply curve, it also represents an interest rate measured by OI and a supply at this rate of OL in funds. At this rate marked by the intersection of the demand and supply curves, demand equals supply. It is the only rate which effects an equilibrium



DEMAND AND SUPPLY IN A GIVEN MARKET FOR LOANABLE FUNDS

between demand and supply. If a higher rate be assumed, the supply will exceed the demand, which will tend to force the rate down. If a lower rate be assumed, the demand will exceed the supply, which in turn will tend to force the rate up. Only an interest rate that equates demand and supply offers any assurance of market stability.

The preceding analysis of the interest problem is eclectic: it does not explain the loan interest rate in terms of a *single* principle to the exclusion of all others. No single principle aptly fits all the facts of the market, no matter what may be true of interest as a psychological phenomenon. The explanation of interest here offered emphasizes the necessity of making a complete analysis of all the influences affecting the demand and the supply. Demand is a composite both of consumption loans, private and public, for which there is a high time-preference, and of production loans, which are wanted because entrepreneurs can use capital productively. They see investment opportunities and chances to make a profit for which they are willing to pay a premium measured by the marginal productivity of such capital. The supply of loanable funds is also a composite drawn from

a variety of sources. Individual savings, corporate savings, advances by government, and the extension of bank credit all help to create the supply. A fair part of this supply might be forthcoming regardless of the rate of interest, some of it even at a negative interest rate. But a most important factor limiting the supply and setting the minimum supply-price is the time-preference of those lenders whose savings are essential to meeting the demand for loanable funds. The cost of producing the marginal part of the supply—that is, the marginal rate of time-preference—sets a price which all lenders will be glad to claim, whether they have any time-preference or none at all, since they are all supplying equally acceptable loanable funds. Out of the comparison of present and future, when identical goods or sums are considered, the rate of interest emerges, whether thought of as a premium on the present or discount of the future. The time-preference principle in interest theory does not deny the marginal productivity of capital in providing the sums out of which some interest can be paid. What it does deny is that marginal productivity offers any real explanation of the *rate* of interest; this it claims as its own distinctive contribution. Time-preference unquestionably accounts for a subjective rate of interest. Whether it will become the going rate of the loan market depends upon the intensity of the demand in relation to the supply. If consumer-borrowers are willing to mortgage future income, or producer-borrowers see opportunities for business enterprise that will enable them to repay loans with interest, a market rate of interest will be established. This loan interest rate, however, is a rate of gross interest, higher than the rate of time-preference. It covers not only net or pure interest, which is the marginal rate of time-preference, but also a payment for risk and the supervision of the investment.

The preceding loan interest theory has been built around the demand and supply mechanism, the institutional framework of the society concerned, the contractual transaction which loan interest represents, what it is that specifically determines the limits to both sides of that transaction, and what effects the adjustment of demand and supply in any given market.

IMPUTED INTEREST AND CAPITALIZED INCOME

This chapter has largely been concerned with loan interest—the price, expressed as a rate per cent of a principal sum, which men contract to pay for the temporary use of borrowed funds. Loan or contract interest rates are basic to imputed interest, which has been defined as the interest allowed for or attributed to the use of the funds invested in a business enterprise. Most entrepreneurs figure that the minimum rate of return they should allow as imputed interest is the rate they could obtain as loan interest on reasonably good security. The rate of interest on British

consols or United States bonds, which constitute the direct obligations of two of the financially strongest governments in the world, comes as close to representing the rate of pure time-preference in Great Britain or the United States as any loan interest rate can. Ordinary loan interest rates are higher because of the greater risks and other costs involved. The loan interest rate is the going contract interest rate of a given time and place. Because it emerges from innumerable transactions of the market, and enters into innumerable calculations of values, the loan interest rate serves as a basic standard of comparison in determining imputed interest.

The return to the owners of capital goods used in production—the so-called distributive share of capital—is a composite of several elements of which imputed interest is only one. The embodiment of capital in concrete capital goods, the instruments of production, is a time-consuming process. Materials and labor have to be assembled and paid for. It may take years to build a great hydro-electric plant together with its extensive facilities for the distribution of light and power. Consequently, considerable time will have to elapse before the electric current can be sold and income be obtained out of which ultimately to recover the capital costs. In some other forms of productive enterprise, the time required may be relatively short. But whatever the time interval, the owners of capital must advance the funds, and wait until some time in the indefinite future for returns on their investments. For such waiting they expect not only the eventual return of their invested capital but a premium besides. Interest is this premium—compensation for waiting not only to the *lenders* of capital funds but to *owners* who invest capital in their own enterprises. The interest that can be imputed to capital arises out of its productivity.

But there must be other returns to capital than imputed interest. Since capital goods have physical forms and limited “life expectancies” they are constantly wearing out and in need of replacement. The returns to capital, whatever they may be called, must be large enough to provide for the maintenance of the capital goods as long as they are in use, and also for the inevitable depreciation which finally commits them to the graveyard of all material things. Sometimes, too, extraordinary provision has to be made for that premature form of depreciation known as obsolescence. All these capital production-costs must be covered by the sales-product of the enterprise in which the capital is invested.

What the invested capital of a business enterprise is worth is a function of two variables: the net income of the enterprise and the expected rate of return. If the average net income of an enterprise is \$800,000 and the assumed rate of return because of current interest rates is 8 per cent, the invested capital may be said to have a value of \$10,000,000. Interest rates are indispensable to all valuations of the business world which are based upon anticipated incomes. What determines capital value more than

anything else is the capitalization of anticipated income. But capitalization assumes a rate, which interest theory must supply. Income from concrete capital goods, from land and other natural resources, from investments of all sorts, is regularly capitalized at an assumed rate to arrive at capital values. Interest rates, it is apparent then, are not only basic to much of economic theory but also fundamental to valuation practice.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Loan interest is gross interest, not net interest.
2. Imputed interest differs from loan interest in that the former is not a market price.
3. The basis of the interest rate is found in the varying importance which individuals attach to present goods in comparison with future goods.
4. Some saving would occur even if no interest were paid.
5. The possibility of paying interest arises out of the productivity of capital, and out of nothing else.
6. While high time-preference explains the demand for consumption loans, it is inadequate as an explanation of the demand for production loans.
7. Since they put their borrowed funds to productive uses, entrepreneurial borrowers are willing to pay higher rates of interest than are consumer-borrowers.
8. An increase in the productivity of capital has a tendency to raise the rate of interest.
9. According to the time-preference theory of interest, there will be a rate of interest on consumption loans as long as people like to have things today rather than tomorrow.
10. A person may have a low rate of time-preference and at the same time a high rate of liquidity-preference.
11. Lenders would be willing to make loans without charging interest if they knew beyond any doubt that the principal would be paid at maturity.
12. Since most loans are made by banks at rates of interest determined by them, the time-preference of the marginal saver has no significance in an explanation of the interest rate.
13. The most important single factor in the explanation of the current level of interest rates is the policy of the Federal Reserve Board of Governors with regard to the government bond market.
14. The marked tendency of large corporations to finance new capital investments from internal funds (e.g., undistributed profits) tends to decrease the market demand for loanable funds.
15. The federal government has an important stake in the level of interest rates because of the size of the national debt.

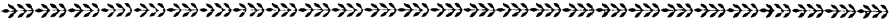
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CHAPTER XXIV

Rent



THE NATURE OF RENT

Rent as payment for the temporary use of a durable good. The term “rent” is commonly used, and sometimes technically used, to describe the amount paid by one person to another for the temporary use of a durable good, which is to be returned to the owner when the specified period of use has expired. Thus in the ordinary usage of the term we speak about renting a farm or an apartment, an automobile or a cap and gown. In all such cases the identical good (with allowance for ordinary wear and tear) is to be returned, together with a price for its use, when the rental period has ended. The price or rent may be \$5 per year for each acre of the farm, \$75 per month for the apartment, ten cents per mile with a minimum mileage per hour for the use of the automobile, and \$2 for the use of the cap and gown on the occasion of commencement. In all cases the rent is related to the physical goods concerned and is thought of as a price for their use. Some economists conform to this popular usage and regard all rent as just such payments for the specified use of durable goods. For them, both rent and interest are income from invested capital. Rent is thought of as a sum or amount paid when the identical good must be returned; interest as an amount or rate computed on the capital-value of that which was borrowed. As thus used rent is the broader term, since it must logically include not only interest on the invested capital but also a payment for maintenance and depreciation. He who lends a sum of money gets back the same number of dollars. But he who lends a physical good gets it back subject to such depreciation as its use necessarily involves. His payment must be more than interest. There is much to commend this broad usage of the term “rent” as a price for the temporary use of a durable good. The present chapter, however, is concerned not with all rents, but only with the rent of land—the income derived from its ownership and the price paid for its use.

Rent as payment for the use of land. In arriving at an understanding of the rent of land, as a price paid for the use of land or imputed to its use, and what determines such rent, it is necessary to distinguish between *contract land rent* and the *economic rent* of land. Contract land rent is

simply the amount that it is actually agreed shall be paid for the use of land. Most contract land rentals include payments for the use of improvements, such as buildings (a capital charge), as well as for the land itself. Economic rent may be defined as the annual value of a piece of land as measured by its net income-producing power. It is a well-known fact that with the same application of labor and capital under the same or equally competent management, some pieces of land are more productive than others. In this superior productiveness lies the possibility of paying more for the use, or valuing more the possession, of one piece of land than of another.

FUNCTIONING OF THE LAND MARKET IN THE ESTABLISHMENT OF CONTRACT RENTS

In the land or real estate markets of the country two types of transactions occur: the leasing of land for stipulated contract rentals, and the sale of land in which the title of ownership passes from seller to buyer. Prices of course emerge in both types of transactions. How both contract rent and the sale-price of land are strongly influenced by what economists, for lack of a better name, have called the "economic rent" of land, is the central theme of the discussion that follows. Contract rent is considered first and then the price of land when ownership rights are transferred from one party to another.

Contract rents as phenomena of the markets arise out of the same sort of market functioning as has already been considered in the determination of commodity prices, wage rates, and loan interest. Both structurally and functionally land or real estate markets are not unique. Again the *market* is a series of *transactions* between *parties* who formulate *subjective prices* as terms on which they are willing to become landlords and tenants, lessors and lessees, as the parties to a leasehold transaction are called. Many land markets, particularly in agricultural land, are less formally organized than urban real estate markets, for example. The transactions may be negotiated directly between the interested parties without the aid (or intervention) of any middlemen. Although the transactions of many real estate markets are rather disjointed and in dull times highly infrequent, the essence of such markets is nevertheless a series of transactions each of which results in a market price. The subjective prices of tenant and landlord, which in the aggregate make up the demand and supply of the market, are influenced by certain *general* and *specific determinants*. It is the particular task of rent theory to set forth these specific and general determinants of the subjective prices of the parties to contract rent transactions in a given land market. The institutional setting of time and place, including the force of custom, the power of monopoly (which is stronger here than in the

markets for reproducible goods), the possible assertion of public authority, as in certain urban rent controls of the Second World War period, and the strength of competition help to mould the terms on which men are willing to do business in the land market. But it is the productivity or income distinctively attributable to land which specifically determines what men are willing to pay, and also able to get, both for the temporary use and the more permanent possession of the land.

EXPLANATION OF THE DEMAND FOR AGRICULTURAL LAND

In accounting for contract rents it is again necessary to resort to the market for an analysis of the forces that create a demand for land and its uses when the supply of desirable land is limited. In considering the theory of rent it will simplify matters to think first of the rent of agricultural land and then of urban land.

Meaning and sources of the demand for land. In any rental market the demand for land is the amount of land that prospective tenants are ready to lease or rent at specified prices. Some of this demand comes from consumers who want land, improved by buildings, for the direct satisfaction of their housing wants. More of it comes from entrepreneurs who want land on account of its productivity. Land may be used for a great variety of purposes. If one traveled west from the intersection of State Street and Madison Street in the city of Chicago, an important business center of the city, and noted the uses to which land is being put, a succession of different uses would be seen. The most important use from the standpoint of income to which land can be put in the heart of Chicago is of course the use for business. Trade flourishes in the centers of cities where the lanes of traffic converge and men congregate. Next the traveler might note land devoted either to residences or industries, depending upon the exact route taken. In any event both uses are there; the exact order in which they come into view is of no great importance. On the outskirts of the city, truck gardening or farming, the most intensive form of agriculture, would be seen. Leaving the environs of Chicago the observer would travel through a rich agricultural region practising diversified farming, with the raising of corn and hogs and the management of dairy herds predominant. Wheat lands would appear farther west. Still farther on, the predominant use of land over a wide expanse of territory is its use for cattle-grazing. And practically all along the route, small patches here and large tracts there, are lands which it does not pay to use at all under present conditions. All of these diversified uses of land help to create the demand for land and, because the supply is limited in relation to the specific demands for it, to give it value.

Like all other prospective buyers, tenants, who are buyers of some of

the uses of land, must have purchasing power in the form of cash or credit to make their desire for land effective in the market. How much of the purchasing power at his disposal can a tenant afford to pay for the use of a particular piece of land? That depends upon its importance to him either as a consumer or as a producer. What the producer-tenant, operating a farm, can afford to pay is determined by his estimate of the productivity of the land. The productivity of agricultural land varies sharply.

Causes of the differential productivity of land. The superior productivity of certain lands over others is sometimes found in differences in the quality of the land, and at other times in differences in location.

In general we sum up differences in the quality of the land under the single term "fertility." There are physical conditions affecting such fertility. The temperature and humidity of the air, the mechanical structure of the soil as to coarseness or fineness, the topography of the country affecting particularly the erosion of the soil, and obstacles in the way of cultivation such as glacial boulders or tree-stumps on cut-over lands, are important physical conditions affecting the fertility of the land. There are even more important chemical conditions which affect it. The presence or absence of certain elements, such as carbon, nitrogen, potassium, and phosphorus, and of poisonous conditions such as acidity, present vital problems to the practical farmer who wants large yields per acre. There are also certain biological conditions which cannot be ignored in explaining the fertility of the land. The presence in the soil of the useful nitrifying bacteria, the absence of destructive bacteria through good sanitation, the action of the common earthworm in promoting the capillarity of the soil, the elimination of pests such as field-mice and gophers, and the eradication of troublesome weeds like Canadian thistle and quack-grass, do much to improve growing conditions and ultimate productivity. Natural fertility of the soil reduces unit costs of production. The land that has it is prized more highly than land that is deficient in this respect, particularly in a country where it is necessary to resort to lands of varying fertility in order to produce adequate food supplies.

Differences in location are responsible for the differential productivity of equally fertile agricultural lands, if we may assume that there is no difference in the application of labor and capital. In the case of agricultural land, location means, particularly, ready accessibility to markets.

Productivity as a specific determinant of the demand for land. The productivity that specifically determines the entrepreneur's demand for land is value-productivity. In the case of agricultural land it is possible to think of it first of all in terms of physical productivity, consisting for example of a given number of bushels of grain. Whatever the nature and volume of the physical products may be, however, it is the price which they bring when sold in the markets that determines the ultimate income

from land. And it is this income specifically imputed to the land, over and above the expense of utilizing it, that determines what any prospective buyer of land-use can afford to pay for it.

In cultivating the land a given quantity of labor and capital can either be spread over a larger area of land, if land is abundant, or be applied more intensively to a smaller area. In new countries, where land is plentiful and labor and capital are apt to be the limiting factors in production, an extensive rather than intensive agriculture is usually practised. When land becomes relatively more scarce and heavier demands are made upon it, it is necessary to cultivate land much more intensively.

If a given combination of labor and capital is applied to lands of varying grades, the grades being due to differences in fertility and accessibility, varying products will be obtained. These differences in the productivity of various grades of land, when all are cultivated with uniform intensity, are one way of accounting for the economic rent of land, and perhaps the simplest to understand. This factor has been called the *differential principle* in rent theory.

But instead of applying uniform "doses" ¹ of labor and capital to different pieces of land, a succession of equal doses may be applied to each of the better grades of land up to the capacity of each to absorb them without loss on the productive operations. The application of the successive increments of labor and capital does not give uniform results. Productivity has a tendency to diminish. Costs per unit of output, on the contrary, have a tendency to increase. But if the high-cost part of the supply is to be regularly produced, market prices must be high enough to cover the outlays in producing it. Since all like units of a commodity will command the same price in the same market, no matter what it may have cost to produce them, the market price of the high-cost part of the supply will become the price of every other unit of the supply. Under such conditions it is obvious that the farmer who finds it advantageous to apply a succession of doses of labor and capital to his land receives a surplus over and above his expenses for doing so. This surplus product arising out of the varying intensity of the cultivation of each of the better lands is another way of accounting for the economic rent of land. It has been called the *diminishing returns or productivity principle* in rent theory. The application of each of these principles in accounting for rent will be considered next.

Productivity measured from the extensive margin of use. If all agricultural land were equally good, as to both quality and location, and so capable of carrying with equal effectiveness the same applications of labor

¹ Apparently the term "dose" was first used by James Mill in his *Elements of Political Economy*. Cf. Alfred Marshall, *Principles of Economics* (London, Macmillan and Company, Ltd., 1916), p. 153.

and capital, there would be no differential productivity of land. (The law of diminishing returns, however, would still apply.) Under such assumed conditions one piece of land would be worth as much as another. Such assumptions, however, are contrary to fact. There are marked differences in the productivity of land. If this is true, why should anyone ever make use of the inferior lands? The answer is that either an increase in population or an increase in wealth brings about an increase in the demand for goods, which ultimately means an increased demand for the land. It is the growing scarcity of the better lands and the necessity of resorting to the poorer grades, that is responsible for economic rent. Whenever it becomes necessary to utilize different grades of land, economic rent emerges. Economic rent under assumed conditions of uniform intensity in the utilization of land is measured from the *extensive margin* of use. The poorest land which it pays to utilize is at the extensive margin of use. It is marginal land. The product obtained from it is just large enough to cover all the labor and capital costs of whatever kind involved in utilizing it. It yields no surplus above expenses, and consequently no rent can be paid for its use. It is no-rent land. Lands are cultivated with uniform intensity when the same amounts of equally efficient labor and capital under equally competent managements are applied to different grades of land. Under competitive conditions, when lands are cultivated with uniform intensity, the total expenditures for labor and capital are the same on each piece of land. But since there are sharp differences in productivity, unit costs will be different and the better grades of land will yield economic rents.

Let us assume five grades of agricultural land, equal in area and cultivated with uniform intensity by applying \$2,400 of labor and capital to each. The only variable in the situation is the quality and location of the land. Grade E land is marginal because it yields a value-product just large enough to pay for all the expenses of cultivation. The table on the next page summarizes the results.

Physical output measured in bushels differs because of differences in the quality of the land. Since the same amount of money is spent on each grade of land, the cost of producing one bushel varies from fifty cents on Grade A land to \$1.20 on Grade E land. But if Grade E land is to be cultivated at all, the selling price must be at least \$1.20 per bushel. In accordance with the familiar theory of marginal costs, the selling price must be high enough in the long run to cover the cost of producing the marginal part of the supply, that final part of the supply needed in order to satisfy the existing demand. A selling price of \$1.20 per bushel for the marginal part of the supply, in a competitive market, becomes the selling price of every other bushel of supply. Market price tends to equal the marginal cost of production. Because of common selling prices and varying costs of production per bushel of output, the total value-productivity ranges from

ECONOMIC RENT UNDER ASSUMED UNIFORM INTENSITY OF CULTIVATION

Rent Factors	Grades of Land				
	A	B	C	D	E
Labor and capital costs	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Physical output in bushels	4,800	3,750	3,000	2,400	2,000
Cost per bushel	\$.50	\$.64	\$.80	\$1.00	\$1.20
Selling price per bushel	\$1.20	\$1.20	\$1.20	\$1.20	\$1.20
Total value-product	\$5,760	\$4,500	\$3,600	\$2,880	\$2,400
Economic rent	\$3,360	\$2,100	\$1,200	\$480	....

\$5,760 on Grade A land to \$2,400 on Grade E land. The cultivation of Grade E land just pays for itself. Each of the other four grades yields a surplus over the expenses of cultivation. This surplus, amounting to \$3,360, \$2,100, \$1,200, and \$480 respectively, for the Grade A, B, C, and D lands, constitutes the economic rent.

Economic rent, then, under the assumed condition of uniform intensity of cultivation, is a differential which measures the productive superiority of the better land over marginal land. It is this economic rent which a tenant can afford to pay the landlord as contract land rent. To the extent that practical experience has taught him how to estimate it, it will determine his maximum subjective price. It is this economic rent which the landlord endeavors to procure in the form of contract land rent.

Productivity measured from the intensive margin of use. The cultivation of all land, good, bad, and indifferent, with uniform intensity is not the ordinary and regular course of farming procedure. Good business judgment dictates that the better lands shall be cultivated more intensively than the poorer lands. But in the more intensive cultivation of the better lands, sooner or later, the point of diminishing returns is reached, and ultimately also a marginal employment of labor and capital beyond which it does not pay to go. The principle of diminishing productivity, already noted in our study of the productive uses of labor and capital, is just as characteristic of the use of land. It is commonly called the law of diminishing returns when applied to land. The law of diminishing returns states that when successive equal doses of labor and capital are applied to a given piece of land, a point is reached after which further doses produce a diminishing return per dose. The successive increments of labor and capital do not produce proportional returns.

If it were not for the law of diminishing returns (as inexorable in the economic world as the laws of freely falling bodies are in the physical universe), there would be no economic rent. If from every application of labor and capital it were possible to get proportional instead of diminishing

returns, it would be unnecessary to use the inferior lands, and there would be no increasing cost per unit of output on the best land. The mere postulation of this contrary-to-fact condition reveals the importance of diminishing returns in our economic life.

In applying successive increments of labor and capital to a given piece of land, not only does the productivity per unit diminish, but finally a marginal use of labor and capital is reached. The cultivation of any piece of land has reached the *intensive margin* when the last dose of labor and capital applied to it yields a product that is just large enough to pay for itself. The intensive margin of use of a piece of land marks the least productive application of labor and capital to that land. If this least productive application of labor and capital just pays for itself, it follows that the preceding doses more than pay for themselves, since under competitive conditions the cost of all the doses is the same. The more productive doses, therefore, yield a rent. Economic rent, when lands are cultivated with varying intensity, may be measured from the intensive as well as the extensive margin of use. The product of the intensive margin of use of the better lands equals the product of the poorer lands at the extensive margin of use, since both (by definition) are just large enough to cover the cost of applying the unit of labor and capital concerned.

If, as illustrated in the next table, five equal doses of labor and capital, amounting to \$2,400 each, are applied to a piece of land, and if the fifth dose yields a product just large enough to pay for itself, it is obvious that the first four doses yield a surplus over costs measured by the difference between their yields and the yield of the fifth or marginal dose. The surplus over costs of the first dose measured in bushels is 2,800 ($4,800 - 2,000 = 2,800$); of the second, 1,750 ($3,750 - 2,000 = 1,750$); of the third, 1,000; and of the fourth, 400. The fifth dose being marginal yields no surplus. The total surplus over costs as a result of applying these five doses of labor and capital is 5,950 bushels. At \$1.20 per bushel needed to cover marginal costs this represents an economic rent of \$7,140.

The converse of the law of diminishing returns is the principle of increasing costs. Indeed, the latter is only another way of looking at the facts covered by the former. If the productivity of land per unit of labor and capital tends to decline, it follows that the product is being obtained at an increasing cost per unit. The following illustration furnished by a wheat farm capable of intensive cultivation shows the interdependence of diminishing returns and increasing costs.

The table shows that while the productivity declines from 4,800 bushels for the first dose to 2,000 bushels for the fifth, the cost per bushel of additional output rises from \$.50 for the first dose to \$1.20 for the fifth. The law of increasing costs in agriculture makes it impossible to concentrate only upon the best lands in raising the necessary food supply for the world.

DIMINISHING RETURNS AND INCREASING COSTS ON FIXED AMOUNT OF LAND

<i>Number of Equal Doses of Labor and Capital of \$2,400 each</i>	<i>Cumulative Output in Bushels</i>	<i>Additional Output in Bushels per Dose</i>	<i>Cost per Bushel of Additional Output</i>
1	4,800	....	\$ .50
2	8,550	3,750	.64
3	11,550	3,000	.80
4	13,950	2,400	1.00
5	15,950	2,000	1.20

The sharply increasing unit cost of obtaining ever larger food supplies from fertile land ultimately results in so high a marginal cost that society cannot afford to pay it. Even the most fertile soil in the course of intensive use proves reluctant to yield any more.

What happens in the everyday cultivation of the soil is that men both spread their activities out over larger areas and at the same time cultivate the better soils more intensively. They simultaneously work *out* to the extensive margin on the poorer lands and *down* to the intensive margin on the better lands. The practical choices to be made in the application of equal doses of labor and capital either to a given piece of land or to different grades of land may be illustrated by the following table, showing the yield in bushels of wheat per five-acre tract.

PRODUCTIVITY MEASURED FROM BOTH THE EXTENSIVE AND THE INTENSIVE MARGINS

<i>Product in Bushels from Each Dose of Labor and Capital Costing \$25</i>	<i>Grades of Land (five-acre tracts)</i>				
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
First Dose	40	35	30	25	20
Second Dose	35	30	25	20	15
Third Dose	30	25	20	15	10
Fourth Dose	25	20	15	10	5

With a necessary expenditure of \$25 for each dose of labor and capital, the wheat would have to sell for at least \$1 per bushel to make it profitable to cultivate Grade D land at all, and \$1.25 per bushel if Grade E land is to be used. If we assume that the market price is \$1 per bushel, Grade D land is at the extensive margin of use, since it just pays to apply one dose to it, and Grade E land is sub-marginal. With a market price of \$1 per bushel established, the intensive margin is reached on the Grade A land

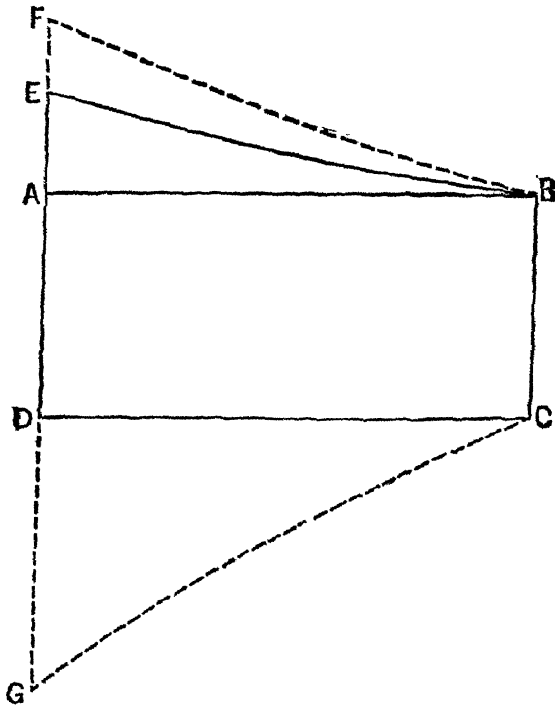
with the fourth dose, on the Grade B land with the third, on the Grade C land with the second, and on the Grade D land with the first. The surplus over expenditures, that is, the economic rent, of Grade A land when cultivated as intensively as it will stand (four doses) at the prevailing market price of \$1 is \$30; of Grade B land (three doses), \$15; of Grade C land (two doses), \$5. Grade D is marginal and accordingly yields no economic rent. If the cost of applying a dose of labor and capital were increased from \$25 to \$30, and at the same time wheat could not be sold for more than \$1 per bushel, the extensive margin would have to be "pulled in" and the intensive margin would have to be "lifted." Grade C land would now be at the extensive margin, and the intensive margin would be reached with the application of the third dose on Grade A land and the second on Grade B land. Total economic rents would be correspondingly less. When the margin of cultivation of land falls, rents increase; when the margin rises, rents decrease.

The full economic rent of a piece of land is only realized when it is cultivated as intensively as its capacity to absorb labor and capital permits. Economic rent is a surplus which arises from the use of the most advantageous combination of labor and capital on any piece of land, in comparison with what could be obtained from the application of the same amount of labor and capital on marginal land. It would of course be impossible for a farmer economically to use the same amount of labor and capital on marginal land that he uses on a piece of much better land, except as he spreads the labor and capital out over a larger area of marginal land. Rent is a surplus of product over outlay due both to the differential productivity of different grades of land and to the operation of the law of diminishing returns and increasing costs on all lands. Rent arises because unequal products are obtained from equal applications of labor and capital to land, as measured from either the extensive or intensive margin.

The relation between rent and costs, when lands of different grades are cultivated and the better lands are cultivated more intensively, may be shown by the diagram on the following page.

The diagram represents the total value-productivity of certain lands, ranged from the best at the extreme left of the diagram to the marginal land at the extreme right. The value-productivity of each piece of land may be thought of as represented by vertical lines like FG, BC, or any line parallel to them. The area enclosed by the solid lines EBCD represents the total value-productivity of all the lands when they are cultivated with uniform intensity. BC represents the marginal product and the marginal cost of production, since by definition the two are equal. Under conditions of uniform intensity of cultivation BC also becomes the cost of production on each of the other pieces of land. Then the area ABCD represents the total cost of production of all the lands and EBA the total

economic rent when the lands are cultivated with uniform intensity. EA is the economic rent of the best land, measuring its superiority over the marginal land, BC.



THE RELATION BETWEEN RENT AND COSTS

The area set off by the broken lines DGC marks the additional total cost due to varying intensity of cultivation, and the area FEB the additional economic rent obtained from such more intensive cultivation. Everything below the line AB represents costs, and everything above, economic rent. Costs of operation include the wages of labor, capital costs consisting of interest, maintenance, and depreciation, and sufficient remuneration for the entrepreneur to induce him to function. The full economic rent of the best land under the conditions of cultivation represented is not EA but FA. It is measured by the difference (FA) between the total value-productivity (FG) obtained by cultivating it through the use of whatever doses of labor and capital it has the capacity to absorb, and the expense of utilizing it (AG). The economic rent (FA) represents the maximum price that any prospective tenant can pay for its use.²

² The broad outlines of the theory of rent were sketched by David Ricardo in his *Principles of Political Economy and Taxation* (London, 1817), Chaps. II, III.

EXPLANATION OF THE SUPPLY OF AGRICULTURAL LAND

The demand for land, whether directed toward its temporary use or more permanent possession, makes land valuable, because at the same time the supply of land is limited in relation to human wants. The distinguishing thing about the supply of land in contrast to the supply of the other agents in production is that man cannot as readily adjust the supply of land to his changing production needs as he can adjust the other factors. The supply of land is less amenable to human control than is the supply of produced capital. The latter in the long run can be indefinitely increased, which is out of the question in the case of land. While this is doubtless a difference in degree rather than of kind, it has important bearings upon economic rent and the value of land. Since it is possible indefinitely to increase the supply of produced capital, the returns from various units of such capital tend to be equalized. Because it is impossible easily to increase the supply of economically desirable land, the returns from various units of land tend to become very unequal.

As far as the supply of land is concerned, the ultimate limiting factor is of course what nature has furnished in the geographic supply of land. This is wholly a matter of acreage. Man has reclaimed a little from the waters, but on the whole reclaimed land represents only a small percentage of the total. Not all of the geographic supply of land is usable; consequently, not all of it is included in the economic supply of land. Land that is scarce must be capable of use either for production or for the direct satisfaction of human wants in order to be counted as part of the economic supply. Throughout economic history more and more of the geographic supply has become economic land. Improved means of transportation rendering distant areas available, the discovery of means for utilizing waste lands, and reclamation projects illustrate ways in which the economic supply of land has been increased. At any given time and place only a small part of the economic supply of land constitutes the actual market supply of land, although potentially much more might be included. In any rental market the supply of land is the amount of land that prospective landlords are ready to rent or lease to others at specified prices. What sets their prices it is the problem of rent theory to demonstrate, no less than to show what sets the subjective prices of prospective tenants. But the basic analysis is the same.

Land, once the free gift of nature, has become the object of private property rights. The landowner who rents his land to a tenant is the seller of the use of the land. His subjective price expresses his choice to sell the use of the land for a given equivalent. If he has any withholding power he may at times choose not to offer his land, in the expectation that by helping to restrict the market supply he will help to advance the rents. The chief

determinant, however, of the landlord's subjective price, in the case of agricultural land, is his own estimate of the productivity attributable to the land. The income specifically attributable to the land, over and above the expense of utilizing it, not only determines what any prospective tenant or lessee can afford to pay for it but also what the prospective landlord or lessor can hope to get. The entire preceding analysis, then, of the productivity of land, and the differential and the diminishing returns principles as ways of measuring the economic rent, are just as germane in explaining the market supply of land as they are in explaining the demand. Both buyer and seller of land-use, both tenant and landlord, are guided in the formulation of their subjective prices by what they estimate the economic rent of land to be, that is, by the net income which they impute to the land.

THE CONTRACT RENT BARGAIN IN AGRICULTURAL LAND

Contract rent, as its name implies, is a matter of agreement between a tenant and a landlord as parties to a leasing transaction. Whenever there is an equality or overlapping of the subjective prices of prospective tenants and landlords, the prices of the former being equal to or greater than those of the latter, contract rents can be established through agreement. What the tenant can afford to pay is the economic rent of the land, which he must estimate as best he can. If he can procure the use of the land for anything less than its full economic rent, that is of course to his advantage. The landowner, functioning as lessor of the property, is interested in obtaining all that he can for its use. The most that he is entitled to get is the full economic rent of the land, which he, too, must estimate with experience as his guide. If he gets any more, it must be at the expense of other income of the tenant, such as his wages.

If free competition be assumed, there is a strong tendency for the contract rent to equal the economic rent. The competition of the market must be two-sided, and this is as true of prospective landlords as it is of prospective tenants. If competition is perfect, the landlord cannot exact more than the economic rent from a tenant because the latter has the alternative of occupying other lands where his labor and capital can be at least as profitably employed and where he does not have to pay a rental exceeding the economic rent. On the other hand, if competition is equally effective among tenants, a tenant cannot secure the use of land for less than its economic rent, because if he is unwilling to pay that rent some other prospective tenant will. Moreover, he might as well pay the economic rent on land that he wants to occupy, because under the assumed conditions he cannot find a more profitable employment for his labor and capital.

Competition in the land market, however, is usually far from perfect. The inertia of custom is powerful in fixing contract rents. There is much ignorance as to what the real economic rent of a piece of land is, and much inability to compute it with precision. In consequence tenants sometimes obligate themselves to pay a higher contract rental than the economic rent warrants. At other times landlords through ignorance, indifference, or generosity may not stipulate to collect the full economic rent of the land. Long-time contracts, during which the amount of the rental payments is not changed, may result to the advantage of one and to the disadvantage of the other party to the contract, provided the economic rent of the land has changed materially during the contract period. If the economic rent increases during such long-term contract, the tenant will be able to retain such increase in the economic rent for himself. On the other hand, if the economic rent falls during the period of his long-term lease, he is contractually bound to pay a higher sum than the present economic rent warrants. Such considerations are responsible for the fact that contract rents often vary widely from economic rents.

THE RENT OF URBAN LAND

The preceding analysis of economic rent and contract rent of land has dealt very largely with agricultural land. Economic rent, however, appears in all uses of land. It is just as characteristic of urban land as of agricultural land, and of all the varied uses to which urban land can be put.

Much urban land is wanted for residential purposes, which is a consumption-want. Into the selection of choice residential sites many factors enter, such as proximity to parks, accessibility to schools, ease and convenience of transportation, the quiet and cleanliness of the neighborhood, and other less tangible social factors. What the consumer-tenant can afford to pay, or at least is willing to pay, is determined by the marginal utility of the land-use to him. As a consumer he does not contemplate using the land productively. With him it is wholly a matter of the importance to himself of having or going without a particular site. It is a question of the importance to himself and family of living in one place or locality rather than in another. In buying such a land-use the same principles of valuation apply as obtain in acquiring any other consumption good.

Much other urban land is used for business and industrial purposes. In such use location is the principal factor accounting for the differential productivity of the land. A given investment of capital and labor in merchandising will yield much higher returns on State Street, Chicago, or Fifth Avenue, New York, than in the outskirts of these cities, if one can imagine it invested in the outskirts at all. The best business sites are found on the great arteries of pedestrian traffic. Because all urban sites are not

equally good for a given purpose, and because some sites will stand a very much more intensive development than others, economic rent emerges. Urban rents, like agricultural rents, are explained by the differential and the diminishing returns principles.

Retail trade and office building sites offer the most convenient and familiar illustrations. Retail stores require steady patronage and a rapid turnover of their merchandise for their greatest success. The choicest sites are the locations where the largest number of persons whom the retail merchant would like to attract as customers regularly pass. It is a great advantage to be located in the central shopping district. Not all can be. There are many grades of business sites ranging from the best to marginal sites which it just pays to utilize for business. When equal investments of labor and capital are made on these sites, under managements that are fairly comparable, the only conclusion that can be drawn when the incomes differ sharply is that the differences are due to the varying efficiency of the several locations. Those that occupy the better sites and are the recipients of the larger incomes are able to pay for the opportunity of doing business on the superior locations.

In cities there is usually no land at the extensive margin of all uses, which may be obtained without the payment of rent. There is land, however, that is marginal for business and other specific uses. What happens as business expands to occupy less and less desirable locations is that ultimately a location is reached which cannot be used any more advantageously for business than it can be used for some other purposes, such as residence sites. It is marginal for business but still above the margin for other possible uses. As long as land is super-marginal for any use, it commands a rent. Only land that is marginal for all possible uses is really no-rent land. The economic rent of urban land, then, when devoted to business is in part explained as a differential which measures the superiority of a given piece of land over marginal land.

But the differential principle is only a partial explanation of the economic rent of urban land. The better lands are used very much more intensively than the poorer. Even the casual observer notes this when he contemplates the towering heights to which office buildings and hotels rise in our large cities. On a smaller scale similar differences in intensity of use are characteristic of less populous centers. In deciding how much of an investment to make in improving a given urban site for a specific purpose, the law of diminishing returns must be taken into consideration. This limits the number of stories in an office building or hotel, and the number of floors in an apartment house, that can be economically constructed and used. There is also an intensive margin of use in such urban properties beyond which it does not pay to go. If the productive utilization of a given piece of land is pushed beyond this point it will not pay;

more income would be forthcoming from the investment of the same amount of labor and capital on less advantageously located land. Thus the law of diminishing returns is partly the cause of resorting to successively less desirable lands for each of a series of possible uses.

The economic rent of urban lands, although complicated by the more diverse uses to which such lands can be put, emerges from the operation of the same differential and diminishing returns principles as does the economic rent of agricultural land. The economic rent of both types of land is increased by the "dynamic principle," recognized by Ricardo, of pressure upon both the extensive and intensive margins caused by increase in population and wealth. Whether the contract rent will fully absorb the economic rent or vary from it in either direction depends upon the effectiveness of competition in the urban lands market.

Again it may be said in summary that the explanation of rent here offered (like the preceding theories of commodity prices, wages, and interest) turns on the demand and supply mechanism, the institutional arrangements of the society in which economic rent emerges and contract rents are negotiated, the contractual transaction, and the specific determinants of the subjective prices of the parties to such transactions.

CAPITALIZATION OF ECONOMIC RENT AND THE VALUE OF LAND

Economic rent is the basis of property values in land. The owner of land may receive it in the form of contract rent if he has leased his property to others or in the form of imputed rent if he uses the property himself. When a farmer uses his own farm or a merchant his own business site, and so pays no one else any contract rent, it is still true that part of the gross income of the farm or the retail business must logically be classified as economic rent, because it is distinctively due to the land. It is this economic rent which anyone can afford to pay for the use of land or exact for its use; and it is the capitalization of economic rent which forms the basis of land values for purposes of purchase and sale.

Land is valued by both buyers and sellers because it yields a rent. Since the economic rent is regarded as a regular income, although subject to advances and declines, it may be capitalized at an assumed rate of return, such as the current rate of interest. If a farm yields an economic rent of \$1,000 and the rate of return on money invested in farms is assumed to be 5 per cent, a prospective buyer could afford to offer \$20,000 for it. An investment of \$20,000 at 5 per cent nets \$1,000.³

³The value of land may be stated as the sum of a series of values representing the present worth of definite amounts of income expected in the future. The sum of \$1 at 5 per cent interest will in one year amount to \$1.05; in two years, with

If the expectation is that economic rents will increase, prospective buyers will be willing to pay more than the capitalization of the present economic rent at the current rate of return, and prospective sellers will also be inclined to ask for more. The converse will hold for falling economic rents. The value of land, like the value of anything else, is a resultant of the interaction of the market forces of demand and supply. Both the demand and the supply reflect the subjective prices of prospective buyers and sellers, which are based on the capitalization of the economic rent. If buyers and sellers estimate the economic rent differently, or use different rates of capitalization, or assume different trends for economic rents and land values in the future, they will arrive at different results. If the subjective prices of prospective buyers are equal to or greater than the subjective prices of prospective sellers, land sales are possible. The ordinary forces of a competitive market will help to establish a price equilibrium.

When a purchaser of land has capitalized its net income, and made his financial commitment in landed property, he thereupon regards his investment in land like any other capital investment. To him it is now acquisitive capital. Upon it he expects a fair rate of return. From it he hopes for a steady flow of income. From his point of view the anticipated rent may be regarded as interest on the capital invested in the land.

Since land values are ultimately based upon the net income or productivity of the land, it follows that land products are not high because the value of the land is high, but the value of the land is high because the value of land products is high.⁴ What causes the high value of land products is a strong, sustaining demand and the necessity of resorting to inferior

allowance for compounding, to \$1.1025; in three years, to \$1.1576. The present worth of \$1.05 payable one year from now is \$1; of \$1.1576 payable three years from now is \$1. If the sum to be paid annually is constant, say \$1,000, the present worth at 5 per cent of \$1,000 payable one year from now is $\frac{\$1,000}{1.05}$; in five years, $\frac{\$1,000}{(1.05)^5}$. If a farm is thought capable of yielding rent of \$1,000 payable at the close of the first year and thereafter at annual intervals in perpetuity, and if the interest rate is assumed to be 5 per cent, the present value of the land is the sum of the present worths of the anticipated future rental payments. It may be represented by the series $\frac{\$1,000}{1.05} + \frac{\$1,000}{(1.05)^2} + \frac{\$1,000}{(1.05)^3} \dots + \frac{\$1,000}{(1.05)^n}$. The sum of this series, if assumed to be infinite, is \$20,000. An investment of \$20,000 at 5 per cent can be counted upon to return an annual income of \$1,000.

⁴ Cf. Ricardo's celebrated statement: "The value of corn is regulated by the quantity of labour bestowed on its production on that quality of land, or with that portion of capital, which pays no rent. Corn is not high because a rent is paid, but a rent is paid because corn is high; and it has been justly observed, that no reduction would take place in the price of corn, although landlords should forgo the whole of their rent." *Principles of Political Economy and Taxation* (London, 1817), Chap. II.

lands to satisfy this demand. The use of inferior land lowers the margin of utilization, increases the unit costs of production, raises prices, and increases the economic rent of the better lands.

In contemplating the advantages and disadvantages of making an investment in certain types of land, prospective buyers are influenced by what has been called the "ripening costs in land utilization." Richard T. Ely describes these as follows:

The term ripening costs in land utilization is new. . . . Broadly conceived, ripening costs occur when land is ripening from one use to a higher use, for it takes time to change from one use to another. They consist of expenditures made, or income sacrificed, during this period. If the holder of the land is a private individual, the costs are in the form of taxes, special assessments, and interest foregone, which must be paid or sacrificed even when there is no income from the land. These costs of ripening use are particularly significant in the case of land because of the large investment and longer period of time required to change from one use to another.⁵

Such costs are of real importance, particularly in the case of urban land, when often a considerable period of time must elapse before the demand grows up to the supply. Yet much urban land must be platted and developed in advance of its use. It takes time and costs money to make it ready for use. Such costs are real and may limit the economic supply of land for a given use. By withholding land from one use and holding it available for another use men may affect the supply of land for each use, and through changes in the supply affect the income from such land. They must look to the ultimate economic rent of the land, however, or to the capitalized value of its economic rent, for their reimbursement. Ripening costs are carrying charges which must be borne during a time when the land to which they pertain yields no income. But while they affect the desirability of landed property as a form of investment, they do not invalidate the previous explanation of the causes of economic rent. Land values are distinctly based on the capitalization of the net income of land and are established in the market through the interaction of demand and supply.

EFFECTS OF TAXATION UPON RENTS AND LAND VALUES

Economic rent, this peculiar surplus due to the differential productivity of land, even under existing taxation laws cannot all be retained by the owner of the land. The ordinary property tax annually takes its toll. What is known as the unearned increment tax has been proposed in many places and put into force in some. But the most drastic of all proposals affecting

⁵ *Economic Essays* contributed in honor of John Bates Clark (New York, The Macmillan Company, 1927), p. 129.

the economic rent of land goes under the name of the "single tax." It proposes to take all of the economic rent in lieu of all other forms of taxation.

Effects of current property taxes. If the economic rent of a piece of land is \$1,200 and it is appraised at \$20,000 for taxation purposes, the net income of the owner is not \$1,200 but \$1,200 less the amount of the property tax. If the property tax rate in the community concerned happens to be fifteen mills (\$.015) per dollar of appraised valuation, the owner's tax bill will be \$300 and his net income \$900. Existing property taxes reduce the net income derived from the ownership of land which yields an economic rent.

A piece of property located in a city, and also appraised at \$20,000 for taxation purposes, would almost everywhere have to carry a higher rate of taxation than the agricultural land. Urban property taxes are usually higher because urban government costs more. If the urban tax rate is twenty-five mills (\$.025) per dollar of appraised valuation, it is obvious that the property tax against this piece of real estate will be \$500.

Plan of the unearned increment tax. Economic rent has occasionally been taxed as an unearned increment. An unearned increment in the value of land is an increase in value due solely to the operation of social forces rather than to the efforts of individual owners. The social forces chiefly responsible for the increase in land values are growth in population and growth in the income and wealth of the people, which result in a more active demand for land and its uses. Under a system of unearned increment taxation any increase in land values accruing after a given date is subject to heavy extra taxation. The unearned increment tax lets bygones be bygones and takes only part or all of the future unearned increments. In this respect it stands in contrast to the single tax, which socializes past unearned increments as well. The tax may be collected at the time of the sale of the land or at periodic intervals. To the taxation of future unearned increments in land values there can be no serious objection in principle. If the government serves notice upon all that after a certain date the rules of the game of land ownership are to be changed and that thereafter further increases in land values will be taken by the state, no valid criticism can be passed on the fairness of the policy. The proposal to socialize future unearned increments is not a question primarily of justice, but rather a question of whether the taking of the unearned increments by government as a tax will bring greater social gains than if all or part of this increase in land values remains in the hands of private landowners. If society takes all of the unearned increment, it is urged in counter-argument that society is in honor bound to compensate private landowners for any unearned decrements they may have experienced. Only a few countries have made serious use of a special unearned increment tax; England and Germany

are among them. The practical effect, however, of periodic advances in the appraisement of real estate for the property tax is to take some of the unearned increment through the medium of the general property tax.

The single-tax proposal. Perhaps the most ingenious suggestion ever made concerning the raising of public revenue is the "single-tax" proposal to socialize all of the economic rent that is due to the superiority of unimproved land. The single-tax proposal is that the government shall appropriate all of the economic rent of land, it being held that a single tax of this kind would yield revenues large enough to enable the government to abolish all other taxes. Since the plan means socialization of economic rent, it practically means socialization of the land itself, because the value of the land to a private owner is the capitalization of its economic rent. Under the single-tax plan private individuals could still retain title to their land, and might prefer to do so for a variety of reasons, but as far as any money income from the land is concerned one piece of land would be no better than any other.

The single-tax program and movement are inevitably associated with Henry George (1839-1897), their founder and proponent. Henry George, though born and reared in the East, made most of his observations in San Francisco at a time when the numbers and wealth of the population were increasing at a rapid rate and many fortunes were being made through the rapid rise in land values. He was impressed with the persistence of poverty in spite of increasing wealth. His avowed purpose in writing *Progress and Poverty*, published in 1879, was "to seek the law which associates poverty with progress and increases want with advancing wealth." In this widely read and justly celebrated book he tries to show that this law results from the institution of private property in land, which he believes causes the benefits of progress to accrue to the exclusive advantage of landowners. The simple remedy is the appropriation of the economic rent for the common good through taxation.

To the achievement of this end Henry George directed his passionate eloquence. Master of a moving style, his writings have had a profound influence upon economic thought concerning taxation and landed property, even though the remedy he proposed for the ills of the world has not been generally adopted. Both the spirit and the substance of George's proposal are reflected in the following striking passage taken from the closing pages of *Progress and Poverty*:

In allowing one man to own the land on which and from which other men live, we have made them his bondsmen in a degree which increases as material progress goes on. This is the subtle alchemy that in ways they do not realize is extracting from the masses in every civilized country the fruits of their weary toil; that is instituting a harder and more hopeless slavery in place of that which has been destroyed; that is bringing political despotism

out of political freedom, and must soon transmute democratic institutions into anarchy.

It is this that turns the blessings of material progress into a curse. . . . Civilization so based cannot continue. . . .

Though it may take the language of prayer, it is blasphemy that attributes to the inscrutable decrees of Providence the suffering and brutishness that come of poverty; that turns with folded hands to the All-Father and lays on Him the responsibility for the want and crime of our great cities. We degrade the Everlasting. We slander the Just One. A merciful man would have better ordered the world; a just man would crush with his foot such an ulcerous ant-hill! It is not the Almighty, but we who are responsible for the vice and misery that fester amid our civilization. The Creator showers upon us his gifts—more than enough for all. But like swine scrambling for food, we tread them in the mire—tread them in the mire, while we tear and rend each other.

In the very centers of our civilization today are want and suffering enough to make sick at heart whoever does not close his eyes and steel his nerves. Dare we turn to the Creator and ask Him to relieve it? Supposing the prayer were heard, and at the behest with which the universe sprang into being there should glow in the sun a greater power; new virtue fill the air; fresh vigor the soil; that for every blade of grass that now grows two should spring up, and the seed that now increases fifty fold should increase a hundred fold! Would poverty be abated or want relieved? Manifestly no! Whatever benefit would accrue would be but temporary. The new powers streaming through the material universe could only be utilized through land. And land, being private property, the classes that now monopolize the bounty of the Creator would monopolize all the new bounty. Land owners would alone be benefited. Rents would increase, but wages would still tend to the starvation point.⁶

The case for the single tax. The case for the single tax turns on a number of arguments. The main contention is that economic rent is a social product and therefore society is entitled to it. The effort of individual owners has very little to do with creating economic rent. It is primarily increases in population and wealth, resulting in an increased demand for the products of the land, that bring about an increase in economic rent and accordingly in land values. What society has given, society has a right to take away.

What is more, a tax upon economic rent, though it amounted even to the socialization of the economic rent, would be a burdenless tax. Any old and continuing tax upon land values is discounted at the time of purchase and so is not felt at all by the new owner of the land. If the economic rent of a farm is \$1,200 and there are annual taxes against it of \$300, no prospective buyer could afford to pay more for it than the capitalization of \$900, which is the *net* economic rent. The sum of \$300 represents society's "equity" in the income of the property. To the extent to which

⁶ *Progress and Poverty*, Book X, Chap. V, "The Central Truth." The entire volume is filled with similar rhetorical passages expressing strong feeling and deep conviction.

the present owners of land allowed for taxes in the capitalized rentals which they paid, the land is already held free from tax burdens. This process could be continued until all of the economic rent has been absorbed by the government. New taxes upon present owners would of course be felt, but ultimately a state of painless extraction of taxes would be established. If economic rent is a true form of "surplus income," the payment of which is not essential to call forth necessary productive functioning as wages, interest, and some forms of profits are, its complete socialization would not affect the creation of want-satisfying goods.

It is further argued that the single tax offers a tax that is incapable of evasion and that it would put an end to speculation in land and its inescapable wastes.

There is no question that some of the principles of single-tax theory are sound. The issue really turns on the worth-whileness from a social point of view of maintaining the institution of private property in land, that is, of allowing private individuals to retain the income distinctively imputed to the land. The institution has harsh critics but equally ardent defenders.

Objections to the single tax. Objections to the single-tax program may be classified as ethical, political, and economic. On ethical grounds the opponent of the single tax argues that the program is unjust. It is unjust because it fails to keep faith with persons who have acquired land either through government grant or purchase, in the expectation that the land values created by themselves and their neighbors would accrue to them. The single-tax plan deprives owners of the income which these lands afford and so, in substance if not in form, deprives them of the land itself. It is unjust because it discriminates against the landowner. If it is admitted that the landowner is the recipient of an unearned increment, so are the owners of other capital goods. Why should the landowner be singled out for this discriminatory treatment? Why not socialize all production goods instead of merely land? Or why socialize most production goods at all? The single-tax proposal is unjust, it is said, because while taking all of the unearned increment in land values for state purposes, it fails to make provision for compensating landowners for any unearned decrements which they may have suffered. If the government proposes to take the unearned increment but refuses to compensate for the unearned decrement, is it not playing the old game of "Heads, I win; tails, you lose"? Such a policy would undermine confidence in the government.

On political grounds, the opponent of the single tax argues that if public revenues could be obtained from rents without any other form of taxation, it would take away the main incentive of many citizens to participate in government. This would not be in the best interests of democracy. It is also held that the socialization of economic rent would remove from

society the large group of landed property-holders who are essential both to the stability and to the progress of political society.

The chief objection to the single-tax proposal that has been urged on economic grounds is that it would not lead to the best use of the land. Private property in land, it is held, leads to care and excellence in management. To own and operate land, as to own a home, means that the owner-operator will express something of his personality in it. Nothing could be better as far as the best care and management of the land are concerned. The single tax would take the kernel of private property in land, leaving only the shell. On the administrative side of the single tax as a fiscal measure, it would be exceedingly difficult, and often insuperably so, to differentiate the value of the bare land from its value as improved land. As a fiscal measure it is also exceedingly doubtful that the single tax could really long remain a *single* tax; the revenues produced would doubtless prove inadequate for the purposes of government. The fighting of wars and depressions cannot be financed in this way. Only when land values are rising and the governmental need of revenue is moderate is there reasonable expectation that some governments would find the tax adequate.

Perhaps the greatest service of the single-tax movement, even though the proposed plan has not been widely adopted, has been educational. It has called attention to the glaring defects of the general property tax and has emphasized the need for a more equitable distribution of the tax burden. But as long as the institution of private property in land is regarded as more useful on economic, social, or any other grounds than public property in all land, and as more promotive of the general welfare, it will be maintained, and the single-tax plan will fail of adoption. This is still the verdict of most peoples throughout the world.

QUASI-RENTS

While economic rents are commonly and distinctively associated with land as a factor in production, they may also be present in the returns to other factors. Economic rent, as has been pointed out, is a differential return, measured by the surplus over costs at either the extensive or intensive margin of use of land. Because the demand for the land and its products is so great as to requisition the use not only of the better but also of the poorer lands, and to necessitate the more intensive utilization of the better lands, the products of the land are bound to be brought into the market under widely varying conditions of cost. But in a common market the same products will be sold at a uniform price, and that price will tend to be high enough to cover the costs of producing the marginal part of the supply. In consequence the super-marginal lands will yield economic rent because their value-productivity more than covers the cost of utilizing

them. If the supply of land were perfectly elastic, that is if the amount of land could be readily increased as more of it is wanted, the differential surplus known as economic rent would not arise. Economic rent results from the scarcity of land and the inelasticity of its supply.

But land is not the only factor characterized by differential returns. They may arise on man-made durable capital goods. When an investment has once been made in durable capital goods, such as machines and appliances of all sorts, the investment is fixed for the life-time of the capital good concerned. Capital is said to be "sunk" in concrete capital goods. The owner of capital goods is interested in obtaining as much income as he can from them, but with the lapse of time may be obliged to accept an income regardless of the capital-fund that is invested in them. His capital goods may be growing old and inefficient when compared with new capital goods of improved efficiency. If the supply of the latter were perfectly elastic, the former would soon be obsolete and out of use. But it takes time to bring about such changes, with the result that old and new fixed capital goods, those of lesser and those of greater efficiency, are kept in productive service. Under such conditions the owners of the new and more efficient capital goods may become the recipients of an income analogous to economic rent. To such income Alfred Marshall has given the name of "quasi-rent."⁷ Quasi-rents are differential returns which arise when durable man-made capital goods of varying efficiency are being simultaneously used in production. Because such differential returns are apt to prove temporary they are designated as quasi-rents to distinguish them from the more permanent differential rents which arise in connection with the use of land. Quasi-rents, however, may persist for unexpectedly long periods of time because of the slow disappearance of old capital goods and the time-consuming processes involved in the creation of the new.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Economic rent and contract rent are never equal except under conditions of perfect competition.
2. Both the intensive and the extensive margins of cultivation result from the fact of diminishing returns.
3. Economic rent emerges because the supply of land is inelastic for certain uses, but not for all uses.
4. The economic rent of agricultural land arises from differences in location of land, and from the diminishing returns which the land yields.

⁷ *Principles of Economics*, 8th ed. (London, Macmillan and Company, Ltd., 1920), pp. 74, 412.

5. The economic rent of urban land arises from differences in location and diminishing returns.
6. There would be no economic rent if it were not for the law of diminishing returns.
7. An increase in the economic rent derived from agricultural lands is caused by an increase in the market price of those lands.
8. The full economic rent of a piece of land is only realized when it is utilized as intensively as its capacity to absorb labor and capital permits.
9. Since economic rent is a differential surplus over costs at the margin, it does not enter into the determination of either commodity values or land values.
10. Since economic rent is the difference between the value products of the better lands and of marginal land, a farmer paying full economic rent on 160 acres of superior land would make no more money than he would on 160 acres of marginal land.
11. If on two pieces of corn-land of equal size and equal fertility, one farm being in Kansas and the other in Illinois, the same expenditure yields the same number of bushels of corn, the economic rent of the two farms will be the same.
12. Both rent theory and interest theory are used to explain the value of land.
13. If the government owned all the land, economic rents would disappear.
14. The single tax proposal, if adopted, would completely destroy the value of land as a business investment, and would thus deprive farmers of all incentive to use their land for agricultural purposes.
15. Quasi-rent emerges when the supply of a factor is inelastic in the short run.

B

1. Explain how economic rent would be affected by the following: (a) an increasing population; (b) the opening-up of new, good lands through improvements in transportation; (c) an improvement in the technical arts of agriculture resulting in greater production per acre.
2. Assume the following data with regard to a wheat farm for the years 1940 and 1949:

	1940	1949
Number of bushels produced	6,000	8,000
Total expenses of production	\$6,000	\$10,000
Selling price of wheat per bushel	\$ 1.00	\$ 1.50
Rate of return expected on farm investments .	5%	6%

- a. What was the economic rent of this farm in 1940? In 1949?
- b. Does the rent paid by the tenant farmer have any effect on the price of grain at the primary market? Explain.
- c. As a buyer of land, how much might you have been willing to pay for this farm in 1940? In 1949?
- d. Was the land in either year marginal for wheat production? Explain.
3. Assume the following facts concerning the production of corn on four plots of land, the plots having different degrees of fertility, but the fertility being uniform within each plot. A unit of the variable factor

represents the employment of labor and capital costing \$500; the units are considered to be of equal efficiency.

TOTAL NUMBER OF BUSHELS OF GRAIN PRODUCED
ON FOUR GRADES OF LAND

Number of Units of Variable Factor	Grades of Land			
	A	B	C	D
1	800	700	600	500
2	1500	1300	1100	900
3	2100	1800	1500	1200
4	2600	2200	1800	1400
5	3000	2500	2000	1500
6	3300	2700	2100	1500
7	3500	2800	2100	1400
8	3600	2800	2000	1200

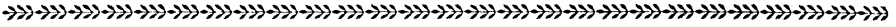
- a. Assume a market price of \$1.25 per bushel.
 - (1) How many units of the variable factor would be employed on Grade D land?
 - (2) What is the total economic rent on Grade C land? (Assume it is cultivated up to, but not past the intensive margin.)
- b. Assume a market price of \$1.00 per bushel.
 - (1) At how many units of the variable productive factor is the intensive margin on Grade B land reached?
 - (2) What is the maximum contract rent a farmer could pay on Grade A land without incurring a loss on current production?
 - (3) What grade of land is no-rent land?

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXV

Profits



PROFITS, THE FUNCTIONAL REWARD OF ENTREPRENEURS

PROFITS ARE THE reward for the successful functioning of entrepreneurs and an inducement for the continuance of such functioning. The entrepreneur is the person, or group of persons, that assumes the risk of the business enterprise. He profits if the business succeeds and loses if the business fails. To distinguish him from the laborer, capitalist, and landowner, he is often spoken of as the active "business man." While these other three claimants to the product of industry are the recipients of incomes which he has contracted to pay, he himself is the recipient of a non-contractual income. He contracts to pay wages; failure to pay them may result in a lien against his property and a court judgment against him. He contracts to pay interest on borrowed funds; failure to pay it may result in suit against him, forfeit of collateral if his loan was supported by collateral security, possible bankruptcy and reorganization of the business. He contracts to pay rent; failure to pay may invite suit and possible surrender of the premises he occupies or even eviction from them. Wages, interest, and rent are contractual incomes. The entrepreneur's failure to pay them gives the injured parties cause for action against him. Failure to pay profits, however, as distributive shares or dividends, if not earned, gives no owner or shareholder any cause for action against the business or its management. Failure to receive profits may prove a grievous disappointment, even a sore injustice, but it is not usually actionable. The entrepreneur is the guarantor of the contractual remuneration of others, but is himself the recipient only of a residual income. Risk-taking, which implies the possibility of losses as well as of profits, is the peculiar and distinctive function of the entrepreneur. It is his *raison d'être*. Profits, when earned, are his compensation.

In a sense and to a degree everyone—the laborer, the capitalist supplying loan capital, and the landowner—who has risked something on the success or failure of a business enterprise, is an entrepreneur. All of them are bearing risks. But such an extension of the rôle of the entrepreneur would imply giving the term a connotation that it does not generally enjoy. The term "entrepreneur" is usually applied to the capitalist-owners, to

the persons who supply the "venture-capital," rather than to those who lend funds to the business or supply services to it. In the successful discharge of his risk-taking function the entrepreneur must make the most of the productive opportunity he sees, must constantly study the future for his business, and must carry the financial risks involved in producing his goods. Individuals, functioning as entrepreneurs, usually express themselves through some business unit, such as the sole proprietorship, partnership, or corporation. It is this business unit that makes the actual decisions concerning production, allocates the income, and appropriates the profits.

Responsibility for the management of the enterprise is inseparable from risk-taking, but management is a function which can to some extent be delegated, and is largely delegated in corporations. The average stockholder of a corporation has practically nothing to do with managing the affairs of the corporation of which he is part owner. He has the right and the duty to vote at the annual meeting for the board of directors, who are directly responsible for the management or the selection of managers. Frequently he is too indifferent to exercise even this vestige of the managerial function. The entrepreneur may properly be identified with the owner of a business enterprise. Every sole proprietor, partner in a partnership, or stockholder in a corporation is an entrepreneur. All expect profits as a reward for their risk-taking function.

PURE PROFITS, NECESSARY AND SURPLUS

Profits constitute the residual share of the gross income of a business which goes to the entrepreneur. What is left as a net gain to the entrepreneur after covering all direct costs and imputed claims against the business constitutes his profits. Profits are measured by the difference between the gross income of a business from whatever source derived and the total outlays or costs properly chargeable against the business.

If profits are the difference between gross income and costs, it is obvious that they may be either a positive or a negative quantity. The annual reports of corporations, and the reports to the states and to the federal government for income tax purposes, give ample evidence of the existence of losses as well as profits.

The following operating statement, showing net income (a profit), may serve to illustrate the items that enter into income and outgo in accounting for an ultimate profit or loss.

Some differences of opinion exist as to what are properly chargeable costs against the income of a business. Direct outlays for materials and supplies, wages, interest on loans, contract rent, and similar explicit payments are easily recognized as costs. But if the entrepreneur is active in the management of his business, what part of his annual net income, which

WESTINGHOUSE ELECTRIC CORPORATION
 CONSOLIDATED STATEMENT OF OPERATIONS
 YEAR ENDED DECEMBER 31, 1949

INCOME:	
Products and services sold	\$945,699,382
From other sources	4,305,651
Total Income	950,005,033
COSTS APPLICABLE:	
Wages and salaries	360,420,145
Employe insurance and pensions	6,276,006
Social security taxes	5,961,470
Federal income tax	40,210,826
Other taxes	† 8,307,740
Materials and services from others	434,048,505
Interest and fees on debentures and other loans	3,598,335
Wear of facilities (<i>depreciation and amortization</i>)	14,006,096
Probable future expenditures applicable to current operations	9,907,355
Total Costs	882,736,478
NET INCOME—For the year	67,268,555
Balance, before dividends	67,268,555
DIVIDENDS:	
On preferred stock—Series A	276,518
—Series B	2,375,000
On common stock	18,303,795
Total Dividends	20,955,313
INCOME RETAINED IN THE BUSINESS	\$ 46,313,242

† Excludes \$15,165,320 federal excise taxes deducted from products and services sold and \$700,356 foreign and other taxes deducted from income from other sources

he is apt to call profits, is really his wage of management? Whether one works for others or works in one's own business, wages are the proper term to designate payment for the services rendered. What part of the return to an entrepreneur is logically interest on his investment and what part is real profits? Whether capital is lent to others or employed in one's own business, it is expected to earn interest. Shall mere interest on invested capital then, and the wages of management, if they can be separately determined, be treated as costs? This is a knotty question. Logically the answer must be in the affirmative, which gives us a much narrower concept of profits than the one currently entertained.

In the preceding operating statement *net income* represents the return to owners after all operating costs and other proper charges against income have been met. But what is it a payment for? To the economist net income

is itself a composite of several functional returns. The net income may cover non-contractual wages of management, imputed interest, and imputed rent, as well as pure profits, the reward for risk-taking.

Differentiation of wages of management from pure profits. If an entrepreneur is actively engaged in the work of his business enterprise, directing and managing its activities, he is entitled to wages of management just as certainly as he would be if he were selling his services to someone else. The wages of management paid or imputed to a managing owner, however, are service payments rather than ownership returns. If it pleases him to include such returns under profits (and apparently many business men persist in calling them profits), that is understandable. Logically, however, there is little difference between wages of management and any other service income. If the entrepreneurs of a business enterprise are obliged to hire an outsider as manager, the manager's salary would unhesitatingly be entered as an expense of operation. Is it any less so when the entrepreneur functions as manager himself? Wages of management cannot properly be considered a residual income; they are a payment for necessary functioning in production. The methods of modern corporations which hire their managerial executives, the practice of cost accounting in distributing costs, and the reporting of net income for taxation purposes after allowing for total business costs have all served to emphasize wages of management as business costs rather than as residual profits.

In some business enterprises the wages of management are actually contractual payments; this is the prevailing practice of corporations. The stockholders who are entrepreneurs, but not actively concerned with management, receive no wages of management. No part of their dividend checks can be earmarked as such wages. In other businesses, however, it usually happens that the entrepreneur's wage is an allotment or allowance out of the gross income of the business which may be both uncertain and irregular. It is unlike wages or salaries in that it may not be definitely fixed in advance. In calculating "entrepreneurial" wages it is often necessary to estimate what salary the managing entrepreneur could command if he were rendering similar managerial services to some business other than his own. There is a market for managerial ability no less than for other types of labor. If he can command an annual salary of \$5,000, for example, in a comparable position, this sum may serve as a guide in determining what is a proper charge for managing his own business. Many entrepreneurs, however, who manage their own enterprises are willing, for a time at least, to accept lower wages of management than they could secure as employees, because they prefer the greater independence which they enjoy in being their own "bosses."

Segregation of imputed interest and rent from pure profits. If an entrepreneur borrows capital for his business enterprise, he must pay loan inter-

est for it. If he leases the premises he uses, he expects to pay contract rent for them. Both the loan interest and contract rent are direct outlays of the business which must be covered by its gross income. If we assume that the entrepreneur, be he farmer, merchant, or manufacturer, is able to supply all of his own capital and land, and thus pays neither loan interest nor contract rent, does the absence of such explicit payments mean a proportional increase in profits? There is no convincing reason for thinking so. The mere fact that in this case the interest and rent are imputed returns rather than contractual payments does not really alter the logic of the situation. The entrepreneur is entitled to interest on his capital invested in his own enterprise just as much as if he had lent his capital to someone else. If he owns the land he uses in his business enterprise, he is warranted in regarding some of his gross income as economic rent.

To be sure, imputed interest and rent are mingled with profits, and for some business men are hopelessly mixed. This is due to the fact that entrepreneurs must supply much of the capital for business, just as they must provide much of the management. Without a substantial capital investment in a business by the entrepreneurs, the business would have no credit standing. It could borrow neither long-term capital nor short-term funds. Because the entrepreneur so frequently functions not only as risk-taker, but also as capitalist, landowner, and manager of the enterprise, it is not surprising that profits, interest, rent, and "entrepreneurial" wages are all commingled in a single ownership return. From a functional point of view, however, this ownership return is not a single return. It consists of a number of components, which it is the task of economic analysis to distinguish. The "entrepreneurial" wage is compensation for the discharge of the managerial function. Imputed interest is a return allowed at the current rate of interest on the invested capital; imputed rent is a return on that part of the capital investment which has taken the form of land. Only what is left is profits in the narrower sense of the term, sometimes called *pure profits*. These are the distinctive compensation for risk-taking in production.

Identification of pure profits. If after meeting all of the direct and explicit obligations of the business, and if after allowing for wages of management, imputed interest on the invested capital, and imputed rent, if any, there is a residual product, such product constitutes true or pure profits. Pure profit is a much less inclusive concept of profits than that commonly entertained, but it has the advantage of identifying profits as a distinctly functional return for the discharge of the socially necessary function of risk-taking. If men are to risk their capital in business enterprise in the hope of a highly uncertain return, this return must be larger than it would have to be if it were definite and assured. Unless there are at least the possibility and the reasonable expectation that the rewards will be greater

than ordinary interest on the invested capital, men will lack financial incentive to become entrepreneurs. The individual must see the chance of making profits in a given line of business if he is to run the risk and take up the burdens of being an entrepreneur. Without such stimulus and reward he might better lend his money to the government or to some other borrower for a definitely stipulated return and engage to work for someone else at a salary than to assume the risks and responsibilities of business enterprise. Of course, if there were no opportunity for anyone to make profits and hence no one wanted either his capital or his services, the situation would be different. In this event, however, the profits system would have disappeared and a different form of economic organization would prevail. The system of private enterprise presupposes the possibility of making profits as an inducement for the taking of business risks.

Pure profits are *necessary profits* to the extent that they are returns required to attract capital investments into business enterprise—to induce men to assume the risks essential to production. There may also be *surplus profits*, which are returns beyond what is strictly essential to call forth the necessary risk-taking function in production. Surplus profits constitute an extra prize which entrepreneurs seek. Ownership of such profits is often contested by other agents, and in any fiscal emergency of government these profits are apt to invite heavy taxation by the state. If a return of 2 per cent in excess of the current interest rate, which may be assumed to be 5 per cent, is just sufficient to attract adequate amounts of new capital into a given kind of business enterprise, then the return of 2 per cent constitutes necessary profits, and anything beyond a total of 7 per cent is surplus profits. The sources and disposition of both necessary and surplus profits will be considered later.

Gross profits inclusive of pure profits. Since wages of management, imputed rent, interest on the invested capital owned by the entrepreneurs, and pure profits all go or accrue to the entrepreneur who is active in his business, it is often convenient to refer to the totality of this return to owners by a single term. For this purpose the term “gross profits” is used and usable, with the added advantage of a certain historical continuity in the meaning of the term. The classical economists from Adam Smith to John Stuart Mill considered profits the residual income accruing to the managing owner. It was natural to do so, for in the days of these economists joint-stock companies were rare and corporations relatively unknown. Consequently, profits were the income of the capitalist, though such income usually included interest, a payment for risk and an allowance for management.¹ This usage persists among many business men. Pure

¹ Cf. John Stuart Mill, *Principles of Political Economy*, edited by W. J. Ashley (London, Longmans, Green and Co., Ltd., 1920), p. 406. He says. “The gross profits from capital, the gains returned to those who supply the funds for pro-

profits, however, not the whole of gross profits, are the distinctive reward for risk-taking.

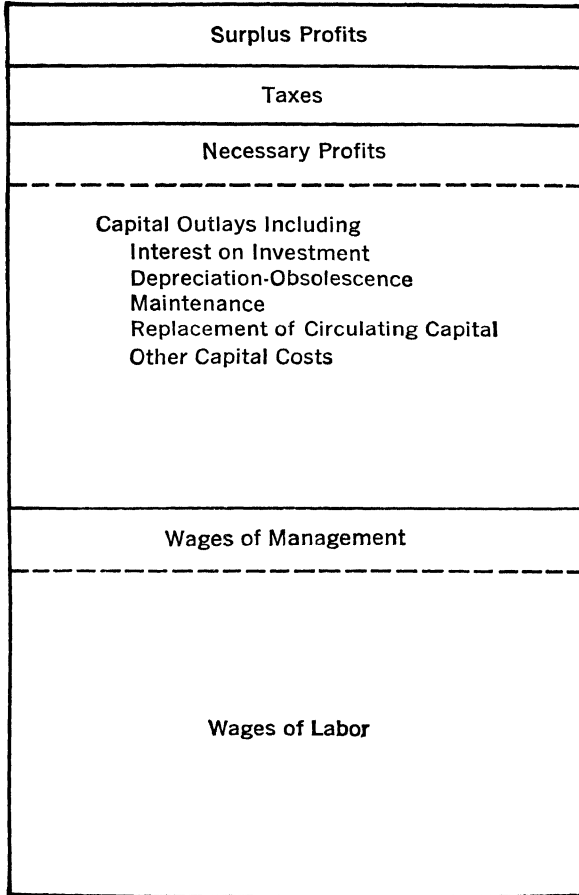
RELATION OF PROFITS TO OTHER DISTRIBUTIVE SHARES

The relation of profits to the other outlays of a business and the distributive shares represented in its product may be illustrated by the accompanying diagram. The entire bar diagram represents the total value of the product of a business during an accounting period such as a year. It is meant to show qualitative, not quantitative, relations. To represent the latter it would have to be drawn to a precise scale in accordance with the value produced and the outlays made by a particular business during a given year. The question here is, what becomes of the value-product created, and why is it distributed as it is? A substantial part of the value produced by this business must be used to cover labor costs, including both the wages of labor and the wages of management. A further substantial part is required for capital costs of all sorts. These capital outlays and charges include interest on the invested capital, whether in the form of loan interest or imputed interest, and contract rent or imputed rent as the case may be. They represent a return on the investment at the current rate of interest. But there are other capital costs and charges, which must be covered by the income from operations, before there can be any possibility of profits. These include depreciation and obsolescence; capital goods are constantly wearing out and sometimes become obsolete even before they are worn out. Then there are maintenance charges to be met, replacements of circulating capital, such as raw materials, to be made, and still other capital costs, such as insurance and losses, to be covered. Still another inescapable outlay is taxes, which may be looked upon as a payment for the services of the state. Over and above these direct outlays and costs, chargeable against the operations of a business, are profits or losses. Some of these profits are necessary to induce entrepreneurs to assume the risk-taking function and others are surplus gains beyond that which is strictly essential to call forth and reward their risk-taking. Profits in the narrower sense include the areas marked necessary and surplus profits, the residual income after meeting all direct costs and providing for all imputed returns.

Perhaps a confusing problem in the relation of profits to the other distributive shares is the reconciliation of profits, as the residual return, with economic rent, as a differential surplus over costs at either the extensive or intensive margin of use of land. To the extent that profits are

duction, must suffice for these three purposes. They must afford a sufficient equivalent for abstinence, indemnity for risk, and remuneration for the labour and skill required for superintendence."

necessary that is a necessary supply-price for the investment of venture-capital, they represent a functional cost comparable to other capital costs. They must be included in the cost of operating land before calculating



DISTRIBUTION OF THE VALUE PRODUCT

its economic rent. Beyond this, surplus profits and economic rent are different forms of surplus. If surplus profits arise, they are a surplus return to the entrepreneur, over and above what is required to evoke and compensate the risk-taking function, though nonetheless welcome on that account. Economic rent, on the other hand, is not usually a surplus to the operator of land. It is a differential surplus which measures the economic superiority of one piece of land over another, but this surplus is either absorbed in the contract rent which the tenant pays or capitalized as an investment in land which any buyer of land makes. To the tenant, eco-

conomic rent represents the means of meeting his contract-rent obligation. To the landowner, it means a return on his capital invested in land.

THE SOURCES OF PROFITS

It has been said that some profits, over and above the ordinary rate of interest on invested capital, are necessary as an inducement and reward for the discharge of the socially necessary function of risk-taking. Since risk-taking is the essence of business enterprise, private business is largely motivated by profits. If this is true, the sources and probable permanence of pure profits are important subjects of inquiry.

Differential gains due to efficiency in risk-taking. One important source of profits for the more successful entrepreneurs in every field of production may be called "differential gains." These are due to exceptional "entrepreneurial" ability or to exceptional business opportunities which the entrepreneur is quick to seize. Unusually successful business men know how to reduce unit costs below those of their competitors or to increase the volume of their business so as to reap larger returns. They know how to bargain advantageously for labor, capital, and land. They not only buy goods of all sorts needed in their business but also sell their products more shrewdly than their competitors. They are quick to develop and to use to their own advantage any new ideas in their field of business enterprise, and to profit from successful innovations. They profit from the good will built up for their products. They reap differential gains over their less fortunate competitors which are analogous to the differential return known as economic rent.

Successful methods of business, however, beget imitation. The differential gains of the more successful entrepreneurs are continually in jeopardy as competition becomes more effective. Whether such entrepreneurs can maintain their positions of leadership or not depends upon their versatility in keeping "one jump ahead of their competitors." The urge to do so drives many business men at top speed.

It may be argued that differential gains which are due to exceptional "entrepreneurial" ability tend to be absorbed in the wages of management and thus leave nothing for distribution to the owners of the enterprise, if the latter are not active in its management. Many businesses, however, particularly corporations, enter into contractual agreements for the wages of management. While wages of management are not set without reference to such differential gains, the latter are not completely absorbed by the former. The good showing of superior management is due not only to exceptional executive ability but also to the resources at the disposal of the management, and these are provided by the business. The assets of a business provide the leverage for management.

Chance gains. In certain years and for particular enterprises Dame Fortune may be credited with a not inconsiderable part of the pure profits of business. Many conspicuously successful business men are quick to admit that some of their greatest financial successes have been "lucky strikes." Chance gains result from circumstances and forces entirely beyond the powers of the individual entrepreneur. Practically all that he does is to take advantage of the "break" that comes to him.

Perhaps the most conspicuous example of chance gains that the present generation has seen is furnished by the so-called "war profits" made during the First and the Second World Wars. Industries in both belligerent and neutral countries that were in a position immediately to supply the munitions and materials of war profited enormously. In this instance what was fortune for some was misfortune for others. A great drought such as that which visited the United States in 1934 brought chance gains to the vendors of food supplies who had anything to sell. Sometimes industry-wide shortages develop, with exceptional profits for the favored few. A lucky discovery of gold or oil, a new invention, a fortunate turn in the market—these are coveted and often realized chance gains in many enterprises.

Gains from changes in the price level. Closely related to chance gains are the gains (and of course losses, too) that arise from changes in the general level of prices. These are expressed in changes in the value of stock piles and inventories. When the trend of commodity prices is upward, profits grow because of the mark-up of goods already produced and the tendency of operating costs to lag behind the advance in prices. This is the situation during the prosperity phase of what is known as the business cycle. Since the selling prices of goods increase more rapidly than the costs of producing them, business men make extra profits on their sales. During the recession and depression phases of the business cycle, on the other hand, when there is a fall in commodity prices without a corresponding fall in operating costs, losses appear.

Gains from imperfect competition and monopoly. Much of the pure profit of business arises from imperfect competition and a condition of partial or complete monopoly. Competition is a great leveler of prices. If it were perfectly effective and if risk and uncertainty could also be removed, pure profits would disappear, because both prices and costs would be uniform in any given field of production. But competition is far from perfect. Some producers are subject to little or no effective competition. In consequence the spread between prices and costs may be increased, which results in larger profits. In the different fields of productive enterprise conditions vary all the way from intense competition on the one hand to monopoly on the other, with many gradations of imperfect competition between these extremes. Whenever any degree of monopoly

exists, the opportunity for making profits is enhanced. The monopolist, however, who is intent upon increasing his profits does not set his price arbitrarily. He is guided by the law of monopoly price². If he were to set a very high price upon each unit of product, his unit profits would be high, but if the demand for his product is at all elastic his total profits may be very much lower than if he should set a lower price. It is to the monopolist's own interest to set a price that will yield him the highest net profits.

While there are few complete monopolies (and these are usually either socialized or socially controlled), elements of monopoly are much more widespread in our economic system than commonly supposed. The most obvious monopolies are the natural monopolies, due either to the actual limitation of the natural supply of a good, or to peculiar characteristics of the business itself, such as in the case of the public utilities, which make competition impracticable and socially inadvisable. In a large part of this field, if private enterprise is allowed, profits are limited through the regulation of the rates charged the public.

Monopoly profits for limited periods of time may also result from the granting of patent rights and copyrights, although here the primary purpose is to stimulate and reward inventiveness and originality. Monopoly profits, if realized, are incidental to this larger social purpose.

Profits resulting from the marketing of a product that is "different" from the ordinary run of possible substitutes are the hope and ambition of many business men. Writers on imperfect and monopolistic competition call this "product differentiation." If a business firm can successfully differentiate its products in the public mind from those of its competitors, and build up a favorable reputation for them, it may secure at least a temporary hold on the patronage of a part of the buying public. This patronage may not be threatened even though higher prices are charged than the prices of competitors. Such good will yields extra profits. It is hard, although of course not impossible, for newcomers in a productive field successfully to challenge the supremacy of firms enjoying the reputation of "product differentiation" and the good will of their buying public.

The permanence of pure profits. As long as uncertainty persists in economic life, and men take the risks which uncertainty brings, there will be the chance to make profits. But pure profits are the least stable of all the returns for functioning in production. They are also the least definite. There is no principle for measuring profits comparable to productivity in determining wages or to time-preference in determining interest. Profits are a residual return. If all the other returns—wages, interest, and contract rent—are determined in accordance with established principles, profits can properly be treated as a residual return. Profits are not only unstable and indefinite, they are also highly irregular. As far as profits are concerned

² Cf. Chap. XIX, "Price Under Monopoly," pp. 455-462.

many businesses are in the "prince or pauper class"—they make handsome profits in certain years and none at all in others.

High profits in any line of productive enterprise are sure to invite vigorous competition. Competition works relentlessly to pull down the level of profits and to reduce to a minimum the spread between selling prices and costs. As business grows more stable and economic society more static, the possibility of making profits is greatly restricted. But no such condition of static equilibrium has yet been reached as to preclude the possibility of profits. Economic society continues to be dynamic. Differences in entrepreneurial ability persist. Chance gains have not been eliminated; inventions and innovations, and sudden changes in the demand or failure of important sources of the supply, are still with us. The price structure is never perfectly adjusted. Competition continues imperfect, and degrees of monopoly exist. So the quest for profits remains in an economic world distinguished by risk and uncertainty.

THE DISPOSITION OF PROFITS

Necessary profits. The possibility of obtaining profits furnishes powerful motivation for business enterprise. Not many persons would care to assume the risks of business with all its uncertainties of outcome and irregularities of income except in the hope and expectation of making profits. Entrepreneurs engage in business because they are attracted by the prospect of profits for risks which they assume and successfully carry. Since risk-taking is essential to getting production under way, and because most of it is irksome, profits are necessary to induce entrepreneurs to assume the socially essential risk-taking function. The entrepreneur is the primary shock-absorber of the industrial system. He is and ought to be the first to feel the impact of the rapidly changing forces of the business world. The prospect of making profits larger than ordinary interest on invested capital prompts men to initiate business enterprises of their own and to carry the risks involved. In this sense, and to the degree required to attract "entrepreneurial" ability and capital, profits are necessary. From the point of view of society as a whole they may be regarded as a reward allowed for the discharge of the risk-taking function.

When it is said that profits are necessary, does this mean that an individual business cannot and will not be conducted unless profits are forthcoming? This is not a fair deduction. But there must be the possibility of winning the prize of profits. Many will contest for the prizes of business even though they know that not all will win them. It is the anticipation of profits that prompts and stimulates risk-taking. Economic society gets its necessary risk-taking done without underwriting the profits of every entrepreneur. Whether an individual entrepreneur will continue in busi-

ness if he never realizes them is at least open to question and doubt. He would do better if he lent his capital and sold his services to others, and thus substituted a more certain income for the uncertainties of business enterprise. Whatever may be true of individual entrepreneurs, profits must, under a productive system which leaves the assumption of risk-taking to private enterprise, be obtainable for entrepreneurs as a whole.

Surplus profits. But this is not to affirm that all profits are necessary. The prizes may be larger than needed to stimulate and reward the risk-taking function. Such profits may be properly designated as surplus profits. The surplus profits of a particular year, however, may be partly or wholly counterbalanced by the losses of some other year. Whether in a given industry over a period of years there is an excess of surplus profits over losses sustained is a hotly contested issue upon which we ought to have more conclusive evidence than is furnished by much of the available data. Be that as it may, the emergence of surplus profits at any time invites the imposition of both regular income taxes and taxes on surplus profits. During the period of the First World War, for example, the United States Government for a time taxed what it called "excess profits." Again under the Revenue Act of 1940 special excess-profits taxes were reinstated. They reached a peak during the Second World War when for some years excess profits were taxed at the rate of 95 per cent. Since a 10 per cent refund was allowed (the intention at first being that it should be paid after the close of the war), the effective rate of taxation on excess profits was 85.5 per cent.³ To the extent that surplus profits are a true form of surplus, they may be taxed 100 per cent without affecting the basic functioning of the economic system.

Profits as a reward for success in socially necessary risk-taking are associated with a system of private initiative and free enterprise. The most important questions concerning profits are not questions as to the amount of profits, their necessity, or their taxation, but rather questions as to how the powerful profit-seeking motive can be controlled and guided in the social interest.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Profits motivate production in a capitalistic society.
2. Whatever is left to the owners of a business enterprise after all the claims of others against the business have been met constitutes profits.
3. In an industry the amount of profits received by the entrepreneurs can be increased only by lowering the returns to the other factors of production or by raising prices.

³ For discussion of the excess profits tax, cf. Chap. XXXV, "Forms of Taxation," p. 795.

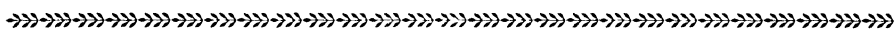
4. There is no essential difference between the risks involved in supplying loan-capital and venture-capital.
5. The whole product of industry is distributed as interest, wages, rent, and profits. Therefore, an increased return to any one of these shares means a corresponding decrease in the return to one or more of the other shares.
6. Since profits are the compensation for risk-taking, it follows that the varying rates of profits from industry to industry may be explained adequately by the relative degrees of risk which characterize different industries.
7. Uncertainty in the business outlook necessarily increases the profits of entrepreneurs.
8. It is the expectation rather than the necessary realization of profits which is important in a system of free enterprise.
9. The concept of necessary profits is significant only from a long-time point of view.
10. A local restaurant owner's total sales for last year amounted to approximately 65% of his investment in the business. This is conclusive proof that he received surplus profits.
11. Last year an entrepreneur's total sales from his men's furnishings store were \$300,000. His costs (merchandise, insurance premiums, advertising, salesmen, janitor, heat and light, and taxes) totaled approximately \$200,000. From this information it may be deduced that his surplus profits for the year amounted to \$100,000.
12. Since risk-taking is a socially necessary function, and since profit is primarily a reward for risk, it follows that the enterprisers take all the risks and that all profits are socially necessary payments.
13. The wage-earners and creditors of a business have just as legitimate a claim to so-called surplus profits as do the entrepreneurs.
14. Surplus profits can be taxed 100 per cent without materially affecting the productiveness of a business firm.
15. If the most efficient manufacturers of cotton cloth are making 25 per cent on their investment, and the least efficient or marginal producers are making 7 per cent, the price of cloth will tend to rise if the government, through taxation, takes all profits over 20 per cent.

SUGGESTIONS FOR FURTHER READING

- AMERICAN ECONOMIC ASSOCIATION, *Readings in the Theory of Income Distribution* (Philadelphia, The Blakiston Company, 1946), Nos. 27-30.
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- FOREMAN, CLARENCE J., *Efficiency and Scarcity Profits* (Chicago, University of Chicago Press, 1930).
- KNIGHT, FRANK H., *Risk, Uncertainty, and Profit* (Boston, Houghton Mifflin Company, 1921).
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CHAPTER XXVI

Value of Money and General Price Changes



VALUE OF MONEY AND CHANGING PRICE LEVELS

THROUGHOUT THE preceding analysis of what determines prices, including commodity and service prices, wage rates, loan interest rates, and contract rents, no question was raised concerning the purchasing power of the money in terms of which prices are expressed. It was tentatively assumed that this was constant. This assumption, however, is contrary to fact. The purchasing power of money, that is, its command over other goods, is subject to considerable variation, and sometimes records wide fluctuations. The monetary unit in terms of which all prices are expressed has its value, determined by the same sort of interaction of forces that sets all other values. Since a given amount of money, such as the dollar, constitutes the unit of value, any changes in its value are recorded in the prices of all other goods. The value of the dollar is measured by the quantity of goods which it commands in exchange. This is its purchasing power. When the dollar becomes more valuable, it buys more of other goods, which means that their prices, expressed in dollars, fall. On the other hand, when the dollar becomes less valuable, its command over other goods is less, which is expressed in higher dollar prices for these goods.

The unit of value, such as the dollar, which measures all other exchange values, may itself change in value, whether it be a unit of gold, of some other metal, or of paper. What its value will be depends upon the interplay of all the forces affecting the demand for money and its supply. In all cases, however, changes in the value of money register in changes in the general level of prices.

The general level of prices measures the value of money—its power of exchange. The value of money and the general price level are two aspects of the same fact: the exchange ratio of money and goods. The higher the price level, the lower is the purchasing power of money and vice versa.

To arrive at the concept of a “general level of prices” it is necessary to compare the money prices of a wide selection of goods at a given

time with the money prices of these same goods at some other time. These changes in the value relationship of goods and money are expressed by percentages called index numbers, in the construction of which the prices of some year or other period of time are taken as a base and considered as 100.

MEASUREMENT OF PRICE CHANGES BY INDEX NUMBERS

If variations in the price of a single commodity are to be studied, an index number is unnecessary. If anthracite, for example, sells for \$16 per ton in a given year and some years later the price has advanced to \$20 per ton, a direct comparison between the two prices indicates that there has been an increase of 25 per cent in the price of anthracite. But the prices of other commodities may not all have moved in the same direction nor to the same extent. Some prices may have advanced more than 25 per cent and some less. The prices of some commodities may show little change, and it is possible that the prices of others may actually have fallen. In order conveniently to measure variations in the prices of many goods, index numbers are essential. In an exceedingly compact way they tell the story of the general changes in prices that have occurred.

To construct an index number of prices it is first of all necessary to decide what prices are to be studied. If it is the price of food, only the prices of foodstuffs need be collected. If it is the cost of living, then not only the retail prices of representative foodstuffs, but also the prices of clothing, housing, fuel and light, and sundries of many kinds, must be assembled. If it is to show certain trends of business activity, wholesale commodity prices may be preferred. Since it is impracticable to collect the prices of all commodities for the area under investigation, a list of representative commodities must be selected and their prices at key places ascertained from time to time. Perhaps the best-known index numbers of prices in the United States are those of the United States Bureau of Labor Statistics. One is based on the *wholesale* prices of 890 commodities regularly reported from cities all over the United States. Prices of these commodities in 1926 are taken as the base of 100. The other is a cost-of-living index number, officially described as a "consumers' price index for moderate income families in large cities." It is based on *retail* prices with average prices in 1935-39 taken as the base of 100.

Index numbers of the arithmetic average type. After representative price data on the selected commodities have been assembled and tabulated, the important task is the calculation of averages and index numbers which will correctly indicate the price changes that have occurred. The following table of average wholesale prices of ten foodstuffs, as compiled by the United States Bureau of Labor Statistics, may be of use in illustrating

the method of computing an index number. The prices quoted for each commodity are average prices prevailing during 1926 and 1948.

AVERAGE WHOLESALE PRICES AND INDEX NUMBERS OF SELECTED COMMODITIES,
1926 AND 1948

(1926 = 100)

<i>Commodity</i>	<i>1926 Average Price</i>	<i>1948 Average Price</i>	<i>1926 Base Price</i>	<i>1948 Relative Price</i>
Eggs, per doz.	\$.335	\$.441	100.0	131.7
Butter, per lb. ....	.429	.746	100.0	173.9
Bread, per lb. ....	.075	.126	100.0	168.0
Soda crackers, per lb. ....	.140	.194	100.0	138.6
Coffee, per lb. ....	.182	.268	100.0	147.2
Pepper, per lb. ....	.256	.622	100.0	243.0
Sugar, per lb. ....	.055	.076	100.0	138.2
Lard, per lb. ....	.150	.217	100.0	144.7
Corn meal, per lb. ....	.016	.054	100.0	337.5
Dried prunes, per lb. ....	.078	.106	100.0	135.9

United States Bureau of Labor Statistics: *Wholesale Prices, 1913 to 1928*, Bulletin No. 493, pp. 53 ff.
United States Bureau of Labor Statistics: *Wholesale Prices, 1948*, Bulletin No. 973, 1950, pp. 12-13.

If the price of each of these commodities in 1926 is taken as the base or 100 per cent, the prices of these same commodities in 1948 may be expressed as relative prices or percentages calculated on the 1926 base. The results are indicated in the last column of the table. It is apparent that there has been a rise in the prices of all these commodities, although the percentage of rise has been much sharper in some cases than in others. To get a composite picture of the change, index numbers are constructed. One way of constructing an index number is to take a *simple arithmetical average* of the relative prices, which, calculated from the figures of the table, is 175.8. If this be accepted as a correct gauge of the course of food prices, it means that there has been a rise of about 76 per cent from 1926 to 1948.

But such an index number of changes in the price of food has decided limitations. In the first place, its reliability is questionable because it is based upon only ten commodities. A much wider range of commodities would enhance the trustworthiness of the index number. Secondly, the simple arithmetical average assigns the same importance to each commodity in the representative list. Expenditures for pepper, however, do not actually rank as equal in importance to expenditures for bread and butter, either in absolute volume or in the significance of these commodities to the ultimate consumer. If the price of pepper were to rise 500 per cent, its rise in price could still be borne with equanimity, since no family

spends very much for pepper. A sharp advance in the price of milk, on the other hand, is quickly felt, since all families use it and expenditures for milk represent a substantial percentage of their annual food budgets. To correct the error of the equal treatment of unequally important items, a *weighted arithmetical average* may be substituted for the simple arithmetical average. In the construction of such an index number each commodity is given a weight in accordance with its relative importance in the total expenditures during a period of time. Thus if the expenditures for sugar are ten times as large as those for whatever commodity is used as the base of comparison, the relative price of sugar (138.2) is counted ten times while that of the other commodity is counted only once in arriving at the weighted arithmetical average. The relative prices of the fourth column of the table must be multiplied by the weight assigned each commodity. The sum of these weighted relative prices divided by the sum of the weights then gives the weighted arithmetical average, which constitutes the index number.¹

Index numbers of the aggregative type. Instead of calculating either a simple or weighted arithmetical average of the relative prices of a series of commodities as a means of getting an index number, it is also possible to use simple or weighted sums of actual prices. Such index numbers are known as the simple or weighted aggregative type. One sum or aggregate may be expressed as a percentage of the other taken as a base. Such an index number is a "relative of aggregates." Calculations made from the first two columns of the table show that in 1926 it cost \$1.71 to buy the ten commodities in the quantities indicated, while in 1948 the total cost was \$2.85. If the unweighted 1948 sum is expressed as a percentage of the 1926 sum taken as the base, the percentage or index number is 166.1. If the commodities are weighted in accordance with their relative signifi-

¹ There are other averages or types than the arithmetic average which may be used in the construction of index numbers. Two of the most familiar of these are the median and the mode. They have their distinctive uses and for some purposes are better than the arithmetic average. The *median* is the item in a consecutively arranged series of items which divides the distribution of items into two equal parts. It is only slightly affected by the extreme items in the array which may represent a sharp variation from the ordinary run of items. The median is a highly useful type or average for some purposes, such as wage studies and studies of the distribution of income and of wealth. To say that in 1949 the median American family had an income of \$3,100, which means that there were as many families with incomes of over \$3,100 as there were families with incomes less than this amount, is one way of graphically describing the distribution of the income of the American people.

Another common average or type is the *mode*. It is the most frequently occurring item in a series. The mode eliminates extreme variations completely. Indeed, in calculating the mode, it is not even necessary to know precisely what the extreme items are; it suffices to know that they are few in number. To say that the modal wage of a group of workmen is \$12 per day, which means that there are more workers in this group getting \$12 per day than there are getting any other rate, seems to many persons the fairest way of describing the distribution of wages.

INDEX NUMBERS AND EQUIVALENT PURCHASING POWER OF THE DOLLAR AT
WHOLESALE, 1885 TO 1950

Year	Index Numbers 1926 = 100	Purchasing Power of the Dollar 1926 = \$1 000	Year	Index Numbers 1926 = 100	Purchasing Power of the Dollar 1926 = \$1.000
1885	56.6	\$1.767	1918	131.3	.762
1886	56.0	1.786	1919	138.6	.722
1887	56.4	1.773	1920	154.4	.648
1888	57.4	1.742	1921	97.6	1.025
1889	57.4	1.742	1922	96.7	1.034
1890	56.2	1.779	1923	100.6	.994
1891	55.8	1.791	1924	98.1	1.019
1892	52.2	1.916	1925	103.5	.966
1893	53.4	1.873	1926	100.0	1.000
1894	47.9	2.088	1927	95.4	1.048
1895	48.8	2.049	1928	96.7	1.034
1896	46.5	2.151	1929	95.3	1.049
1897	46.6	2.146	1930	86.4	1.157
1898	48.5	2.062	1931	73.0	1.370
1899	52.2	1.916	1932	64.8	1.543
1900	56.1	1.783	1933	65.9	1.517
1901	55.3	1.808	1934	74.9	1.335
1902	58.9	1.698	1935	80.0	1.250
1903	59.6	1.678	1936	80.8	1.238
1904	59.7	1.675	1937	86.3	1.159
1905	60.1	1.664	1938	78.6	1.272
1906	61.8	1.618	1939	77.1	1.297
1907	65.2	1.534	1940	78.6	1.271
1908	62.9	1.590	1941	87.3	1.145
1909	67.6	1.479	1942	98.8	1.012
1910	70.4	1.420	1943	103.1	.969
1911	64.9	1.541	1944	104.0	.961
1912	69.1	1.447	1945	105.8	.945
1913	69.8	1.433	1946	121.1	.825
1914	68.1	1.468	1947	152.1	.650
1915	69.5	1.439	1948	165.1	.605
1916	85.5	1.170	1949	155.0	.645
1917	117.5	.851	1950	160.2	.624

United States Bureau of Labor Statistics, *Wholesale Prices*, Serial No. R 278 (Washington, 1935), p. 8. Index number for 1935 taken from United States Bureau of Labor Statistics, *Wholesale Prices*, Serial No. R 342 (Washington, 1936), p. 12. Index numbers for 1936 to 1950 taken from *Monthly Labor Review*, Vol. 71 (1950), No. 3, p. 421 and later monthly issues. The data for 1950 are based on an eleven-month average.

cance as determined by expenditures for them during a given period, such as the base year or any other year which is regarded as a fair sample, the index number will be correspondingly more reliable. This is accomplished by multiplying the prices paid for each unit of a commodity by the number of units purchased during the course of a period of time, such

as a year. The sum of the weighted prices of a given year may then be expressed as a percentage of the sum of the weighted prices of the base year. The widely used wholesale price index numbers of the United States Bureau of Labor Statistics are relatives of weighted sums of actual prices. The prices of any month or year are expressed as a percentage of the prices obtaining in 1926, which is made the base year.

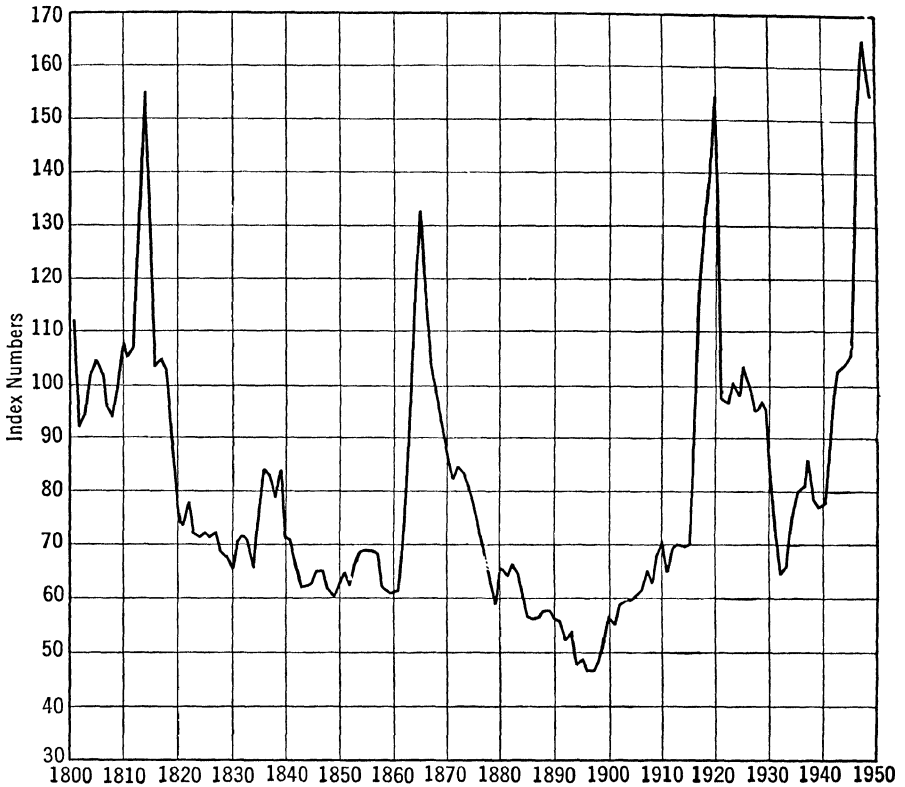
The index numbers and equivalent purchasing power of the dollar at wholesale, from 1885 to 1950, as compiled by the United States Bureau of Labor Statistics, are given in the table on page 599. The figures expressing the purchasing power of the dollar illustrate the usefulness of index numbers; they are merely reciprocals of the index numbers. Since the index number for 1932, for example, is given as 64.8, the dollar of 1932 compared with the dollar of 1926 had a purchasing power of \$1.543 ($1.00 \div .648 = \1.543). Similarly, with an index number for 1949 of 155.0, the dollar of 1949 compared with the dollar of 1926 had a purchasing power of only \$.645 ($\$1.00 \div 1.55 = \$.645$).

The table shows that the low point of prices during this sixty-five year period was reached in 1896 (46 5) when the purchasing power of the dollar stood at \$2.151 compared with \$1.00 of purchasing power in 1926. From 1896 on to 1920 the general trend of prices was upward, although there were minor recessions in 1901, 1908, 1911, and 1914. The big downward turn, however, began in 1920, and by 1921 prices declined to an index of 97.6, which showed a decrease of over 36 per cent from the average prevailing in 1920. This sharp recession was followed by a period of eight to nine years when prices were comparatively stable at a level approximately one-third lower than the average reached during the peak year of 1920. The next sharp break in prices came after the financial crash of 1929; prices reached their lowest yearly average for this depression period in 1932. Thereafter they rose until 1938, when the sharp recession which began in the fall of 1937 carried them to substantially lower levels. For the three-year period, 1938-1940, they remained remarkably stable. Beginning with 1941, the year the United States entered the Second World War, they rose substantially and reached their post-war peak in 1948.

The course of wholesale prices as measured by index numbers is most clearly and strikingly shown in graphic form. The following chart traces the course of wholesale prices in the United States from 1801 to 1950, with prices in 1926 taken as the base of 100. The peaks and valleys in price movements are readily apparent. It is instructive to observe that the four major price peaks occurred during and after the periods of great war disturbances—the Napoleonic wars in Europe including the American War of 1812, the Civil War, the First and the Second World Wars.

Changes in the cost of living, also compiled by the United States Bureau of Labor Statistics, are shown in the table on page 602, which reveals that

consumers' prices in 1948-50 have been approximately 70 per cent higher than they were during the base period 1935-1939.



WHOLESALE PRICES IN THE UNITED STATES, 1801-1950
(1926 = 100)

Prepared by Jack Ellenbogen, Department of Economics, University of Wisconsin

EVILS IN RAPID CHANGES IN THE PRICE LEVEL

Changes in the general level of prices are always disturbing to someone. Whether the price level itself is relatively high or low is not a fact of great significance. There is nothing inherently desirable about a high level of prices, nor anything necessarily distressing about a low level of prices, if prices are governed by costs, and the incomes of people are adjusted to whatever price level prevails. If money incomes are up when the price level is high, or down when the price level is low, the status of the income recipients is neither better nor worse in one price situation than in the other. But rapid changes, which allow no time for adjustments, are particularly distressing, since they upset calculations and cause hardships to individuals, groups, and business enterprises.

Slowness of fixed incomes in responding to price changes. One evil inherent in rapid upward price changes is the inertia of fixed incomes, which fail to respond to such changes in the price level. It is a well-known fact that generally wage changes lag behind price changes. It takes time

COST OF LIVING

CONSUMERS' PRICE INDEX FOR MODERATE INCOME FAMILIES IN LARGE CITIES

(Index numbers of the Bureau of Labor Statistics, 1935-1939 average = 100)

Year	All Items	Food	Apparel	Rent	Fuel, Electricity, Refrigeration	House Furnishings	Misc.
1929	122.5	132.5	115.3	141.4	112.5	111.7	104.6
1933	92.4	84.1	87.9	100.7	100.0	84.2	98.4
1940	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943	123.6	138.0	129.7	108.0	107.7	125.6	115.8
1944	125.5	136.1	138.8	108.2	109.8	136.4	121.3
1945	128.4	139.1	145.9	108.3	110.3	145.8	124.1
1946	139.3	159.6	160.2	108.6	112.4	159.2	128.8
1947	159.2	193.8	185.8	111.2	121.2	184.4	139.9
1948	171.2	210.2	198.0	117.4	133.9	195.8	149.9
1949	169.1	201.9	190.1	120.8	137.5	189.0	154.7
1950	170.6	203.1	187.2	123.9	140.8	189.5	156.7

Monthly Labor Review, Vol. 71, No. 2 (August, 1950), p. 299 The data for 1933 are from the *Federal Reserve Bulletin*, Vol. 36 (August, 1950), p. 1062 The 1950 data are based on an eleven-month average

for the ordinary bargaining processes to effect a change in wages. The prices of individual commodities can be advanced much more quickly. In consequence, periods of rapidly rising commodity prices are always times during which there is much complaint about the high cost of living. Persons whose living depends on other forms of fixed income, such as interest on investments, pensions, and annuities, are affected in precisely the same way as are wage-earners and salaried workers. The dollars of income of all these groups command less and less of want-satisfying goods as prices move upward.

It would seem that the recipients of fixed incomes should have an offsetting advantage when prices fall. They do have such advantage provided their incomes continue unchanged. Such advantage, however, is apt to prove short-lived. Falling prices cause uneasiness concerning the future of productive enterprise, slow up its tempo, and result in unemployment with loss of income. If the depressing effects are severe, many enterprises may not be able to pay their fixed obligations, which not only impairs the

income of bondholders, or other holders of such obligations, but may jeopardize their investment as well.

Shrinkage or impairment of the value of savings. One of the greatest hardships incidental to rapid changes in the general level of prices is either shrinkage in the value of savings or impairment of the safety of such savings. For a quarter of a century (1896-1920), the general trend of prices was upward in the United States. If a person had invested \$10,000 at the beginning of the period and had allowed it to accumulate interest at 3 per cent per annum, at the end of a quarter-century of self-denial, during all of which neither interest nor any part of the principal was used for current expenditures, he would have accumulated about \$20,000. His savings from 1896 to 1920 would have doubled in the number of dollars to which he was entitled. But at the same time the general level of prices more than trebled.² What he could have bought in 1920 with his original principal plus all the accumulated interest was much less than he might have purchased with the savings of \$10,000 he had accumulated in 1896. Periods of rising prices affect adversely the holders of endowment funds, such as colleges, universities, and philanthropic foundations; the owners of savings accounts; and the holders of maturing insurance policies. The value of fixed income-yielding investments shrinks during periods of rising prices.

Although there should be compensating gains during periods of falling prices, and there frequently are, the risk in such times is that debtors will not be able to meet their obligations, which impairs the security of investments and frequently their safety as well.

A number of striking estimates have been made of the effects of rising price levels upon the value of accumulated savings. For the period beginning in 1914 and culminating in 1920 in the highest known price level since Civil War days, Willford I. King says with reference to the situation in the United States:

A moderate estimate would be to assume that dollars, since 1914, have lost 55 per cent of their purchasing power at that date. The debts owed by individuals and corporations to others than banks amounted in 1914 to not less than 30 billions of dollars. The effect of the currency inflation, which has consisted principally of increase in dollar efficiency, has been to confiscate some 16 billions of dollars' worth of the property of the creditors (at 1914 prices), and turn it over to the debtors as a gift. Sundry other billions have been transferred from the payrolls to the bank accounts of employers; and the owners in 1914 of the 22 billions of bank deposits and money have found their ability to buy goods reduced by over one half, or by about 12 billions, but this loss is partly cancelled by the gains of the borrowing depositors. A moderate estimate, however, of the value of the property which has thus

² The index number for 1896 is 46.5, as shown in the table on p. 600 of this book and 154.4 for 1920.

been transferred without any value given in return is 25 billions of dollars at the 1914 price level or 60 billions at the price level of 1920.³

Irving Fisher provides an estimate for the period 1896-1920 which covers wider territory. He says: "The total unjust shift of income and principal (assuming the present high price level to continue) from shrinkage of dollars, pounds, francs, and other monetary yardsticks since 1896, doubtless exceeds a hundred billion dollars, half or more being during the war. Almost every year untold billions of dollars' worth of social injustice is endured."⁴

Of course the high price level of 1920 did not continue, but its precipitous fall could not correct the unjust transfers of purchasing power that had already been experienced, nor could it prevent a new series of injustices which arose out of the rapidly falling prices.

A comparable impairment or shrinkage of savings took place during the period of the Second World War, and the ensuing years. The Board of Governors of the Federal Reserve System estimates that at the close of 1939 the personal holdings of liquid assets in the United States amounted to 49.6 billion dollars.⁵ Liquid assets are defined to include currency, demand deposits, time deposits, savings and loan shares, and United States Government securities. By the close of 1945 these personal holdings of liquid assets had risen to 154.5 billion dollars, an increase of almost 105 billion dollars. By 1945, however, the cost of living index stood at 128.4 on the basis of retail prices as 100 in the five-year period, 1935-39. The war was over near mid-year 1945, and price controls were removed by mid-year 1946. It is evident that the savings of liquid assets held throughout the period did not have as great purchasing power at the close of the period as at the beginning. Dollars saved to the end of the period had a purchasing power of only 77.8 cents when compared with 1939 dollars. This loss of purchasing power, 22.2 cents per dollar, when multiplied by the number of dollars thus saved, amounts to staggering losses of billions of dollars.

The American people are having the same experience with the United States Savings Bonds, which are bought on an accrual basis and mature ten years from the date of purchase. Bonds bought a decade ago and held to maturity (1950) are being paid in dollars which buy no more than 58.8 cents bought in 1940.

Disturbance of long-time contracts. Still another hardship occasioned by changes in the general level of prices is the disturbance of long-time contracts—contracts reckoned in years rather than in shorter periods of time. Such contracts usually call for the payment of specified sums of

³ "Circulating Credit: Its Nature and Relation to the Public Welfare," *American Economic Review*, Vol. 10 (1920), p. 746.

⁴ *Stabilizing the Dollar* (New York, The Macmillan Company, 1920), p. 63.

⁵ *Federal Reserve Bulletin*, Vol. 36 (1950), pp. 966-967.

money. The number of dollars, for example, specified in the obligation must be paid regardless of the purchasing power of the dollar. Any marked change in the price level and the purchasing power of the dollar is bound to affect unfavorably either the debtor or the creditor who are parties to a long-time contract. Under a rapidly rising price level the debtor gains, because he pays back dollars of much smaller purchasing power than he had originally borrowed. The creditor, while receiving the same number of dollars as the sum he lent, must accept dollars of lesser purchasing power. On the other hand, during a period of rapidly falling prices the debtor loses, because he pays back (if he is able to pay) dollars of larger purchasing power than he had originally borrowed. The creditor gains correspondingly.

Periods of falling prices are apt to be periods of great political and social unrest. In American history the protest of the debtor groups has been particularly marked during times of pronounced falling prices and has taken concrete expression in various cheap-money movements.

Inertia of rates fixed by government. Among the more inflexible prices, whether the general price level is advancing or receding, are prices fixed by custom or government. Such prices are apt to change slowly, simply because they require collective action. In the case of the public utilities, whose rates are controlled by state or federal commissions, public opinion is usually set against an advance in rates even when prices are rising. Public commissions are naturally cautious and slow in revising rates upward. Consequently, public service enterprises may find themselves caught in the vise of relatively fixed income and rapidly mounting operating costs. In times of falling prices the relative inflexibility of such rates, along with some others, tends to retard the rate at which a new balanced price structure can be established.

The human hardships and the economic, political, and social disturbances caused by sharp fluctuations in the price level are so overwhelming that they have stimulated deep and constant study of the causes of changes in the general level of prices, and of the possible means of stabilizing prices.

THE EQUATION OF EXCHANGE AS AN APPROACH TO THE PROBLEM OF PRICE CHANGES

Perhaps the simplest and easiest approach to the problem of what causes changes in the general level of prices is through what is known as the "equation of exchange." Every exchange transaction results in a simple equation of exchange, such as the purchase of a pair of shoes for twelve dollars. In this case there is an equality between the price of one pair of shoes and twelve dollars. Similarly, all of a person's purchases within a year might be expressed in an equation of exchange; the sum of the money or

credit payments would constitute one member of the equation, and the sum of the prices of all the goods bought would constitute the other. More significant and useful still is an equation of exchange which summarizes for an entire people, such as the people of the United States, the equation involved in all the individual exchanges made during the course of a year. Such an equation has a money side and a goods side. This equation of exchange expresses the fact that the total amount paid for goods during a period of time equals the sum of the prices of all the units purchased. As such the equation of exchange is a truism—it requires no demonstration. But it is nevertheless most useful in analyzing the forces that work upon the price level. Just as the law of demand and supply is the most convenient approach to the explanation of market prices of all sorts, so the equation of exchange is the most convenient approach to a study of the interacting and interdependent forces that effect changes in the general level of prices.

The most familiar form of the equation of exchange, expressed in algebraic terms, is that developed and popularized by Irving Fisher. It reads: $MV + M'V' = PT$. In this equation, M equals the average quantity of money, including both metallic and paper money, in circulation during the course of a year. V represents the velocity of circulation of money, which means the number of times the total supply of money turns over during the course of a year in facilitating trade. If the velocity of circulation of money happens to be twenty, only one-twentieth as much money is required as if its velocity were one. The rapid turnover of money increases the efficiency of its use. M' stands for the average quantity of money substitutes, or the rights to receive money, in circulation during the course of a year. It consists almost wholly of bank deposits subject to check. Actually, the "deposit-dollar," as represented by M' , directly facilitates much more trade than the "currency dollar," represented by M . V' denotes the velocity of circulation of bank deposits, the number of times on the average that the deposit-dollar does duty in exchange transactions during the course of a year. P represents the average price paid for all units of goods acquired in exchange transactions, and T denotes the total number of units of goods so exchanged, or the number of transactions in which this price is paid—the volume of trade.

If the algebraic symbols are translated into their meanings, the equation of exchange may be expressed as follows: the average quantity of money in circulation, multiplied by its velocity of circulation, plus the average quantity of bank deposits subject to check, multiplied by their rate of turnover, equal the average unit price paid for goods multiplied by the volume of trade. Obviously, the amount of money payments for goods plus payments through the transfer of bank deposits must equal the total value of all the goods acquired in exchange. Since it is the effects

of other factors upon P that concern us most in accounting for changes in the general level of prices, the equation by simple transposition may be written as follows: $P = \frac{MV + M'V'}{T}$. The equation indicates that prices vary directly with the quantity of money and of money substitutes, together with their respective velocities of circulation, and inversely with the volume of trade. Useful as the equation of exchange is in setting forth certain relationships, it offers no causal explanation of price changes.

CAUSES OF CHANGES IN THE GENERAL LEVEL OF PRICES

Changes in the prices of single commodities may be fully explained by conditions affecting the demand for and the supply of these commodities. But changes in the prices of commodities as a whole, that is, changes in the general level of prices, cannot as a rule be so explained. Such changes mean that there has been a change in the value of money, its purchasing power over other goods.

Quantity theory of money and its assumptions. The most celebrated of the theories emphasizing changes in the value of money, as causes of changes in the general level of prices, is the so-called "quantity theory of money." Economists accepting it in one form or another regard the quantity of money in circulation as the most important price-determining factor in the equation of exchange. Changes in the money supply, according to this theory, are the real causes of changes in the price level. It is held that prices in the long run rise or fall in direct proportion to changes in the quantity of money, rising with increases and falling with decreases in the quantity of money. As far as the other factors in the equation of exchange are concerned, the theory assumes that the velocity of circulation (V) is fairly constant at any particular stage of economic development; that the quantity of bank credit (M'), under existing banking laws and practice with reference to cash reserves, directly depends upon the quantity of money (M) and bears a constant ratio to it; and that the volume of trade (T), like the velocity of circulation of money, changes only slowly. It is the quantity of money, then, together with the quantity of bank credit, which chiefly controls the general level of prices and determines the value of money.

If a question is raised as to how an increase in the supply of money and credit would operate to increase the general level of prices, the answer is that more money and credit would mean more lively spending, and, with greater demand for goods without a greater supply, prices would inevitably rise. If every person in a country found that he suddenly had twice as many cash-dollars and deposit-dollars as he had before, the first thought of many would be concerned with the goods for which

this extra purchasing power should be spent. If people were inclined to hoard this extra purchasing power, it would of course have no effect upon the price level. But more money in circulation would mean more lively trade and higher prices.

Let us suppose that the amount of money in circulation in the United States amounts to 25 billions of dollars, that the bank deposits subject to check amount to 100 billions, and that the rate of turnover of each is 20 times per year. Under the assumptions made, a total of 2500 billions of dollars is offered in exchange for goods. If we further assume that 2500 billions of units of goods are purchased during the year, it follows that the average price per unit must be \$1. If the number of dollars now is suddenly doubled, and all other factors in the equation of exchange remain the same, prices must rise to twice their former level. If the supply of dollars is suddenly reduced by one half, under the same assumed conditions, prices must fall to one half of their former level.

Contentions of the quantity theory of money. One major contention of the quantity theory of the value of money is that the substance of which money is made is irrelevant in explaining general price changes; that it is chiefly the number of money units that counts. This does not mean that the quantity theory is inapplicable when a commodity such as gold, which is valuable in the industrial arts, is used as money. It merely means that the quantity theory in accounting for price changes puts the emphasis upon the number of units of purchasing power in circulation, whether they be gold or other metallic units, paper money units either based upon gold or unsupported by gold, or credit units represented by bank deposits. The quantity theory ascribes no importance as an explanation of price changes to the commodity use of gold in the industrial arts.

On this point the quantity theory clashes sharply with the so-called "commodity theory of money," which stresses changes in the demand for and supply of gold as a commodity of use in the industrial arts in accounting for changes in the general level of prices. For gold (which was the almost universal standard money commodity) there is both a non-monetary and a monetary demand, each of which affects its value; there are also material changes in the supply of gold from time to time, as a result of new gold discoveries or changes in costs affecting the profitability of gold-mining. Changes in the value of gold, however brought about, affect the general level of prices. The quantity theory of money of course does not deny that changes in the monetary use of gold effect changes in the price level; it merely denies that the value of gold as a commodity of use is of any real importance in explaining changes in the general level of prices under present conditions. Such industrial or commodity use of gold may have served very well to explain price changes in the past, when the industrial arts absorbed a much larger part of the gold supply than

they do today. But when the monetary use of gold predominates, for reserves if not for circulation, the commodity theory of money offers too simple an explanation of changes in the price level.

A second contention of the quantity theory, but one which it seeks to establish as its main conclusion, is that the causal sequence in the equation of exchange runs from changes in the quantity of money and credit to changes in the price level. The general level of prices is regarded as passive, the result of changes in other factors. There is nothing in the equation of exchange, however, to prevent one from drawing the conclusion that the causal sequence may run in the other direction; that price changes may cause and necessitate changes in the quantity of money and credit.

The quantity theory of money further contends that the quantity of money and credit (M and M') on the one side and the volume of trade (T) on the other, act primarily upon prices (P) rather than that they spend their force in acting upon each other. It is of course entirely possible that an increase in the quantity of money may simply lead to increased output and volume of trade without an increase of prices at all.

The foregoing contentions of the quantity theory are further examined in the discussion that follows, the argument of which is that not merely the quantity of money but every other element in the equation of exchange must be considered in accounting for changes in the general level of prices.

Price changes affected by every element in the equation of exchange. Price changes are so complicated, and there are so many interdependent forces at work upon prices both at any given time and over periods of time, that it seems futile to try to explain them in terms of a single factor, no matter how important and even preponderant this factor may be. Not merely the quantity of money, but every other element in the equation of exchange must be taken into consideration in accounting for changes in the price level.

That there is a distinct and direct correlation in the long run between prices (P) and the quantity of money and credit (M and M') is generally admitted. There is no escape from the fact that the prices buyers can offer for goods ultimately depend upon the number of cash-dollars and credit-dollars at their disposal. With an increase in the circulating medium and no offsetting changes in other terms of the equation of exchange, prices in the long run must rise. Similarly, with a decrease in the circulating medium and no counteracting changes elsewhere, prices in the long run must fall.

Monetary history offers many instances which seem to confirm this conclusion concerning the long-time relation of money, credit, and prices. Sharp increases in gold-production, in the quantity of paper money, or in the volume of bank deposits subject to check, when any one or all of them increased faster than the volume of production or trade, have been

accompanied by a rise in the price level. In the United States, for example, for a score of years after the Civil War, the volume of physical production increased steadily, while at the same time the world's annual output of gold decreased. The result was a fall in prices. Thereafter the production of gold increased, the increase becoming particularly marked after 1896. New gold-fields were discovered, particularly in Canada and South Africa, and the development of the cyanide process of refining gold made it possible to extract gold from ores which it had not been economical to use before. By the outbreak of the First World War the world's annual production of gold was about three times as great as it had been just prior to 1896. Monetary stocks and gold reserves increased. Prices rose; examination of the table of index numbers of wholesale prices in the United States shows an increase from 1896 to 1914 of nearly 50 per cent.⁶ Continued large outputs of gold since 1914 and the concentration of a much larger percentage of the world's gold supplies in the United States, together with an increased volume of credit built upon them, helped to carry prices to a peak in 1920, when they stood at a level two and one-quarter times as high as that of 1913.

The most striking demonstration of the effect upon prices of huge issues of paper money is furnished by the post-war inflation of the currencies which occurred in various European countries, most notably in Russia and Germany.⁷ With a rate of increase in the currency much greater than the rate of increase in the output of goods, prices inevitably rose. Ultimately, in the case of both Russia and Germany, the magnitudes of the paper money issues and of the resulting price levels had to be expressed in astronomical terms. When the worthless paper money issues were finally swept aside and new currencies established in their stead, prices fell to more customary, earthly levels.

The expansion of bank credit, if it reaches an inflationary stage, has a lifting effect upon the price level. The effective increase in credit may take the form either of volume or of velocity, or of both. It is when means of payment at the disposal of persons who spend them increase faster than the increase in available goods, that prices rise and inflation exists. Increases in the volume of outstanding credit, most economists agree, were an important contributing cause in carrying prices of commodities, real estate, and securities to the levels they reached after both the First and the Second World Wars.

Although in the long run there is a direct relation between prices and the quantity of the circulating medium, changes in the quantity of money and credit seem of little significance for the short term. At times an abun-

⁶ The index number for 1896 is 46.5 and for 1914, 68.1.

⁷ For some of the more important facts concerning these experiences with currency inflation, cf. pp. 236-238.

dance of money and credit neither prevents a fall of prices nor effects a rise. Quantity of the circulating medium is not always the controlling element in the situation. From June 30, 1933, to June 30, 1940, the amount of money in circulation in the United States increased 37 per cent, and the net demand deposits of the reporting member banks of the federal reserve system increased 130 per cent. Wholesale commodity prices during this period, however, increased 17 per cent. From 1940 through June, 1950, the amount of money in circulation increased 210 per cent,⁸ the net demand deposits of federal reserve member banks located in the reserve cities increased about 170 per cent,⁹ while wholesale commodity prices increased about 100 per cent (from 78.6 to 157.3).¹⁰

The difficulty with the quantity theory for the short term is that the assumption "other things being equal" does not hold. When other things than money in the equation of exchange change, a rigid quantity theory of the value of money is inapplicable. The theory is only offered as an explanation of prices in the long run, "other things being equal."

That changes in the velocity of circulation of money and credit affect the general level of prices becomes most apparent under certain unusual economic conditions. When there is lack of confidence in the business outlook, but no suspicion concerning the integrity of a country's currency or of its banking solidity, the velocity of circulation declines. Economic motives to speed it up are lacking. Under such conditions mere increases in the quantity of money or of credit seem to have no effect upon the price level, which tends to sag. But if people lose confidence in their cash-dollars and deposit-dollars, the velocity of circulation rises sharply, and prices tend to rise. Under such circumstances the buying public wants to convert money into goods.

Unfortunately, no accurate and continuous data concerning the velocity of circulation of money are available. To ascertain it, the total volume of money payments in a period such as a year must be estimated. Dividing the total volume of money payments by the quantity of money in circulation gives us the velocity of circulation of money. A velocity of circulation of twenty-five times per year has been estimated for the United States. The velocity of circulation of bank deposits, on the other hand, has been carefully studied since 1919 for selected reporting member banks of the federal reserve banking system. For leading cities outside New York, bank deposits subject to check in reporting member banks of the federal reserve system were being turned over at the annual rate of 53 in October, 1929, but only 19.2 in May, 1950. Turnover in New York City, in which security

⁸ *Federal Reserve Bulletin*, Vol. 36 (1950), p. 1026.

⁹ *Banking and Monetary Statistics*, Federal Reserve System, p. 94, and *Federal Reserve Bulletin*, Vol. 36 (1950), p. 1025.

¹⁰ *Ibid.*, p. 1063.

transactions are a large element, was at the annual rate of 158 in October, 1929, the month that witnessed the frantic buying and selling of securities in the stock market crash. In May, 1950, the velocity of circulation of New York bank deposits was only at the annual rate of 29.7.

Since the transfer of bank deposits facilitates 90 per cent of the exchange transactions of the country, such wide variations in the velocities of circulation of bank deposits cannot avoid affecting the general level of prices. Changes in the velocity of circulation may accentuate or reduce the effect of changes in the quantity of money or credit. Because changes in the velocity of circulation cannot be ignored, it follows that the price level does not vary directly and proportionately with changes in the volume of currency and of demand-deposit dollars.

It must also be recognized that changes in the price level itself, however they may be brought about initially, affect further changes in prices. Prices are by no means wholly passive, as the quantity theory assumes. At times they are very active. The psychology of people, convinced that prices are rising and will continue to rise, usually brings about a further increase of prices. Price changes may for a time be self-generating. At times they are causes rather than results. The causal sequence may run from price changes to increases in the circulating medium and in the velocity of circulation rather than in the opposite direction. Psychological factors, generated by rising or falling prices themselves, cannot be safely dismissed in accounting for changes in the general level of prices.

Finally, changes in the volume of trade, that is, changes in the demand for and supply of goods, may have a decisive effect upon the price level. One of the principal causes for rapidly soaring prices in the United States in the period after the First World War was the fury of extravagant buying that developed. Pent-up desires for luxuries and other nonessentials were suddenly released. High prices did not seem to cause buyers to refrain from buying. High prices were accepted as a matter of course, and the additional buying tended further to accentuate them. The increased volume of trade itself brought about changes in the volume of bank deposits through loans, and also changes in the quantity of currency necessary to carry on the increased volume of trade. If the currency and credit system of a country is elastic, it responds to changes in the volume of trade.

The quantity theory of money at best is a partial explanation of changes in the price level—true in the long run, “other things being equal.” Changes in the quantity of money and credit are a cause but not the sole cause of changes in the general level of prices, because other things do not remain equal. Every factor in the equation of exchange is of causal importance. The different elements in the equation of exchange are constantly interacting and interdependent. The quantity of money (M) and prices

(*P*) are two variables which act and react upon each other, and both influence outside factors and are affected by them. The quantity of money and credit, their respective velocities of circulation, the anticipated price level itself, and the volume of trade, all in constant interaction, and subject to many and sometimes rapid changes, help to create the price level of a given time and place.¹¹

Inflation and the general level of prices. Periodically, the price structures of most countries have been subject to unusual strains, which have come to be called inflation and deflation. The price level of our own country has been a notable example. In recent years, the early thirties were a period of deflation, while the forties have been a period of menacing inflation.

Inflation is a bewildering concept. It is often carelessly identified with every expansion of the currency and credit, that is, with any increase in purchasing power. But when the volume of our currency-dollars or deposit-dollars grows in response to an increased volume of production, it is not inflationary at all. Again any sharp rise of prices is commonly said to be inflationary. But changes in the demand for and supply of goods can bring about an advance of prices that is not inflationary in origin. Inflation does exist when the effective increase in the means of payment is greater than the increase in the supply of available goods. The increase in the means of payment, that is of our currency and deposit-dollars, may take the form of an increase in either their volume or velocity, or both. It is when the means of payment, whether money or bank deposits, at the disposal of persons who spend them, increase faster than the supply of available goods that prices rise and inflation exists. Inflation may be defined as a change in the volume or velocity, or both, of currency-dollars and deposit-dollars, in relation to the supply of available goods, which tends to reduce the purchasing power of the dollar.¹² Deflation, of course, is the opposite type of change in the circulating medium.

Inflation is of two principal types. The one is crude and the other is subtle. The first is inflation of the currency, the second is inflation of bank credit. Currency inflation is the last desperate resort of governments that have exhausted other means of acquiring purchasing power. The classic example is furnished by Germany's post-war inflation in which the German currency ultimately became practically worthless. But there is a more refined way of bringing about real inflation; it is through borrowing from the banks directly. When individuals or other non-banking investors sub-

¹¹ Consideration of possible means of stabilizing the price level is taken up at the close of the next chapter dealing with business cycles. Cf. pp. 639-642.

¹² This definition is built on a definition used in a publication of the Economists' National Committee on Monetary Policy: "Inflation is a change in the volume of the circulating medium tending to reduce the purchasing power of the monetary unit."

scribe for government bonds, what happens is this: they transfer purchasing power in the form of bank deposits or cash to the government in exchange for bonds. They give up the right to spend for civilian goods in war-time in order that the government may spend for war goods. No new means of payment are created by such transactions, and the ever present danger, that idle bank deposits or cash will be used to bid up the prices of dwindling supplies of available goods, is reduced by the amount of the funds transferred to the government. But when the commercial banks subscribe for government bonds what happens is something very different: directly or indirectly, new deposit accounts to the credit of the government are set up on the books of the banks in exchange for the bonds. No depositor in these banks relinquishes the right to spend a single dollar of his deposits as he pleases, and in addition the government acquires the right to spend the sum that the bonds bought by the banks represent. What is more, as the government spends these sums, the checks that it draws ultimately build up private deposit accounts further and so increase the supply of purchasing power. This steady increase in the means of payment let loose in the country in the face of supplies of goods, which may be declining or at least not increasing proportionately, constitutes the threat of inflation. It was this sort of inflation that the United States experienced during the war years and the post-war period. In the summer of 1945 the federal reserve banks and commercial banks of the country held 41 per cent of the government's interest-bearing securities; by the summer of 1950 it had dropped to 32 per cent. To escape run-away inflation such borrowing must be kept in rigorous check or be counteracted by other effective measures.

Inflation causes the cost of living to spiral upward. It imperils the economic status of those living on fixed incomes. It jeopardizes the safety of capital assets. It disturbs all existing economic relationships and so undermines the morale of the people. Control of inflation, in consequence, is of paramount importance. The methods employed by the United States in fighting inflation during the Second World War period included siphoning off consumer income through taxes that were not only drastic but sufficiently pervasive to reach practically all levels of income—there were about fifty million income tax payers in 1945 at the close of the war. A second method of combating inflation was to drain off consumer income through loans to the government. Whatever part of their current incomes consumers did not spend, but transferred to the government for spending, was noninflationary. Fixing prices by establishing price ceilings and rationing limited supplies of goods wherever necessary, were other methods of fighting inflation. Taxes and loans attacked the problem of inflation from the money or purchasing power side; price fixing and rationing approached it from the goods side. These four methods were supplementary and inter-

dependent; no one of them could have succeeded alone. But together they proved reasonably effective, not in preventing all inflation, but certainly in controlling inflation for the duration of the war. When the war ended in the summer of 1945, wholesale commodity prices in the United States had advanced 36 per cent over what they had been in 1939, and the cost of living showed an advance of 30 per cent over the 1939 base. While these advances were substantial they were small when judged by the inflationary potentialities of the time. Great credit for the war-time control of inflation must be given to the restraint and coöperation of the American people.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. An index of wholesale food prices is a good measure of the cost of living.
2. An index of general prices, to be adequately representative, must contain a large number of different types of commodities and services.
3. The aggregate national income is not affected by shifting price levels, since some groups gain and other groups lose.
4. When the general price level falls, the debtor is injured; when it rises, he is benefited; therefore in the long run the result so far as debtors are concerned is the same as though the price level had remained constant.
5. It would be to the advantage of railroads and other public utilities if rapid rises in the general price level could be prevented.
6. According both to the commodity theory and to the quantity theory of money, a reduction in the weight of the gold dollar would cause a rise in prices.
7. Coins in circulation, time deposits, and demand deposits are considered parts of the quantity of money in circulation (M).
8. An increase in the legal reserves required to be maintained by member banks against demand deposits would have an immediate effect of decreasing the quantity of money in circulation.
9. The quantity theory of money implies that (in the long run) an increase in the quantity of money would cause an increase in the volume of trade, proportional to the increase in M .
10. In the short run, according to the quantity theory, the effect of an increase in aggregate money demand (MV), if aggregate trade remained the same, would probably be to increase the general level of prices.
11. No element in the equation of exchange can be safely disregarded in the explanation of changes in the general level of prices.

B

1. On June 15, 1946, the consumers' cost-of-living price index was 133.3 (computed with prices in 1935-39 as the base). On June 15, 1950, it was 170.2 (same base). What was the percentage change in the cost of living from June 15, 1946, to June 15, 1950?

2. The following data refer to the production of electric power in the United States:

<i>Year</i>	<i>Production in Millions of Kw·h</i>
1939	13,442
1940	14,992
1941	17,359
1942	19,429
1943	22,295
1944	23,294
1945	22,605
1946	22,467
1947	25,617
1948	28,067

Change the above production figures into index numbers, using 1939 as the base year.

3. Below are given the index numbers for the number of production workers in manufacturing industries, computed on a 1939 base. Change the base year to 1948, and compute the corresponding index numbers.

<i>Year</i>	<i>Index</i>
1939	100.0
1940	107.5
1941	132.1
1942	154.0
1943	177.7
1944	172.4
1945	151.8
1946	143.4
1947	157.3
1948	159.9

4. The U.S. Bureau of Labor Statistics lists the following retail prices of foods (the weights are hypothetical):

	<i>July, 1940 (cents)</i>	<i>July, 1950 (cents)</i>	<i>Weight</i>
Wheat flour, per 10 lbs. ...	42.6	98.4	15
Round steak, per lb.	37.8	100.3	4
Butter, per lb.	33.9	71.1	6
Eggs, per doz.	30.9	56.9	10
Milk (fresh, store), per qt. .	11.3	18.7	20
Fresh lettuce, per head ...	7.5	11.6	4
Bananas, per lb.	6.4	16.2	1
Apples, per lb.	6.6	18.2	5
Canned peaches, No. 2½ can	17.2	27.4	5
Canned tomatoes, No. 2 can	8.5	14.5	5
Canned corn, No. 2 can ...	10.5	17.1	5
Coffee, per lb.	21.3	76.4	10
Margarine, per lb.	16.0	29.8	3
Sugar, per 10 lbs.	51.7	95.0	7

- a. Compute an unweighted arithmetic mean of relative prices for the above foods, using 1940 as the base period.

- b. Compute an unweighted aggregate index of actual prices for the above foods, using 1940 as the base period. Carry all work to two decimal places.
 - c. Compute a weighted arithmetic mean of relative prices for the above foods, using 1940 as the base year. Carry all work to two decimal places.
 - d. Compute a weighted aggregate of actual prices for the above foods, using 1940 as the base year. Carry all work to two decimal places.
5. Below is given the cost-of-living index for selected years. The index is based on 1935-39. Compute the purchasing power of the dollar for each of the following years:

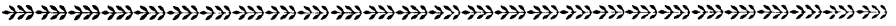
<i>Year</i>	<i>Index</i>
1913	70.7
1929	122.5
1932	97.6
1939	99.4
1940	100.2
1941	105.2
1942	116.5
1943	123.6
1944	125.5
1945	128.4
1946	139.3
1947	159.2
1948	171.2
1949	169.1

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CHAPTER XXVII

Business Cycles



THE RECURRENCE OF BUSINESS CYCLES

THAT BUSINESS has its “ups” and “downs,” its alternating periods of prosperity and depression, is a fact which generations now living and old enough to understand are not apt soon to forget. For never in the 150 years of modern industrialism has a business upheaval been so sudden and severe in the shocks we have been called upon to absorb, so prostrating in its effects upon business life and human hopes, so pervasive of all industries and all countries, as the devastating depression which struck the world about a decade after the close of the First World War. The stock market crash of 1929, which ushered in the depression in the United States, shook the entire nation and had its repercussions throughout the world, even though it was more the occasion than the cause of our economic collapse. Values melted away so that at the low point of the depression the aggregate value of the common stocks listed on the New York Stock Exchange was only about one sixth as great as it had been at its peak in 1929. Wholesale commodity prices ultimately broke through their 1913 levels, which represented a drop of approximately 40 per cent. The volume of industrial production shrank to one half of what was regarded as normal. Fifteen million persons were out of work—nearly one third of those normally gainfully employed in this country. Billions of dollars were spent by the federal government alone upon relief. Five million families, one sixth of our population, became dependent upon public support. Thousands of banks failed, and all banks practically ceased functioning for nearly a fortnight. The debt of the United States Government rose to the highest amount in its history to date, nearly forty-five billions of dollars, to which state and local debts added twenty billions more.

To those inclined to look upon this severe and widespread post-war depression as unique, the following passage may be of interest.

It is a gloomy moment in history. Not for many years—not in the lifetime of most men who read this paper—has there been so much grave and deep apprehension; never has the future seemed so incalculable as at this time. In our own country there is universal commercial prostration and panic and thousands of our poorest fellow-citizens are turned out against the approaching winter without employment, and without the prospect of employment.

In France the political caldron seethes and bubbles with uncertainty; Russia hangs as usual like a cloud, dark and silent upon the horizon of Europe; while all the energies, resources, and influences of the British Empire are sorely tried, and are yet to be tried more sorely, in coping with the vast and deadly Indian insurrection, and with disturbed relations in China.

Of our own troubles (in America) no man can see the end. If we are only to lose money and by painful poverty to be taught wisdom, no man need seriously despair. Yet the very haste to be rich, which is the occasion of this widespread calamity, has also tended to destroy the moral forces with which we are to resist and subdue the calamity!

Although an amazingly realistic description of the international economic situation of the nineteen-thirties, the quotation is from *Harper's Weekly* of October 10, 1857, and describes the depression of nearly a century ago.

Perhaps it is of little comfort to know that other generations suffered from depressions, dark and dreary; but the fact that other generations have also had their economic tragedies, and although seemingly crushed have risen again to greater economic heights, is a matter of real significance.

American economic history records a long series of alternating periods of prosperity and depression, some of them short-lived and minor in their effects, and others protracted and most severe in their consequences. There was the economic disorganization following the Napoleonic wars, for example—the depression of the eighteen-twenties. The depression of the nineteen-thirties has very frequently been compared with this because both depressions occurred about ten years after the close of wars involving many nations, and both were most extensive and severe in the disturbances they caused.

Although the world recovered completely from the depression of the eighteen-twenties, we in the United States were soon plunged into another depression. It was the dismal panic of 1837. It came in the wake of a period of rapid credit inflation and of fantastic land speculation. It took the country six years to recover. During this time every bank in the country, except some in New England, failed. It was not a case of a short bank holiday, but of actual insolvency. Nine out of every ten factories in all the Eastern states were closed. Many states repudiated their debts. People began to despair of the future of the Republic.

Twenty years later came the crash of 1857 described in the passage quoted from *Harper's Weekly*. Severe as was the depression, the country again recovered, only to face the terrible Civil War with its aftermath of political reconstruction and economic depression.

The depression of the seventies was the major corrective of the dislocations effected by the Civil War. Like the depression of the thirties it lasted for six years—from 1873 to 1879. In this period more than eighty

railroads went into receivership and almost the entire steel industry was shut down. Banks and business houses failed by the thousands.

The nineties found us in another severe depression. Prices were low and money was dear. Men were idle everywhere. Armies of the unemployed marched on Washington. The burden of debt was intolerable, and the air was filled with anguished cries of ruined debtors. The gold standard was blamed for our economic woes. Agriculture, industry, and trade all were prostrate. But after four years of suffering the country rose and began a quarter-century of economic progress without parallel in our history.

Not until the primary post-war crash in 1920 was our prosperity seriously interrupted. Then commodity prices fell sharply. With five or six millions of persons unemployed, with agriculture and industry out of gear, and with business everywhere stagnant, the Jeremiahs of economic gloom prophesied that a decade would elapse before the dawn of another day of prosperity. Yet within two years the country began the orgy of expansion and speculation that reached its climax in the stock market crash of 1929, and the beginning of what in the perspective of time may be regarded as the most severe and prolonged depression in our history. And then for the first time in our history we sank into a new depression, the depression of 1937-1938, before we had fully recovered from the last. It proved one of the sharpest and swiftest of American depressions. Recovery was accelerated by war-orders from abroad, war-preparedness at home, and finally our own participation in the Second World War.

This brief allusion to some of the major economic disturbances in the history of the American people supports the statement that there is something recurrent about the disturbances that affect modern business enterprise.

THE COURSE OF A BUSINESS CYCLE

The ups and downs of business are of various kinds. Perhaps the most familiar are the *seasonal* variations. Since the spring and fall months, in most parts of the United States, usher in the periods of greatest change in the activities of people, they are usually the months in which the greatest volume of business is done. The summer and winter months are periods during which business as a whole is not so active, although for special enterprises, such as those that conduct summer or winter resorts, it may be more active. Certain holiday periods, particularly the Christmas season, represent well-known seasonal business peaks.

Variations of a different sort are occasioned by the so-called *secular* trend in business. This is a long-time movement. When it is due to growth in population and wealth, the secular trend is upward. Under other conditions the long-time trend of business activity may be downward or un-

changed. The secular trend in the United States has been upward because the country was new, population growing, wealth increasing, and the technique of production improving.

In contrast to both the seasonal variations and the secular trend of business is the *cyclical* movement of business. The course of business seems to be characterized by alternating periods of prosperity and depression. These swings of business above and below the secular trend are cyclical because they are recurrent. Doubtless no two cycles are alike either in duration or in the amplitude of their swings. There is sufficient similarity, however, to warrant the statement that business moves in cycles. A business cycle has four distinct phases or movements: the period of prosperity, the period of the crisis and recession, the period of depression, and the period of recovery.

The period of prosperity. In tracing the course of a typical business cycle it is well to remind ourselves that production in modern economic society is highly specialized, that it is characteristically based on the extensive use of credit, and that in consequence of both these facts there is an economic interdependence among producers which accentuates every period of prosperity and also of depression. Specialized production on a large scale is possible because a marvelously intricate exchange system has been built up, including swift communication, rapid transportation, highly organized markets, and the universal use of money and credit. But at the same time this very exchange system created by men to extend the scope of their economic activities has greatly intensified their economic interdependence. Agriculture, industry, transportation, trade, finance, and other productive enterprises are today all interdependent. If any one of them fails to function in harmony with all the rest, the economic system may be seriously disrupted. Although it is true that temporarily some industries can prosper while others are depressed, the greatest prosperity of any industry depends upon the prosperity of all.

What we call prosperity, then, is a state of balanced production, even though the balance is never perfect, in which there is a fairly ready market for the goods of producers and no clogging of the markets with unsalable surpluses. The balance is never so perfect that all producers, the inefficient as well as the efficient, can dispose of their goods to advantage. But in times of greatest prosperity there is a steady movement of goods from producers to consumers without the development of unmanageable surpluses. When the goods of many scattered producers are brought to market so that the supply of each good approximately equals the demand, the market is said to clear itself through the establishment of an equilibrium between supply and demand. Under such conditions the production of goods intended for the market is said to be in balance, productive effort is wisely applied, employment is general, and prosperity is widely

diffused. Conversely, when consumption and production are not in equilibrium, largely as the result of lack of balance among specializing producers with consequent loss of purchasing power to many people, we experience the throes of depression. If every economic community still produced what it consumed and consumed what it produced, there would be perfect balance in our economic life and we should have no depressions. One of the most striking and significant facts about modern economic society, however, is that we have all chosen to specialize in our productive efforts rather than try to be self-sufficing. The specialized production of important groups and sections of our population must be kept in balance if prices that justify continued production and make for prosperity are to prevail. When the prices of raw materials and of finished goods, for example, are in alignment (that is, are fairly well-balanced), one of the basic conditions of prosperity is realized. In the late 1920's and again in 1937 the prices of both raw materials and of finished goods each showed about the same variation from the prices that obtained in the base year, 1926. According to the index number of the United States Bureau of Labor Statistics (1926 prices = 100) the indices of raw materials and of finished goods both fluctuated between 95 and 100 in the late 1920's, and between 85 and 90 in 1937. On the whole these were periods when good business prevailed. Under such conditions the producers of raw materials, notably farmers, can afford to buy the goods which industry turns out.

With the various parts of our economic system in reasonably good balance as far as productive output is concerned, an active demand for goods of all sorts develops. This is the more likely because in previous periods of economic adversity many desires for goods had to go ungratified. Buying is restored as productive efforts are brought into balance again after a period of depression. The purchasing power of most of us comes from creating commodities or rendering services which other people want, and for which they, in turn, have something of value to offer in exchange. Successful production, not money, is the ultimate source of purchasing power; it creates the income which makes consumption possible. As business improves, as employment becomes more general, and as more money goes into wages and other business disbursements, prices are apt to rise. The rise may be sporadic at first, but it soon becomes widespread, and ultimately fairly general. An increased demand for goods and rising prices usually mean larger profits because operating costs tend to lag behind the advancing prices. Some operating costs rise quickly, such as the increased prices of raw materials. Others are "pegged" for the time being, such as interest rates on long-term obligations and contract rentals. Still others respond slowly, such as wages, because it takes time to effect new bargains. With an increase both in the margin of profits per unit of output and the aggregate volume of profits, the outlook for business is

most promising. With an alluring prospect before them, business men are encouraged to make fresh commitments: new equipment is bought, old plants are modernized, and expansion of productive facilities is undertaken. Easy credit conditions at the beginning of the period of prosperity stimulate the expansion. Business optimism prevails, and since this is contagious it soon comes to characterize the entire business community. Business men face the future with confidence.

The constant risk in the prosperity phase of the business cycle is that business will over-reach itself; that new commitments will outrun the prospective earnings which must sanction and sustain them. Stresses begin to accumulate, which ultimately reach the breaking points. Chief among these is the rise in operating costs, which at first lagged behind advancing prices except in the case of raw materials. When old rental and interest contracts expire, they can only be renewed at higher rates. Wages advance as new bargains are made, stimulated by the rise in the cost of living. Since rising costs cannot be passed on to consumers indefinitely, because of the failure of the purchasing power of some consumers and the passive or active resistance of others, the margin of profits grows narrower, and the prospect for profit-making becomes decidedly more drab. Another stress results from the fact that production and consumption get out of gear. Still another is attributable to the fact that the equilibrium of prices among various commodity groups, such as that between farm products and all other commodities, is upset. If the prices of farm products break more sharply than the prices of other goods, for example, it means that farmers must sell at relatively low prices and buy at high, which is impossible for any great length of time. Maladjustment between income and fixed charges represents another stress which develops as net business earnings decline, and makes it impossible for many borrowers to meet their obligations promptly. Such failures have sharp repercussions throughout the financial system. Banking institutions, which have previously extended loans to businesses, find their reserves reduced and are forced to curtail further lending and to contract the volume of outstanding credit. The cumulative effect of such stresses and maladjustments, whatever their underlying cause or causes may be, is to bring the period of prosperity to a close through a crisis in the upward movement of prices and the course of business.

The period of the crisis and recession. The period of the crisis marks the culmination of an upward price movement. At some stage in the period of prosperity apprehensiveness develops among business men as to whether prices can continue to climb or even to hold the heights they have reached. This introduces an element of hesitancy into further business commitments. For those who have pressing financial obligations to meet, this uncertainty may lead to some liquidation of inventories regard-

less of the prices that can be obtained. Once the break in commodity prices has occurred, it precipitates a general though uneven retreat of prices along the entire line, which may develop into a disastrous rout in some price sectors.

Consumers reduce their purchases because their supplies of goods are replenished, or because their own purchasing power is impaired, or because they fear that prices may fall still lower and they do not wish to buy at the existing higher prices. Producers curtail all but the most necessary purchases of producers' goods because the outlook for profit-making is so discouraging. At the same time that the demand for both consumers' goods and producers' goods declines, the market supply of goods is increased as a result of the liquidation of inventories which enables business men to meet their obligations and to put their businesses into less precarious positions. The liquidation of high-priced goods by manufacturers and merchants usually begins in the great business centers and finally spreads to Middletown and Gopher Prairie.

The fall of prices may be so rapid as to impair or destroy the credit of many. Banks refuse to extend credit and demand the liquidation of existing loans. Numerous businesses fail to survive the crisis, and others perish in the hard times of the depression that follows. Sometimes an economic crisis may develop into a panic, which consists of a frightened scramble on the part of people to convert commodities or securities or bank deposits into cash in order to meet their obligations or to strengthen their financial positions.

The period of depression. Just as the crisis in a severe illness is apt to be followed by a period of prostration, so a severe economic crisis is usually followed by a period of business depression. Falling prices and the liquidation of credits continue during the period of depression, but not at the rapid rate that characterized the relatively short period of the crisis. This period of depression may be of short duration or may stretch into years. Economic conditions are in striking contrast to what they were during the earlier period of prosperity. Instead of a brisk demand for goods of all kinds, the demand is sluggish. Large and important groups either lack purchasing power or are exceedingly cautious in spending what they have because they fear that the downward price movement has not yet worn itself out. The general complaint is that business is dull. While operating costs fall, they do not fall as rapidly as the wholesale prices of consumers' and producers' goods. Profits either contract or are replaced by operating deficits. Credit is tight because of uneasiness concerning all values and the prospect for earnings. Most industrial plants run on a part-time basis. Some are forced to shut down completely. Marginal plants are abandoned. There is no expansion of business. Unemployment is widespread. The period of depression is a time during which business and productive enterprises in

general are compelled to "clean house." A new adjustment between prices and costs, a new level of prices both wholesale and retail, and a new alignment of prices among various commodity groups are all in the making.

In the early part of a depression period, the way to recovery is the hard road of liquidation and a realignment of prices. Whenever fictitious values have been built up in the boom period of the business cycle, liquidation and a fall in prices must occur. There is no escape. There must be liquidation of high-cost inventories, productive capacity must be brought into closer alignment with present and prospective needs, top-heavy capital structures must be written down, the quality of outstanding credits, old and new, must be improved, and a new alignment of prices at a lower level must be established. Such changes are painful and prolonged in execution. When the prices of most commodities and services have been readjusted in a new equilibrium, so that the products of interdependent industries can again be profitably exchanged, the stage is all set for a forward movement provided a substantial stimulus develops.

The period of recovery. What furnishes the necessary and proper stimulus is a question the answer to which is still shrouded in much uncertainty. As a result of the readjustments of many kinds made during the periods of recession and depression, business recovery is possible. Knowledge that basic economic conditions are again sound is essential to the generation of that confidence in the future without which there can be no real or widespread recovery. When prices not only stop falling but show signs of stability or of rising again, the psychology of buyers and sellers changes. How soon the recovery movement will broaden into another period of prosperity it is impossible to predict. The stimulus to renewed activity may be provided both by expected conditions and unexpected developments.

There are at least four important ways in which business has revived in the past and doubtless will recover in the future. One time-honored way in which business at least partially revives is through the need of making replacements. During every depression people defer what buying they can either because their own purchasing power is impaired, or because they fear prices may fall still lower. Consequently, a potential demand for all sorts of replacements steadily accumulates and ultimately becomes effective, because fortunately in every depression the greater part of the stream of purchasing power does not dry up. Buying of goods for more or less immediate consumption can be curtailed or postponed for a time, but not indefinitely. Replacement buying starts with consumers' goods. When it reaches the durable or capital-goods industries, it is an indication that the depression is over.

A second possibility of business revival after a depression is sometimes presented by an unforeseen event such as the unexpected outbreak of war

or large-scale crop failures in some parts of the world. American recovery from the depressions of the seventies and of the nineties was accelerated by crop failures in other parts of the world, which increased the purchasing power of the American farmer. There is no doubt that the First World War brought to a sudden halt the incipient depression of 1914 through Europe's intense demand for war supplies. The great drought of 1934 gave evidence of what nature can do in crop restriction. Our wheat crop, for example, proved the smallest American crop since 1890 and fell short by 200,000,000 bushels of meeting our recent domestic needs for all purposes. While it brought a sharp rise in the cost of living it also increased the farmers' aggregate purchasing power and ultimately stimulated business. When the Second World War broke out in 1939, huge war orders placed in the United States by Great Britain and her allies helped to accelerate recovery from the depression of 1937-1938. The gigantic defense and preparedness program of the United States begun in 1940 intensified the trend. The participation of the United States in the war itself brought about the greatest volume of production and business activity in the history of the country.

A third way in which a people at times extricates itself from a depression is through the development of a new industry producing a commodity or service of widespread use. The railroads after the depression of the seventies and the motor industry in more recent years provided much of the necessary stimulus for business. Business men and economists have long been anxiously scanning the economic horizon for the appearance of some commanding new industry. Air-conditioning, the creation of a sort of artificial climate, has great possibilities. Television, which may bring the theater and opera into millions of homes, is now here. Cheap electric energy and artificial sunlight promise to revolutionize and expand many human activities. Plastics, glass, and other radically improved materials for construction of buildings and appliances of all sorts may create a new industry. Electronics in its application to industry, medicine, the home, and communications may come to mean as much to mankind as the discovery and control of electricity itself. The release and control of atomic energy may usher in a new industrial world.

Finally, government action may furnish the impetus for the revival of business. There are those who now believe that business is no longer a "self-starter," that it must be "cranked" by government. Certain it is that the government by stimulating demand through public works and relief expenditures, and by restricting the supply through agricultural and industrial control measures, can powerfully accelerate or retard the rate of economic recovery, depending upon the quality of management shown. Upon the proper timing of the governmental program so as to harmonize with and reinforce the natural forces working for economic recovery,

its success or failure largely turns. During the nineteen-thirties the United States Government spent billions of dollars upon public works and in the nineteen-forties billions more upon armaments and other war supplies. The economic justification of public works as a means of restoring prosperity is commonly set forth by saying that public works are meant to prime the engines of private enterprise. If the priming operations represented by the outlays of government funds are successful, private enterprise can again furnish the opportunities for employment and public works can cease. But if the priming operations are not well timed, or the available priming fluid gives out, or the engine itself is broken, no amount of priming will reestablish normal business enterprise.

THEORIES OF THE BUSINESS CYCLE

Just as some of the ablest research workers in the fields of biology and medicine have long sought to discover and to isolate the cause of the common cold, cancer, and other diseases that have so far eluded explanation by man, so some of the world's ablest economists have long tried to furnish a causal explanation of business cycles. The hope is that if investigators can discover the causes of these afflictions it will also be possible to perfect remedies and control-measures. Perhaps the search for a single general cause of business cycles is useless. Perhaps business cycles have multiple causes, rather than a single cause, since no two cycles present exactly the same pattern. It seems certain that many of the theories proposed are partial explanations at most, and some of them are complementary rather than mutually exclusive. Some of the outstanding attempts to explain the business cycle are set forth in the discussion that follows.

Attempts to explain business cycles in terms of weather and climate.

Exceedingly interesting attempts have been made to show a correlation between business cycles and meteorological phenomena. During the last quarter of the nineteenth century the English economist, W. S. Jevons, developed his celebrated sun-spot theory of the periodicity of commercial crises. When the so-called "spots" appear, covering a larger part of the sun's surface, conditions of weather and climate are affected on the earth, particularly through variations in rainfall and the growth of crops. The abundance or failure of crops causes periods of prosperity or depression because of the dependence of all phases of economic activity upon agriculture. It was Jevons' thesis, based upon a study of the records for about 150 years, that the average time interval between the appearance of the sun-spots and the time interval between commercial crises in England were about the same—between ten and eleven years. Unfortunately, average time intervals do not establish regular periodicity. Subsequent investigations also established a longer time interval between the appearances of

sun-spots and a much shorter period of the business cycle than Jevons assumed.

In the United States Henry L. Moore has continued the investigation of weather cycles. From rainfall data he sought to establish the existence of an eight-year cycle in the weather which he contended affected crops, prices of agricultural produce, and so business conditions in general. Like Jevons he looked to the heavens for an explanation of this weather and rainfall cycle. Moore attributed it to the fact that every eight years the planet Venus moves into the direct path of radiations from the sun to the earth, which in some way affects solar radiations, and consequently weather on the earth. The theory is a striking but unproved hypothesis. There may well be some correlation between climatic changes and business cycles, but a dominating causal sequence has yet to be proved.

Business cycles and changes in business psychology. While some economists look to natural phenomena for an explanation of the cyclical course of business, others turn to the psychology of business men. The outcome of business ventures is clouded in much uncertainty. Yet business plans must be laid and commitments made. If business men have confidence in the future, they boldly make their commitments. Their judgments may be right or wrong, but they act upon them. Business optimism is contagious, and may result in over-confidence which leads to unwise expansion and speculative excesses. Sooner or later the day of reckoning comes when men must pay for their errors of judgment. This precipitates liquidation and brings on the crisis.

Again we are told that, when the future of business is uncertain and gloom thickens because pessimism, too, is contagious, all that is needed is the restoration of confidence. With the return of confidence, it is held, business will revive. That confidence is essential to complete recovery there can be no doubt. It is no more the whole remedy, however, than the will to live (powerful a force as it is) is all that a badly injured man needs to regain his health and strength. Basic economic conditions must be sound if business confidence and optimism are to have a rational base. Whether there is a quality of the human mind that finds expression in alternating states of optimism and pessimism and thus helps to account for the periodicity of the business cycle is one of the many "unknowns" about business cycles. It is at present a mere conjecture.

Overproduction in relation to the business cycle. One of the most widespread and persistent ideas in regard to business cycles is that they are due to overproduction, or if one wishes to change the emphasis, to underconsumption of goods. Older forms of the theory of overproduction stressed production as increasing faster than the power of consumers to take goods out of the market. Such general overproduction, it was held,

led to a glut in the market and an economic crisis.¹ The idea that the economic world is suffering from chronic overproduction is not convincing, when we contemplate the relatively low levels of living of most of the world's population. "So long as there remain anywhere wants which are unsatisfied, it is quite clear that there cannot be over-production in the sense of a real superfluity of commodities."² What is now usually meant by overproduction, however, is not *general* overproduction but rather *unbalanced* production in an economic world in which most producers specialize. It is true that periodically *some* goods may be produced in larger quantities than is warranted by the normal effective demand for them year in and year out. Under present conditions of income and standards of living, the American people operate about 30,000,000 passenger cars. Let us assume that the annual demand for new automobiles approximates 5,000,000 cars. If in a period of prosperity and by the liberal use of credit, which mortgages future income, the annual demand is stepped up to 6,000,000 cars, it may well happen that future events, including changes in the income of people, will not sanction any such continued demand. The demand for new cars will then inevitably shrink for a time, and perhaps fall below the previous annual average, with idle productive capacity in consequence. Those who now stress overproduction as an explanation of depressions are apt to emphasize the obvious fact that in every depression there are important supplies which cannot be sold at a profit. But this is a statement of the *problem* of depressions rather than a *solution*. The important question is, "How did supply and demand in so many markets get so badly out of balance?"

To maintain balance in our economic system is a most difficult task. Consumers' goods must come to market in quantities no greater than the market can readily absorb. This means that producers as a whole must previously have estimated the effective demand of the market with remarkable precision. In an economic system which requires the coöperation of millions of scattered producers and in which there is no central authority dictating how much shall be produced, there can be no perfect adjustment between production and consumption. There will be many mistakes of judgment both in the field of production chosen and in the productive capacity developed. So long as such mistaken judgments are not highly concentrated in a single industry, the economic system functions reasonably well in spite of them. If important industries, however,

¹ The classical economists met the theory of general overproduction by pointing out that general overproduction is impossible because the supply of any particular good constitutes potential demand for all other goods.

² Lionel Robbins, *The Great Depression* (New York, The Macmillan Company, 1934), p. 13.

in the volume of their production get out of line with the rest, the disturbance may be serious enough to bring on a crisis and to call for remedial action.

Production for the market becomes badly unbalanced through ill-timed expansion in certain lines without a corresponding increase in the purchasing power of other producers which enables the latter to buy the increased output of goods at prices profitable to their producers. Overproduction may be said temporarily to characterize some industries because underproduction characterizes others. There may be relative, even if not general, overproduction. The more accurate description of the situation, however, is that production is unbalanced when one group of producers in our division-of-labor economy is unable profitably to sell its output to other specialized producers, either because the former have produced too much or the latter have produced too little. Motivated by the quest for greater profits, aided by available credit, and sustained by a sublime faith in the consumptive capacity of future markets, some producers in every period of prosperity bring about an expansion in the production of their commodities which exceeds both the present need and the reasonably imminent demand of the market. Every period of prosperity witnesses such mistaken estimates of future demand which release the forces that hasten the end of prosperity. Such ill-timed and ill-advised expansion unbalances production.

There can be no doubt that every depression reveals such misdirected or unbalanced production. The difficulty of gauging the absorptive capacity of the market and the further fact that much production must be carried on in anticipation of future demand help to account for what prove to be mistakes of judgment. While unbalanced production is a characteristic of every depression, it offers no explanation of why production periodically becomes unbalanced. Unbalanced production is a symptom rather than a cause of depressions.

The savings-investment theory of the business cycle. A theory (or group of theories), widely held in both its naïve and more sophisticated forms, regards business cycles as in some way associated with too much saving of the national income in proportion to the ability and willingness to buy consumption goods. As a result of the very unequal distribution of income and wealth, it is claimed that the recipients of the larger incomes find it either impossible or undesirable to spend enough of their incomes on consumers' goods to clear the markets, which restricts the market demand for consumers' goods. They save what they cannot spend on consumers' goods. When times are good such savings are invested, either in the expansion of old business enterprises or in starting new ones. But this may lead to overproduction. Not only may there be an overbuilding of production facilities, but also an overproduction of durable goods of all

sorts which tends to destroy the equilibrium between consumption and production. Oversaving and overinvestment become apparent when production outruns consumption. Prices then must fall, profits shrink, and incomes decline. "In the chronic attempt to oversave income," as the English economist, John A. Hobson, expressed it, the cause of depressions and business cycles is to be found. Oversaving means that the demand for consumers' goods fails to keep pace with increases in the supply. Depression is inevitable, during which the surplus of goods must be liquidated. When the proportion between saving and spending is reestablished, prosperity can return.

The assumption of this theory seems to be that oversaving leads to underspending, to a shortage of consumer purchasing power. The recurring theme of the theory that we save too much and spend too little is that there is a deficiency of consumer purchasing power with which to buy the goods that have been produced at prices that cover costs. But savings disbursed in the process of becoming fixed in business plants and equipment also build up the purchasing power of consumers. Indeed if such expansion is fairly constant the aggregate consumer purchasing power may be more than sufficient to absorb the consumption goods the market affords, which may result in higher prices for such goods. In times of prosperity the increase in savings and in capital formation, as well as the expansion of consumption, occur at the same time, rather than that one is at the expense of the other. It is of course possible that the investment of savings may be unwisely made, resulting in the development of additional productive capacity where it is not needed. It should be noted, however, that entrepreneurs do not as a rule develop plant capacity for which there is no apparent use. It becomes evident only in depressions.

Savings, however, may be hoarded rather than spent through investment channels. Unusual circumstances, such as loss of confidence in banks or extreme pessimism in regard to opportunities for productive investments, may prompt people to hoard their savings. If savings are hoarded, they are now usually kept as idle bank deposits, either on a demand or time basis. The banks in their turn accumulate excess funds in the form of idle reserves which the customers of the bank are hesitant to borrow or the banks are reluctant to lend. When such hoarding occurs, the level of investment spending decreases and national income falls. There may be a decisive lag between savings and investments which leads to and accentuates depressions.

What has given renewed and extended currency to these ideas of spending, saving, and investment has been the exposition and influence of the British economist, John Maynard Keynes (1883-1946). There are those who think that he has made them scientifically respectable. For individuals and business enterprises there may be a lag between savings and

investments. They may have refrained from either spending or investing a substantial part of their incomes. Their liquidity preference may have been high. Their savings are savings for them as individuals, but they are not savings for the economy as a whole. They are balances kept out of the income stream.

Investment is of strategic importance in the functioning of our economic system, because in order to maintain the level of income, the total income of a given period must either be consumed or invested if the income of the ensuing period is not to drop. When income drops, employment falls off and depression may loom ahead. The problem is to provide opportunities for the investment of the total savings of individuals and business enterprises. When total savings are invested instead of retained as cash balances, more persons are employed, productive facilities are increased, and income rises. With increased income more will be spent during the next period, which will set up an increased demand for production goods. Keynes finds the cause of depressions in the failure of society to invest its savings. When savings are hoarded, instead of invested, income falls.

As Keynes himself puts it:

The outline of (the) theory can be expressed as follows. When employment increases, aggregate real income is increased. The psychology of the community is such that when aggregate real income is increased aggregate consumption is increased, but not by so much as income. Hence employers would make a loss if the whole of the increased employment were to be devoted to satisfying the increased demand for immediate consumption. Thus, to justify any given amount of employment there must be an amount of current investment sufficient to absorb the excess of total output over what the community chooses to consume when employment is at the given level. For unless there is this amount of investment, the receipts of the entrepreneurs will be less than is required to induce them to offer the given amount of employment. It follows, therefore, that, given what we shall call the community's propensity to consume, the equilibrium level of employment, i.e. the level at which there is no inducement to employers as a whole either to expand or to contract employment, will depend on the amount of current investment. The amount of current investment will depend, in turn, on what we shall call the inducement to invest; and the inducement to invest will be found to depend on the relation between the schedule of the marginal efficiency of capital and the complex of rates of interest on loans of various maturities and risks.³

The innovations theory of the business cycle. One of the logically most impressive theories of the business cycle is that based on the introduction of innovations into the economy. Its most recent and persuasive expositor

³ John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York, Harcourt, Brace and Company, 1936), pp. 27-28. By "marginal efficiency of capital" Keynes means the expected future productivity of capital, the anticipated net yield from an addition to capital.

is Joseph Schumpeter (1883-1950). The introduction on a large scale of important innovations generates prosperity. The innovation may take various forms, of which entirely new products and greatly improved methods of producing old products are perhaps the most important. Innovations such as the railroad and the automobile, the telephone and the radio, scores of electric appliances to lighten the work of the home or to enhance its enjoyment have been integral parts of our periods of prosperity. When such innovations come in groups and find large-scale acceptance they may lead to an investment boom. The same is true of greatly improved efficiency in the production of widely used old commodities; the success of a daring innovator may compel all others in the same industry to follow suit. All this means more demand for credit, more investment, more production of capital goods, more employment. Innovations are widely copied and many imitations appear. If all this happened slowly economic society might adapt itself to the innovations without a boom. But usually it does not; instead much is crowded into a short period of time.

After a time, however, the initial demand for the new products will have been met, and the firms and industry producing them will be confronted only by a replacement demand. Expansion of production facilities is over. Some firms may even be in trouble because they cannot adjust themselves rapidly enough to changed conditions and costs of production and fare badly in an ensuing period of depression.

Innovations have been described as coming in waves. The force of some is soon spent. The force of others permanently alters the contours of the economy. Some represent such important technological changes in product or process that they bring almost innumerable secondary changes in their wake. The coming of the automobile is a notable example of such an innovation.

Schumpeter's theory is that technological changes, which are also one of the most striking features of competitive capitalism, are the most dynamic factors in bringing on periods of prosperity. Other factors, some external and others internal, may affect the economy, such as variations in crops due entirely to natural causes or the growth of population. But it is the innovations of management in creating new products, in developing new and more efficient methods of production, in opening up new markets, that are the dynamic factor in economic society. They upset the old equilibrium and work toward the creation of a new one at a higher level. The expansion period of the business cycle is when innovations are being introduced into the economic system; the contraction period of the cycle is when economic society seeks to adjust and adapt itself to the technological changes that have occurred. It is a period of assimilating changes. Schumpeter's theory is a theory of progress as well

as of the business cycle. Perhaps the business cycle is the price that society must pay for economic progress.

Monetary theories of the business cycle. Monetary theories of the business cycle put the emphasis upon changes in the quantity, velocity of turnover, and price of money and credit. The expansion and contraction of credit, the flow of money, the interest rate (that is, the price paid for money), are the ideas stressed. The effects of the expansion and contraction of credit will be used to illustrate this type of theory. That the expansion and contraction of bank credit have much to do with the cyclical movement of business is the contention of many economists. Some think that money and credit changes initiate the business cycle. Some see in the overexpansion of bank credit the invariable cause of depressions. Such monetary theories of the business cycle gain support from the fact that business cycles are most pronounced in highly developed credit economies.

The use of bank credit greatly extends purchasing power. If the credit standing of borrowers is good, the use of bank credit largely depends upon the interest rates that have to be paid for it and the prospects for using it to advantage. The supply of bank credit under modern banking conditions is highly elastic. When prices are rising and profits accruing the demand for bank credit is strong. The issuance of bank credit to entrepreneurs shows itself in greater productive activity, larger employment of labor, expansion of enterprises, and further increases of prices. The profits made stimulate fresh applications for bank loans. "This upward movement comes to a close only when bank credit can no longer be further extended for the reason that it has already reached the limit of banking safety."⁴ Usually the extension of bank credit is not stopped until too late to save many borrowers from financial difficulties. They are the victims of overinvestment.

The contraction of outstanding bank credit forces some liquidation. Securities must be sold. The volume of business and of employment declines. Prices fall. Idle dollars accumulate. Interest rates decline. Idle men grow in number, and wages fall. Depression is evident at every turn.

The Austrian economist, F. A. Hayek, holds that the "lengthening and shortening of the productive process" is an important cause of business cycles. The lengthening of the productive process is due to the increased use of credit and capital in the prosperity phase of the cycle. Exhaustion of credit characterizes the period of depression.⁵

Willford I. King regards our credit system as an important part of the "culture-medium" in which depressions develop. He says:

⁴ Alvin H. Hansen, *Cycles of Prosperity and Depression in the United States, Great Britain and Germany* (Madison, University of Wisconsin Studies in the Social Sciences and History, 1921), p. 107.

⁵ *Monetary Theory and the Trade Cycle* (London, Jonathan Cape, 1933), Chaps. 2, 3.

Depressions are sometimes referred to as diseases of our capitalistic economy. Just as disease germs can multiply only in a favorable culture-medium, so depressions can develop only when the environment is favorable to their growth. To breed crises and depressions of the modern type, three environmental conditions are essential: a mass movement in public sentiment from pessimism to optimism, which generates the boom that, in turn, leads to the collapse; the existence of a freely expansible credit system; a considerable degree of rigidity in the wage and price structure. . . .

It is a commonplace that crises are developed by booms; that without booms, depressions would rarely occur. We can go back a step further and say that a boom would not be possible were it not for the fact that the majority of the inhabitants of the nation *simultaneously* become unduly sanguine concerning the business outlook. From time to time, every modern nation is swept by a great wave of optimism. . . . The existence of such a wave of optimism constitutes the first condition essential for the generation of a depression, for it produces the boom which later terminates in a collapse. . . .

In any nation in which business is done largely upon a credit basis, and in which the volume of credit available expands in response to demand therefor, a speculative boom always means the building up of a great burden of debt which must be liquidated in the future, hence every such boom carries within itself the seeds of future depression. The existence of a credit economy is, then, the second condition essential for breeding depressions. . . .

If a shrinkage in demand causes a fall in the volume of production or sales, it is always because the price is sticky or rigid and does not fall sufficiently to offset the curtailment which has occurred in demand.

It follows that price constitutes the safety valve of our entire existing economic system, and that the workability and satisfactoriness of this system are dependent upon the smooth and easy movement of the safety valve just mentioned.

From what has just been said it is clear that if each potential employee stood ready at all times to sell his labor at the best price obtainable, and if each mining, mercantile, or manufacturing concern, and each transportation company or public utility likewise stood ready at all times to sell its products, without regard to past costs, at whatever prices should prove to be necessary to keep its plant in full operation, business activity would never slacken materially. The economic machine would run smoothly at all times, and depression would be unknown. . . .

Granted the presence of the three predisposing conditions just mentioned, namely, the recurrence, from time to time, of waves of optimism, the existence of a credit economy, and the general prevalence of sticky or rigid wages and prices, there seems little likelihood that a nation can escape the periodic appearance of depressions. The presence or absence of certain supplementary factors may influence the course of the business decline, and may also determine whether it will be mild or severe. In general, however, it is probably true that the greater the extent to which credit is expanded during a boom, the more violent will be the crash, and the deeper will be the depression which follows. Hence, it appears that any forces which tend to facilitate the expansion of credit tend also to accentuate the severity of depressions.⁶

⁶ *The Causes of Economic Fluctuations* (New York, The Ronald Press Company, 1938), pp. 125, 128, 130.

The easy and rapid expansion of credit, largely provided by banks, may lead to overinvestment in the business structure; the sudden contraction of credit, to a collapse of the structure. Such credit facts, it is held, characterize the business cycle; consequently, they must also be in the theory of the business cycle.

The behavior of the profits-margin theory of the business cycle. Of the many interesting and suggestive explanations of business cycles which have been offered, that emphasizing the changing prospects for profit-making is doubtless the most inclusive. Wesley Clair Mitchell, the leading American authority and investigator in the field of business cycles, emphasizes the importance of studying the *course* of business cycles in order to understand the many "recurrent fluctuations in numerous interrelated processes." He regards business cycles as largely self-generating, one phase of the cycle inevitably leading to the next. The accumulating stresses in a period of prosperity bring on the crisis; the crisis is followed by depression in which necessary readjustments are made; the gradual recuperation of business follows and ultimately develops into another period of prosperity. The alternating accumulation and consumption of stocks of merchandise generate the movement of the business cycle from one phase to the next. Although Mitchell sees merit in each of the leading explanations of business cycles as shedding light upon some feature of these complex phenomena, he points out that it is "anticipated profits [which] play the decisive rôle in fixing the direction to be taken by business expansion." He further says:

Of course, business prospects are continually being influenced by changes in crops, and in methods of manufacturing, storing, shipping and distributing goods—as well as by changes in politics, fashion, education, recreation, and health. But it is only as these changes affect the prospects of making money that they affect business activity. To take profits as the leading clue to business cycles does not rule out in advance causes of fluctuations which arise from non-business sources; what it does is to focus attention upon the process through which any cause that stimulates or retards activity in a business economy must exercise its influence. And that is a desirable result. For it is only by study of the processes concerned that we stand much chance of discovering how recurrent business fluctuations come about.

Economic activity in a money-making world, then, depends upon the factors which affect present or prospective profits. Profits are made by connected series of purchases and sales of goods—whether in merchandising or manufacturing, mining or farming, railroading or insurance. Accordingly, the margins between the prices at which goods can be bought and products sold are one fundamental condition of business activity. Closely connected with price margins is the second fundamental condition—the present and prospective volume of transactions.⁷

⁷ *Business Cycles, The Problem and Its Setting* (New York, National Bureau of Economic Research, Inc., 1927), p. 107. See also Mitchell's earlier work *Business Cycles*

Business and industry, then, according to Mitchell, expand when the prospect for profit-making looks inviting to business men; they contract when the outlook for making money is discouraging. The entire course of the business cycle may be thought of as a movement prompted and guided by variations in the profits motive and the prospect for profits. At the beginning of a period of prosperity, when demand is becoming more active, when prices are rising, when costs of operation are lagging behind, and when credit is easy, the prospects for making profits are best. Men become optimistic about the future. Few are far-sighted and level-headed enough clearly to see the dangers and trouble ahead. The desire for profits and the reasonable hope of winning them, as the margin of profits per unit of output increases and the volume of transactions grows, prompt men to expand the scale of their operations. The modernization and expansion of productive facilities set up a demand for capital goods which brings about a further accentuation and diffusion of prosperity.

Ultimately, however, the spread between selling prices and the expenses of production grows narrower. Prices do not advance continuously. Resistance is encountered for one reason or another, psychological or economic. In the meantime costs advance, including wages, interest, and contract rentals. Wastes and inefficiency in production are apt to creep in. The profits margin is threatened. The enthusiasm of business men for further expansion cools off. Many of them cannot meet the financial obligations which they incurred in connection with the expansion of their enterprises. That there has been overinvestment becomes evident. When profits disappear and realized earnings cannot carry the outstanding obligations of business, a collapse is inevitable. This is the crisis of the cycle. Not until all the necessary readjustments, previously sketched in this chapter, are made, and a new equilibrium of prices and costs is established, which offers a fair chance for renewed profit-making, is the way cleared for another period of prosperity.

The theory of business cycles which emphasizes the changing prospects for profit-making is the most inclusive of all theories, because all factors influencing the course of business sooner or later affect the profits margin and the outlook for further profits.

Eclectic nature of business cycle theory. Since no two patterns of the business cycle are exactly alike, it is doubtless futile to look for a single all-inclusive causal explanation of the business cycle. So complex are the phenomena of the business cycle that the explanation of the cycle itself

(Berkeley, University of California Press, 1913), which was a pioneer study in the field of business cycles. The contributions of Professor Mitchell have been heavily drawn upon in the writing of this chapter, and their help is gratefully acknowledged.

is bound to be multiple rather than single. Although many theories have been offered by economists in explanation of business cycles, and although no unanimity of opinion has been reached, many of the theories differ chiefly in what they emphasize. They deal with certain important factors in the situation but not with its totality. A comprehensive theory will doubtless prove to be eclectic. To arrive at a thoroughly satisfactory explanation of business cycles, and at the same time to devise effective means for controlling the cyclical movement of business so as to eliminate or curb its evils, are problems which promise to absorb the attention of many economists for years to come. The business cycle in many of its aspects is still an unsolved problem.

Among the more suggestive and helpful explanations that have been considered are these: the relation between savings and investment, particularly if it means a lag between savings and investment as evidenced by dormant bank deposits; innovations, the dynamic technological changes of our economy; the expansion and contraction of bank credit; and the behavior of the profits margin. All of these affect whatever economic equilibrium has previously been established, and the mass purchasing power which both originates in production and sustains further production.

Money income saved is usually not hoarded (even in bank deposits) but invested. It is spent for production goods rather than for consumption goods. If there is an important lag between investment and savings, there may be a disturbing withdrawal of income from the "circuit flow of money" which will result in increasing the unemployment of both dollars and men.

Innovations are an expression of new ideas in want-satisfying goods. The favorable response of the public is usually not instantaneous. The mass of producers and consumers may indeed resist them. But innovators of vision and courage, and their financial backers, invest in them. When such innovations, sooner or later, find large-scale acceptance, an investment boom may be in the making. At any rate successful innovations provide areas for additional investment, further employment, and increased income.

The expansion or contraction of credit may stimulate or retard the volume of business activities. Easily obtained bank credit may lead to overinvestment, which is not sustained by subsequent real savings. Contraction of credit may precipitate a partial collapse of the business structure concerned.

Widening profits margins, resulting from costs lagging behind rising commodity prices, lead to business expansion. Narrowing profits margins (or their disappearance), resulting from advancing costs, declining prices, and reduced volume of business, lead to business contraction.

THE CONTROL OF BUSINESS CYCLES

Even though the cause or causes of business cycles may not be fully understood, there is fairly general agreement that some plans are worth trying as preventive and control measures. The elimination of the widest swings of the business cycle is a consummation devoutly to be hoped for. To smooth the course of a business cycle by pulling down its peaks and lifting up its valleys would enormously promote the stability of economic society and would eliminate much human suffering. The leading plans proposed for the control of business cycles and their evils may be classified as monetary controls, fiscal controls, and direct controls over production and consumption.

Monetary controls of the business cycle. Plans for the control of business cycles through the regulation of the currency and credit are based upon the idea that the stabilization of prices will do much toward reducing or eliminating the fluctuations of the business cycle. Changes in the general level of prices are an invariable concomitant of business cycles. Whatever can be done to stabilize prices will reduce the sharp fluctuations in profits and cause business to move more evenly and steadily.

Among the oldest of the monetary remedies proposed for the stabilization of prices is the bimetallic standard. But no one thinks seriously of bimetallism any more. Fiat money plans have frequently been proposed as a means of managing the volume of the currency and in the long run of controlling the level of prices. The argument offered in support of the alleged superiority of fiat money over metallic money as a standard of value is, that if the government will wisely control the amount of fiat money issued, prices can be more stable than when measured in a commodity, like gold, the value of which fluctuates with changing market conditions. The success of such a paper money plan for stabilizing prices hinges upon legislative or governmental restraint in the issuance of such money, the avoidance of inflation, and continued confidence in such money manifested by its general acceptability. These are hard conditions to achieve in practice. The suggestion that the United States adopt a tabular standard of value, such as the compensated dollar, the stabilized dollar, or the commodity dollar, is the most vigorously urged of the present proposals to stabilize prices through the management of the currency.⁸

The control of credit, as a means of controlling prices and moderating the business cycle, is today receiving more attention than proposals to control the currency. In the United States the federal reserve banking system has three powers which may help to control credit and exert some influence upon the level of prices and the cyclical movement of business:

⁸ Cf. Chap. IX, "The Money System of Exchange," pp. 238-243 for a discussion of bimetallism, and pp. 245-250 for a discussion of managed currency.

the control over rediscount rates, the right to engage in open market operations, and the power within prescribed limits to increase the reserve ratios of member banks.⁹ When the rediscount rate is advanced, borrowing becomes more costly and credit is tightened; when it is lowered, borrowing is encouraged and credit becomes easier. Changes in the rediscount rate, however, can only have a direct effect upon the credit situation provided member banks find it necessary to borrow. If they do not find it necessary to rediscount, the rates of rediscount, whether high or low, can have no direct effect upon the market because they will not be passed on in higher or lower rates to borrowing customers.

While changes in the rediscount rate are intended to affect the price of credit directly, open market operations are designed to affect the supply of credit and thus indirectly to influence its price. When the federal reserve banks under the mandatory directions of the Open Market Committee of the System buy commercial paper and securities in the open market, they are supplying the market with funds in exchange for the paper and securities, which tends to lower interest and discount rates and to encourage borrowing. Similarly, when the federal reserve banks sell commercial paper and securities in the open market, they are withdrawing funds from the market, which tends to raise interest and discount rates and to discourage borrowing. Lowering the rediscount rates and buying paper and securities in the open market are the principal devices at the disposal of the federal reserve banks for making credit easier and more plentiful. Raising the rediscount rate and selling paper and securities are the corresponding means for restricting credit. The withdrawal of funds from the market through the sale of paper and securities promises to be more effective in controlling credit than the supplying of funds through purchases of securities. Withdrawal of funds may restrict credit; supplying funds does not necessarily create the will to borrow.

A power conferred upon the Board of Governors of the Federal Reserve Banking System by the Banking Act of 1935 is the power to change the reserve requirements which must be maintained by member banks against their time and demand deposits. The board may not reduce the existing requirements but it may raise them to a maximum of twice the amounts prescribed in the original Act. This power may be used to prevent undesirable and injurious credit expansions, and to relax credit when the emergency has passed.

The Board of Governors commented a few years ago on "proposals to require some agency of the government to raise the general level of prices, and then to keep it constant," as a means of stabilizing business and of controlling business cycles.

⁹ Cf. Chap. X, "The Credit System," pp. 283-288 for an account of these powers and operations.

Those who favor such proposals believe that prices can be raised by increasing the supply of money, that prices can be lowered by reducing the supply of money, and that prices can be kept fairly steady by changing the supply of money in the right direction at the right time. They believe that, if prices were kept fairly steady, we would not have booms, depressions, and panics, business would run along on an even keel, and much suffering and hardship would be prevented.

The Board of Governors is in complete sympathy with the desire to prevent booms and depressions, and has always considered it its duty to do what it could to help accomplish these results. . . .

Steady prices and lasting prosperity, however, cannot be brought about by action of the Federal Reserve System alone, because they are affected by many factors beyond the control of the Federal Reserve System. . . .

The Federal Reserve System can see to it that banks have enough reserves to make money available to commerce, industry, and agriculture at low rates; but it cannot make the commercial banks use these reserves, it cannot make the people borrow, and it cannot make the public spend the deposits that result when the banks do make loans and investments. . . .

Experience has shown that prices do not depend primarily on the volume or the cost of money; that the Board's control over the volume of money is not and cannot be made complete; and that steady average prices, even if obtainable by official action, would not assure lasting prosperity. The Board exerts all its powers to provide a constant and ample flow of money at reasonable rates to meet the needs of commerce, industry, and agriculture. In order to maintain a lasting prosperity many other agencies of the Government, as well as many groups in the general public, must cooperate, since policies in respect to taxation, expenditures, lending, foreign trade, agriculture, and labor all influence business conditions.

The Board believes that an order by Congress to the Board or to any other agency of Congress to bring about and maintain a given average of prices would not assist but would hinder efforts to stabilize business conditions. It would hinder, because the price average frequently would indicate a policy that would work against rather than for stability. Such an order would also raise in the public mind hopes and expectations that could not be realized.

In view of all these considerations the Board does not favor the enactment of any bill based on the assumption that the Federal Reserve System or any other agency of the Government can control the volume of money and credit and thereby raise the price level to a prescribed point and maintain it there.¹⁰

The chief hope in the use of credit control measures lies in applying them during the prosperity phase of the business cycle. It has been said that the best way to avoid depressions is to "sit on" the boom of the preceding period of prosperity. To restrict the use of credit when times are good will require both great intelligence and courage on the part of all who are concerned with the shaping of credit policies and the actual extension of credit.

When a recession has set in and liquidation is in process bankers are naturally cautious in making loans and highly selective in their credit risks.

¹⁰ *Federal Reserve Bulletin*, Vol. 25, No. 4 (April, 1929), pp. 255-259.

Business men are not eager to borrow when the outlook is dark, no matter how great the available supply of credit may be. Bank credit finds its natural use by business men when the prospects for profit-making are good. "Credit injections" during the periods of recession and depression are not apt "to take," and if they do may lead to harm.

Fiscal controls of the business cycle. Plans for the control of business cycles through fiscal measures are based upon the idea that "compensatory" governmental spending should be practised in order to offset any deficiency in private expenditures for either consumption or investment. The disposition of the national income in any period is three-fold: for consumption expenditures, investment expenditures, and governmental expenditures.

Consumption Expenditures plus
Investment Expenditures plus
Governmental Expenditures equal
National Income.

The national income of a given period, let us call it Year A, may have been \$200 billion, of which the sum of \$120 billion was spent on consumption, \$35 billion went into investments, and \$45 billion was collected in taxes and spent by the government. The expenditures of Year A help to determine the level of income of Year B. The expenditures of some become the income of others; the expenditures of all set the income of all. The composition of the expenditures may vary; it is the total that counts.

The oversavings theory attributes depressions with their falling incomes to failure on the part of society either to consume as much as before or to invest its savings. If in the Year B of the preceding illustration consumption expenditures are reduced from \$120 billion to \$105 billion, the additional \$15 billion of savings (if we may assume that the government does not take it in taxes) may either be invested or hoarded (that is, kept in idle bank deposits). If it is invested, investment rises from \$35 billion to \$50 billion and the level of income remains the same. But if all or part of the \$15 billion is hoarded, future national income will fall.

In such situations some economists believe there is need for the government to engage in "compensatory spending" to offset the decline in private consumption and investment spending—to spend and spend and spend. One who persuasively insisted upon this point of view was John Maynard Keynes during the great depression of the thirties. He gave this advice to President Roosevelt and it became part of the economics of the "New Deal." There is no question that the use of the fiscal powers of the government can step up the rate of consumption expenditures as long as the government funds are being spent. The question is will such governmental spending raise income only at the time of its expenditure or will this increment of governmental expenditure be "multiplied" so that future national

income is increased. If "the propensity to consume," or rate of spending, of the successive income recipients is high the multiplying effect will be high. A low rate of spending on their part means a small "multiplier effect" with the result that the primary governmental spending will have little or no stimulating effect. Keynesian theorists think it will, but skepticism in other quarters is mounting. To engage in large-scale government spending during a severe depression means either to tax more heavily when income is declining or to borrow from the banks which feeds the fires of inflation. Increased taxation may prove impossible and inflation creates more problems than it solves. The effect of large-scale government spending upon the inducement to invest may prove more devastating than stimulating. And what effect innovations, the expansion of credit, and the profits margin may have upon the economy is largely through the expansion of investments and the building up of larger income.

Direct controls over production and consumption. If production could be perfectly adjusted to consumption, since the two processes are highly interdependent, the problem of business cycles would be largely solved. Such adjustment between production and consumption is the hope and objective of business as a whole. Its achievement spells success, while lack of such adjustment means failure for many business enterprises. The difficulty under a system of free enterprise is that decisions concerning what and how much shall be produced are left to the judgment of millions of scattered producers. They are largely guided by prices for their products and the prospects of profits in their business ventures. Mistakes of judgment are bound to occur. Some attempts are being made to develop and to utilize economic forecasting. The collection, analysis, interpretation, and dissemination of trustworthy business statistics, which reveal present conditions and which are made the basis of predictions concerning future trends, should prove most useful in making decisions concerning production. Forecasting of economic events is in its infancy but it has great potentialities for growth and useful service. Much more of it will ultimately have to be undertaken by the government. A number of commercial forecasting services are now available to business men who care to subscribe for them.

Many attempts have been made to stabilize production in certain lines either by withdrawing productive capacity from the market or by temporarily withholding produced goods. Crop restriction practices of the Agricultural Adjustment Administration are a notable example.

There are those who contend that all stabilization of production measures are mere temporizing devices, unless they are integral parts of a planned economy; that the perfect adjustment between production and consumption can only be achieved through some form of the collective state. It must be admitted that the establishment of economic and political

dictatorships, vested with the power to decide what shall be produced and what shall be consumed, can bring about an equilibrium of a sort between production and consumption. The question for any people to decide is whether it wants such stabilization badly enough to surrender a large part of its freedom of choice in producing and consuming, in buying and selling goods.¹¹

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. In the first part of a period of prosperity, wages and interest rates usually rise faster than wholesale prices.
2. In view of the relation of wages to other prices, the average wage-earner is better off in periods of depression than in periods of prosperity.
3. During the prosperity phase of the business cycle, when prices are rising, both the demand for and the supply of loanable funds are affected in such a way that interest rates tend to rise.
4. While there can be overproduction in specific fields, general overproduction is impossible.
5. The expansion of bank credit during periods of prosperity and its contraction during periods of depression is a primary cause of business cycles.
6. The explanation of the business cycle must be in terms of multiple causes rather than in terms of a single principle.
7. Since a business man is never certain that he will make profits, business cycle theories based on prospects for profits are unsound.
8. According to the over-investment analysis of the business cycle, the end of the expansion phase is due to investment outrunning the available supplies of capital.
9. According to the under-consumption analysis of the business cycle, the end of the expansion phase is due to excessive savings, whether they are invested or not.
10. By undertaking public construction projects at a time when there is considerable unemployment, depression in business can be largely prevented.
11. Since overexpansion is made possible through borrowing, business cycles can be eliminated through any procedure that effectively controls the supply of money and credit.
12. Managed currency holds the promise of a more stable standard of value and so of greater price stability than gold has furnished.
13. One of the most promising proposals for the stabilization of the general price level consists in the control of credit by the federal reserve system through open market operations, the control of rediscount rates, and power over reserve ratios.
14. "Spending our way out of a depression" is unsound governmental policy.

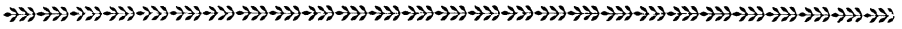
¹¹ Cf. Chapter XLII, "Socialism, Communism, and Other Alternatives to Private Enterprise."

15. Business cycles are desirable since they tend to eliminate the economically unfit.

SUGGESTIONS FOR FURTHER READING

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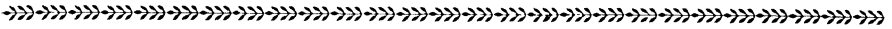
PART V



CONSUMPTION, SAVING,
AND INVESTMENT

CHAPTER XXVIII

Consumption



NATURE OF CONSUMPTION

THE PRODUCTION, exchange, and valuation of goods, which have been considered in the preceding parts of this book, are social processes which make possible the gratification of human wants. For the most part, men produce in order that they may consume. In the case of individuals, however, consumption is often not a very conscious objective in production. Some men work from force of habit; or because work is more enjoyable than inactivity; or perhaps because work means life to them very much more than a mere means of living. Whatever the motivation of individuals in productive and acquisitive activities may be, there can be no question that, from the social point of view, our whole productive system is organized to make possible larger and better living.

Consumption means the use of goods in the direct satisfaction of human wants. Goods, which often follow a circuitous route through all the processes of production and exchange, have reached their final destination when in the hands of the ultimate consumer, whose wants they are intended to gratify. Such consumption, illustrated by the food we eat, the clothes we wear, and the houses we live in, is known as *final consumption*. We consume in this way not only material goods, but also personal services, such as those of the barber who cuts or “bobs” our hair. There is final consumption of durable goods, such as a painting, quite as much as of goods, like food, the form of which is changed in the very act of consumption. Sometimes such final consumption proves harmful rather than beneficial. Consumption is *harmful* when it tends to lower the efficiency of the consumer, often diminishing in the long run the amount of his satisfactions as a consumer, and frequently impairing his efficiency as a producer as well. The fact that harm rather than benefit follows an act of consumption does not make it any the less an act of consumption. Again consumption may be *destructive*, a form of consumption in which the satisfaction derived is insignificant when compared with other uses that could be obtained from the goods. The classical illustration is furnished by Nero’s alleged burning of Rome, which was destructive consumption, whatever incidental utility it may have furnished the consummately ego-

tistical emperor. Some luxuries are consumed so wastefully that their consumption is really destructive, for the satisfaction derived is trivial in comparison with the uses that might have been derived from the goods. While consumption may sometimes be harmful and occasionally destructive, most final consumption is neither. Whatever specific forms it may take, final consumption is the consummation of all economic activity.

Consumption affected by diminishing utility. There is small reason to suppose that all human wants will ever be satisfied. There is little likelihood that goods will so increase in amount, or that the number of people will so decrease, as to eliminate the fact of scarcity. Consequently most men must choose what wants to gratify, and how far to go toward satisfying a given want in relation to other wants demanding gratification. While there is seemingly no end to the number of man's wants, it is equally true that a single want at any given time is soon satisfied. Man's psychological organism tires of an often repeated stimulus. His reactions are subject to the law of diminishing utility, which means that the gratification received from the consumption of a good tends to decrease as one consumes successive units of it. It is implied, of course, that during the process of consumption there is no change in the consumer and that the successive units be consumed *at a given time*. If not, the organism has a chance to recuperate and for the time being no diminishing gratification may be experienced. But if these conditions be present, the principle applies. As consumers, we do not derive utility from an indefinite number of units of the same good. Everyone knows, for instance, that the utility derived from the consumption of cold drinks on a hot summer day tends to diminish as one drinks successive glasses of some refreshing liquid. Eventually it falls to zero, and perhaps in some moment of indiscretion, to sub-zero.

But the principle of diminishing utility has wider application than is suggested by the ordinary consumption of drinks or food. Here the basis of the principle is essentially physiological. But it is just as applicable to goods that are consumed in other ways. The fact is that there is a limit to the number of units of a given good that a consumer can use advantageously or find any use for at all. Most goods afford him a variety of uses, of greater or lesser importance. A single unit of a good will be used to gratify the most important want for that good; another will serve a less important use; and so on with additional units, until finally no additional utility is afforded by another unit. The automobile, for example, apparently has an almost universal appeal to the American people, for in 1947 there were approximately 37,360,000 registered passenger cars, buses and trucks in the United States. While every family does not yet have a car, and perhaps never will, many have several. For such pleasure-car owners the utility derived from the use of a single car is usually high in relation to other goods. The large number of cars bought on credit or on

some partial payment plan is striking evidence of this fact. For some, a second car seems equally necessary, and a third a great convenience. The limitations of garage accommodations and of parking facilities, not to mention other factors, are such, however, that the utility obtained from the use of cars drops off rather sharply after the consumer has acquired a very limited number. This principle of the diminishing utility that men tend to get from the consumption of the successive units of a good strongly affects consumers' choice, and through this, the whole of our economic life.

Consumption affected by variety and harmony of the goods consumed.

While consumption is restricted by the everyday experience of diminishing utility, it is also enlarged by observing variety and harmony in the goods consumed. The fact of diminishing utility prompts men to diversify their expenditures in order that they may get the largest utility yield from their outlay. Every course dinner illustrates the principle of variety in consumption. No one would think of furnishing a wardrobe or home without observing this principle. Why buy more of a given commodity, when an equal expenditure will procure another good that will yield greater utility? The careful consumer-buyer does not do this. To the extent that men can classify their wants with reference to degrees of intensity and act in accordance with such knowledge, they tend to choose those goods which will afford them the largest gratification per unit of expenditure. Our most urgent wants come first. But we do not consume an indefinite number of units of the good that satisfies our most urgent want. As we increase our consumption of it, its marginal utility (the importance to us of a single unit) rapidly falls. Greater gratification can be obtained by spending our money for something else. Consequently we tend so to diversify our expenditures as to get the largest possible total utility. This is fully achieved only by those consumers who so regulate their expenditures that the gratification derived from the final dollar's purchase of any good is equal to that of every other dollar's. Such persons have achieved a perfect balance of their marginal utilities. As buyers they are getting "the most for their money." The marginal utilities of a consumer, all together, locate his margin of consumption. The economical consumer, intent upon getting the greatest possible gratification, seeks constantly to keep his marginal utilities as nearly equal as possible.

A closely related fact of everyday experience is that the gratification derived from consumption is deepened by observing harmony in the goods consumed. To effect harmony in variety is the way greatly to increase the utilities of consumption. Some goods go together so perfectly that the want-satisfying power of each is enhanced by the presence of the others. Some of these same goods, however, in other combinations may spoil the effect of the whole. Many people get their primer lesson in the need of harmony in consumption through some injudicious mixture of goods that

were never intended to be consumed together. A well-balanced diet expresses the principle of harmony in consumption; in the long run it not only promotes health but yields the greatest gratification. Everyone knows how indispensable harmony is to the most pleasing appearance in dress or house furnishings. Without it one may get striking effects, but none that will afford pleasure to those who know and appreciate good taste.

THE MEASUREMENT OF CONSUMPTION

Since it is impossible to measure the utilities of consumption because they are psychic experiences of the consumer, any measurement of consumption must be made in other terms. It is possible, however, to ascertain the physical units of goods which a family or community consumes, such as pounds of flour and meat and sugar, and from such physical magnitudes to arrive at a measurement of the volume of consumption. It is equally possible to measure consumption in terms of the relative money expenditures for different classes of consumption goods. Indeed, in measuring the consumption habits of a people it would be exceedingly instructive to know what consumers do with their incomes. The individual or family that keeps a record of expenditures can have accurate information as to what has become of the income. But unfortunately there is no such national system of accounting. All estimates of the expenditures of a people are crude approximations at best. A number of notable quantitative studies have been made, however, using actual statistics of expenditure furnished by families cooperating in the studies. Such studies are extremely suggestive of the consumption habits of people. The earliest important study of this kind was published in 1857 by Engel, who used data gathered in Saxony. It was his hope that by a large number of such studies it would be possible to forecast coming economic changes as a result of known changes in the consumption habits of people. While his hope has never been realized, in spite of a considerable number of excellent later studies, much significant information concerning consumption has been assembled.¹

¹ The reader is referred to the following as among the more important quantitative investigations into the expenditures of selected families in the United States: R. C. Chapin, *The Standard of Living in New York City* (New York, 1909).

E. E. Hoyt, *The Consumption of Wealth* (New York, The Macmillan Company, 1928), p. 275.

Maurice Leven, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume* (Washington, Brookings Institution, 1934), Part II.

Louise B. Moore, *Wage Earners' Budgets* (New York, 1907).

National Bureau of Economic Research, *Income in the United States* (New York, Harcourt, Brace and Company, 1922), II, p. 26.

Jessica Peixotto, *Getting and Spending at the Professional Standard of Living* (New York, 1927).

A quantitative study of this sort was conducted in 1918-1919 by the United States Bureau of Labor Statistics and the National War Labor Board. The income and expenditures of more than 12,000 families living in ninety-two different industrial centers of the United States were studied. The following table shows, for various income groups, the percentages of the total yearly income spent for various purposes.

PERCENTAGE DISTRIBUTION OF EXPENDITURES AS MADE BY WAGE-EARNERS' FAMILIES IN 92 INDUSTRIAL CENTERS IN THE UNITED STATES, BY INCOME GROUPS, 1918-1919

INCOME GROUP	NUMBER OF FAMILIES	DISTRIBUTION OF EXPENDITURES						Total
		Food	Clothing	Rent	Fuel and Light	Furniture, Furnishings	Misc.	
Under \$900	332	44.1	13.2	14.5	6.8	3.6	17.8	100
\$900 and under \$1,200..	2,423	42.4	14.5	13.9	6.0	4.4	18.7	100
\$1,200 and under \$1,500	3,959	39.6	15.9	13.8	5.6	4.8	20.2	100
\$1,500 and under \$1,800	2,730	37.2	16.7	13.5	5.2	5.5	21.8	100
\$1,800 and under \$2,100	1,594	35.7	17.5	13.2	5.0	5.5	23.0	100
\$2,100 and under \$2,500	705	34.6	18.7	12.1	4.5	5.7	24.3	100
\$2,500 and over	353	34.9	20.4	10.6	4.1	5.4	24.7	100
All income groups	12,096	38.2	16.6	13.4	5.3	5.1	21.3	100

United States Bureau of Labor Statistics, *Monthly Labor Review*, Vol. 9 (1919), p. 118. Cf. also United States Bureau of Labor Statistics, *Cost of Living in the United States*, Bulletin 357 (1924), p. 5

This study of the expenditures of American wage-earners having incomes not over \$2,500 per year established two facts: First, as income increases, the percentage of it expended for (a) food, (b) fuel and light, and (c) housing, decreases. Second, as income increases, the percentage of it expended for (a) clothing and (b) sundries increases. It is not to be inferred that the expenditures of any given family within one of the indicated income groups will necessarily be distributed in accordance with

Frank H. Streightoff, *Report on the Cost of Living*, New York State Factory Investigating Commission, Vol. IV (1915), pp. 1625-1654.

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See also Louis Bader, "Can We Find Out How the American Income Is Spent?" *Journal of the American Statistical Association*, Vol. 36 (1931), pp. 285-294, for a critical discussion of these and other attempts to measure the expenditures of national income.

the percentages or principles stated. Nevertheless, the studies made, and the generalizations based upon them, furnish quantitative evidence of the trend of expenditures in the United States. Perhaps they only furnish large-scale statistical confirmation of what the reader can discover for himself by examining his own personal or family expenditures over a period of years. Food and protection against the cold being primary necessities, they naturally require a large part of the income of the poor. But since there is a limit to the amount of food one needs and the amount of fuel and light one can use, the percentage of the yearly expenditures devoted to these decreases as one rises in the scale of income. While the percentage spent for housing tends to remain constant in the lower-income groups, it also decreases as the income grows larger. But when income permits it, the percentage spent for clothing and miscellanca, such as education, travel, recreation, and furnishings, shows a marked increase. Rising standards of living, social pride, and competition readily account for this.

The most comprehensive study of the expenditures of the American people ever made was that undertaken by the National Resources Committee and published under the title, *Consumer Expenditures in the United States*. The period investigated was the twelve months from July, 1935, through June, 1936. A nation-wide sample of over 300,000 families and "single" individuals was taken, and from it the income and expenditures of more than 39 million consumer-units were projected, including over 29 million families of two or more persons and 10 million individuals living alone or as lodgers. The consumer-units were divided into three groups: a lower third (13 million units), whose incomes fell below \$780 and averaged \$471; a middle third whose incomes ranged from \$780 to \$1,450 and averaged \$1,076; and an upper third whose incomes exceeded \$1,450 and averaged \$2,959. The combined income of these 39 million consumer-units amounted to a little over 59 billion dollars in 1935-1936.

What they did with their income is shown in the table on page 655, which reveals expenditures for current consumption aggregating more than 50 million dollars.

With reference to these disbursements the report of the National Resources Committee states:

Food claimed by far the largest share of the \$50 billion outlay. It accounted for almost \$17 billion—34 per cent of the consumption expenditures and 29 per cent of the total consumer income. Nearly \$15 billion of this amount represents purchases of food through stores and restaurants. The other \$2 billion was the imputed value of home-produced food raised and consumed by families living in rural communities. . . .

Housing came next to food in order of total outlay. More than \$9.5 billion—16 per cent of the aggregate consumer income—was allocated to this category of expenditure. Over \$7.1 billion of this amount was money expenditures for rent, for the maintenance and repair of owned homes, and for lodging while

AGGREGATE DISBURSEMENTS OF AMERICAN CONSUMERS, 1935-1936

Category of Disbursement	Aggregate Disbursements (in millions)	Percentage of—	
		Total Consumer Income	Total Consumption Expenditures
Current consumption:			
Food:			
Purchased	\$14,753	24.9	29.4
Home-produced	2,112	3.6	4.2
All food	16,865	28.5	33.6
Housing:			
Money expense	7,125	12.0	14.2
Imputed value	2,381	4.0	4.7
All housing	9,506	16.0	18.9
Household operation	5,285	8.9	10.6
Clothing	5,261	8.9	10.5
Automobile	3,781	6.4	7.6
Medical care	2,205	3.7	4.4
Recreation	1,643	2.8	3.3
Furnishings	1,422	2.4	2.8
Personal care	1,032	1.7	2.0
Tobacco	966	1.6	1.9
Transportation other than auto..	884	1.5	1.7
Reading	551	.9	1.1
Education	506	.9	1.0
Other items	307	.5	.6
All consumption items	50,214	84.7	100.0
Gifts	2,178	3.7	....
Personal taxes	889	1.5	....
Savings	5,978	10.1	....
All items	59,259	100.0	....

National Resources Committee, *Consumer Expenditures in the United States* (Washington, 1939), p. 46.

traveling or living away from home. Included also is the value of heat, light, and refrigeration supplied to families whose regular rent payments covered these services. The other \$2.4 billion is the value imputed to the occupancy of owned homes, of homes on rented farms and of rent-free homes during 1935-36. Such housing values were estimated for both rural and urban families and for single individuals.

Household operation ranked next to housing in aggregate disbursements, although it absorbed less than 9 per cent of the total consumer income in 1935-36. Fuel, light, and refrigeration (except when included in rent), paid household service, laundry, and telephone are the major items of expense included in the \$5.3 billion for this category....

Furniture equipment, and other household furnishings accounted for an

outlay of \$1.4 billion, bringing the total expenditures for shelter and home maintenance to \$16.2 billion—over 32 per cent of total consumptive disbursements and over 27 per cent of total income. This was almost equal to the total amount spent for food.

The national clothing bill in 1935-1936 was only slightly less than that for household operation—\$5¼ billion. This included sums spent for dry-cleaning and repair of clothing and for jewelry, but did not include cosmetics, barbers' services, or other expenses for personal care.

Summing the above totals, we find that three principal consumers wants—food, shelter, and clothing—accounted for \$38 billion—over three-fourths of the Nation's expenditures for current consumption, and nearly two-thirds of the aggregate consumer income in 1935-1936.

The remaining \$12 billion spent by families and single individuals for current consumption items was divided among nine major categories of expenditure. Automobile expenses—covering the purchase of cars as well as their operation—accounted for \$3.8 billion, almost a third of this \$12 billion. Over \$2.2 billion was paid out for medical care, including doctors', dentists', and hospital bills, drugs and medical supplies, as well as accident and health insurance. Expenditures for recreation and for personal care were next in importance, totaling a little over \$1.6 billion and \$1 billion, respectively.

Four minor groups of items—tobacco, transportation other than automobile, reading, and education—ranged in amount from nearly \$1 billion to \$500 million each. Miscellaneous items, making up the last category of consumption expenditures, accounted for the remaining \$300 million.²

The relatively small amount spent for taxes (889 million dollars) includes only personal income taxes, poll taxes, and certain personal property taxes.

Various other taxes levied upon consumers are merged with the expenditures for current consumption. Thus property taxes on owned homes and on automobiles are included as expenses for those categories of consumption. Gasoline taxes also appear in automobile expenses. Sales taxes and excise taxes on tobacco, liquor, and amusements are likewise merged with expenditures for the goods or services to which they apply. Taxes levied on business operations and on income-producing property were, of course, deducted as business expenses in calculating net income.³

How the three income groups of the nation's 39 million consumer-units spent their income is shown in the table on page 657.

It is immediately clear that neither the lower nor the middle income group had an average income sufficient to cover the average outlays for current consumption plus gifts and personal taxes. Not only was there nothing left for savings; there were average deficits for the year, amounting to \$92 for families and single individuals in the lower third of the Nation, and to \$19 for those in the middle third. Consumer-units of the upper third of the Nation had average savings of \$566—19 per cent of income—after all outlays for current consumption, gifts and taxes were cared for.

² National Resources Committee, *Consumer Expenditures in the United States* (Washington, 1939), pp. 46-47.

³ *Ibid.*, p. 27.

AVERAGE DISBURSEMENTS OF CONSUMER UNITS IN EACH THIRD OF NATION,
1935-1936

CATEGORY OF DISBURSEMENT	AVERAGE DISBURSEMENTS OF FAMILIES AND SINGLE INDIVIDUALS IN—			PERCENTAGE OF INCOME		
	<i>Lower Third, Incomes Under \$780</i>	<i>Middle Third, Incomes of \$780 to \$1,450</i>	<i>Upper Third, Incomes of \$1,450 and Over</i>	<i>Lower Third</i>	<i>Middle Third</i>	<i>Upper Third</i>
Current consumption:						
Food	\$236	\$404	\$642	50.2	37.5	21.7
Housing	115	199	408	24.4	18.5	13.8
Household operation	54	108	240	11.4	10.0	8.1
Clothing	47	102	251	10.0	9.5	8.5
Automobile	16	57	215	3.3	5.3	7.2
Medical care	20	41	106	4.3	3.9	3.6
Recreation	9	28	89	1.8	2.6	3.0
Furnishings	9	28	72	1.8	2.6	2.4
Personal care	12	12	44	2.5	2.1	1.5
Tobacco	10	23	40	2.2	2.1	1.4
Transportation other than auto	11	19	37	2.4	1.7	1.3
Reading	6	12	23	1.3	1.2	.8
Education	2	7	30	.5	.6	1.0
Other items	3	6	15	.6	.5	.5
All consumption items	550	1,056	2,212	116.7	98.1	74.8
Gifts and personal taxes	13	39	181	2.8	3.7	6.1
Savings	-92	-19	566	-19.5	-1.8	19.1
All items	471	1,076	2,959	100.0	100.0	100.0

Ibid., p. 40.

It must be emphasized again that these average figures serve merely to summarize the expenditures of the families and single individuals in each group. They do not, of course, mean that all the 26 million consumer-units with incomes below \$1,450 spent more than they received during the year, but that for the group as a whole, deficits were greater than savings. Similarly, they do not imply that all those with incomes above \$1,450 accumulated savings, but that the deficits incurred by part of the group were more than offset by the savings made by others.⁴

⁴ *Ibid.*, pp. 40-41.

SHARE OF EACH THIRD OF NATION'S CONSUMER-UNITS IN AGGREGATE
DISBURSEMENT, 1935-1936

CATEGORY OF DISBURSEMENT	AGGREGATE DISBURSEMENTS (IN MILLIONS)			PERCENTAGE OF AGGREGATE DISBURSEMENT FOR EACH CATEGORY MADE BY—		
	<i>Lower Third, Incomes Under \$780</i>	<i>Middle Third, Incomes of \$780 to \$1,450</i>	<i>Upper Third, Incomes of \$1,450 and Over</i>	<i>Lower Third</i>	<i>Middle Third</i>	<i>Upper Third</i>
Current consumption:						
Food	\$3,108	\$5,310	\$8,447	18.4	31.5	50.1
Housing	1,515	2,621	5,370	15.9	27.6	56.5
Household operation	703	1,422	3,160	13.3	26.9	59.8
Clothing	618	1,338	3,305	11.7	25.5	62.8
Automobile	203	755	2,823	5.4	20.0	74.6
Medical care	264	546	1,395	12.0	24.7	63.3
Recreation	115	362	1,166	7.0	22.0	71.0
Furnishings	112	368	942	7.9	25.9	66.2
Personal care	155	292	585	15.1	28.2	56.7
Tobacco	134	301	531	13.8	31.2	55.0
Transportation other than auto	150	247	487	17.0	27.9	55.1
Reading	84	165	302	15.3	29.9	54.8
Education	30	87	389	5.9	17.2	76.9
Other items	35	76	196	11.4	24.6	64.0
All consumption items	7,226	13,890	29,098	14.4	27.7	57.9
Gifts and personal taxes	171	516	2,380	5.6	16.8	77.6
Savings	-1,207	-252	7,437	-20.2	- 4.2	124.4
All items	6,190	14,154	38,915	10.4	23.9	65.7

Ibid., p. 51.

If, instead of looking at the average expenditures of consumer-units in each of the three income groups, we examine the aggregate disbursements of each third of the nation's 39 million consumer-units, the table on this page tells the story.

The table shows that the lower third of the nation's families and single individuals consumed goods valued at 7.2 billion dollars, or 14 per cent of the nation's aggregate consumption of 50 billion dollars. The middle third consumed goods amounting to 13.8 billion dollars, or nearly

28 per cent of the national total. The consumption of the upper third accounted for goods valued at 29 billion dollars, or nearly 58 per cent of the total. Even more unequal is the division of the aggregate consumer-income among them, as the last line (all items) of the table strikingly shows. It is also apparent from the last percentage column of the table that the 13 million families and single individuals constituting the upper third spent more for every category of disbursements on current consumption than did the 26 million consumer-units of the middle and lower thirds combined. This is both illuminating and instructive "not only to business men concerned with the market for consumers' goods, but also to all citizens concerned with problems of economic opportunity in a democracy."

CONSUMERS' GUIDANCE OF PRODUCTION

Nature of consumers' choice. What the consuming public chooses to do with its income is a matter of the greatest importance in shaping the course of our economic life. By spending or not spending, and by spending for this rather than for that, consumers stimulate or check the volume of production and guide the investment of productive energy. So great at one time was the domination of the consumer over production that as a rule no production was undertaken until he had issued his orders. This was the custom-order stage. While modern production seeks to anticipate rather than to await the orders of the consumer, it is still true that the consumer must make the final decision as to how and when his income shall be spent.

Universal consumption is somewhat like universal suffrage; it is a democratic means of control. In this country an educational qualification is a prerequisite for neither. The only qualification required for consumption is the possession of income with which to acquire the desired goods. In economic elections a consumer casts as many votes as he has dollars to spend. One man's money is as good as another's. If the economic electorate votes to spend its money for baubles instead of essentials, for shoddy goods instead of genuine articles, for things that are ugly instead of for things that are beautiful, such things will be produced. Consumers' choice, whether it be wise or foolish, guides the operation of our industrial system. It is like closing an electric circuit and thereby turning on a current that sets the wheels of the productive mechanism into motion. The choices of consumers together make up the composite demand for goods, which in turn authorizes the creation of the necessary supply. The consumer, then, occupies the most strategic position in our economic system; his decisions are orders to countless producers; the work of the world is done in anticipation of his choices and in response to them. But consumers' choice is

neither always economic nor always rational. It would be strictly economic if it invariably fell upon goods that yield the largest return per unit of expenditure. Such is very much more apt to be true of the choices of producers than those of consumers. If a producer makes serious errors of judgment in his outlays, his costs of doing business will rise and he may perish in the competitive struggle. Consumers' choice, on the other hand, is often frivolous and uneconomic. The financial commitment is usually not so serious; at most the consumer may temporarily have to go without goods that he might have procured with the funds represented by his ill-advised purchase.

Neither is consumers' choice always rational. To make a strictly rational choice requires information and time for investigation that consumers frequently do not have. There is often a staggering array of goods from which to choose. Countless suggestions designed to affect choice may pour in from every side. Moreover, we are all creatures of impulse. The upshot is that many consumers' choices are impulsive rather than deliberate. We often buy on the spur of the moment and perhaps repent at leisure. Frequently, to be sure, when some major purchase such as that of a house is to be made, the consumer-buyer proceeds with the utmost care and seeks to arrive at a thoroughly rational conclusion. This is most apt to be true of all purchases involving relatively large expenditures.

Although consumers' choice is commonly the expression of impulse and habit, both the consumer and his mentor, the producer, seek to rationalize the choice. We all like to offer plausible reasons for doing what we actually do in response to the impulsive tendency of some habit. But particularly the producer, through the techniques of advertising and salesmanship, is most skilful in rationalizing the choices of the consumer, whether these be wise or foolish. And usually the consumer is quite willing to accept the most readily available reasons, be they sound or specious, for justifying his impulsive or habitual choices not only to others but also to himself.

Consumers' choice limited by technology of production. Human behavior is so complex and varied that one can only hope to distinguish some of the more general and objective factors affecting consumers' choice. Foremost among these must be placed the technology of production of any given time and place. Obviously the range of consumers' choice must be limited by the stage of progress reached in the technical arts of any period. Only a generation ago "horseless carriages" and "flying-machines" were mere dreams of a few visionaries. Today automobiles and airplanes are considered indispensable modes of transportation. There has been an astounding improvement in the technique of production, which has steadily widened the consumer's range of choice, has so cheapened costs as to bring many one-time prohibitive expensive articles within the pur-

chasing power of the poor, and has even improved the quality of goods which the great masses of people buy.

The variety and quality of foodstuffs available to city consumers are incomparably superior to what they were only a generation ago. The table of an average American family is annually supplied from regions all over the earth, both near and remote. The advent of refrigeration and rapid transportation has made it possible for the consumer to select fresh fruits and vegetables the year round. Coarse homespun clothing is no longer worn. Instead there is an alluring array of fine raiment from which to select, varying in weave, color, and design, and made from fabrics of cotton, wool, rayon, nylon, and silk. Housing units, ready-made and custom-built, are available in all sizes and degrees of comfort and elegance. The air may be heated in the winter by a variety of methods and cooled in the summer to suit the demands of occupants. The consumer who wants to travel has a bewildering number of attractive destinations from which to choose, and he may select simple or luxurious modes of transportation on land and water or through the skies. If he chooses to talk with anyone at a distance, be it short or long, the telephone is instantly available, and other means of communication are at his call. If he wishes to be entertained, sports, amusement parks, theaters, and all their kind covet his patronage. If he longs for learning, he may visit libraries, museums, art galleries, and other study centers or invest in books and periodical literature. An endless number of goods to provide for the comfort, diversion, or luxurious living of consumers are pouring out of the workshops of producers every day. Only Aladdin's lamp, not their developed technique of production, could conjure up such abundance and variety of goods for the consumers of past ages. But the magic of modern production with its low unit costs has brought goods within the range of choice of the poor that would once have been regarded as luxuries or idle fantasies by the well-to-do and rich. The state of the industrial arts and the whole technology of production of a given time and place determine both the number and the quality of goods that consumers may possibly choose.

Consumers' choice affected by size of income. Within the limits set by the technical arts, the most powerful single force controlling the individual's consumption is the amount of purchasing power at his command. For only a negligible percentage of persons is purchasing power so ample that it does not restrict consumers' choice. Most people need to economize; they must weigh carefully, at least in making their major outlays, the advantages and disadvantages of a proposed expenditure. The expenditure of a person's income normally reveals his standard of living.

It is important in this connection to recognize the influence of both the actual and the ideal standard of living. The former may be a matter of necessity; the latter, of aspiration. A person's actual standard of living

may or may not be his ideal. The actual standard of living is revealed by a person's mode of life, the totality of his habits of consumption. It is sometimes called the scale or level of living. A person's ideal or desired standard of living is expressed by the scale of consumption of the social group or class to which he belongs or aspires to belong. Included within a person's standard of living are the number and kinds of goods which he normally buys without raising any question concerning the wisdom of making or forgoing the purchase. When he considers them necessary to his position in life, they are part of his standard. Both the actual scale and the desired standard of living influence the precise allotment of consumer's choice within the limits of the available income. It seems as yet to be characteristic of modern life that the standard of living advances readily with increases in income.

On the basis of income, and the standard of living which a given income permits, people may be divided into various groups. Differences in income lead to a horizontal economic stratification of society. Many studies have strikingly shown how exceedingly limited is consumers' freedom of choice, particularly at the lower income levels. The chief purpose of such investigations has been to formulate a standard of living that could be regarded as just and fair, and capable of realization. The cost of maintaining such a standard at any given time and place can be easily computed when the quantity of goods required for it is known. All these studies have shown that very generally at least five income levels can be distinguished.⁵ The lowest is the *poverty level*, which "represents roughly a standard of living just above where families receive aid from charity or where they run into serious debt." Another study describes the characteristics of life at the poverty level as "undernourishment, overcrowding, deterioration of household equipment and clothing, liability of acute distress with any minor disturbance of the daily equilibrium. The family is either not on a permanent basis of self-support or it is so at the expense of its physical vigor."⁶

The next lowest income group is at the *minimum of subsistence level*, "based essentially on mere animal existence and allowing little or nothing for the needs of men as social creatures." Consumers at this level have no money with which to meet any costly emergencies, and if they purchase any relatively expensive sundries, they must do without some much more necessary goods.

⁵ The description of the first three groups is partly quoted and partly adapted from a report of the United States Bureau of Labor Statistics. (Cf. *Monthly Labor Review*, Vol. 9, No. 6 [Dec. 1919], pp. 22-29.) This report sets up a quantity-cost budget necessary to maintain a family of five, consisting of husband, wife, and three children below the age of fourteen.

⁶ P. H. Douglas, C. N. Hitchcock, and W. E. Atkins, *The Worker in Modern Economic Society* (Chicago, University of Chicago Press, 1923), p. 283.

The third income level may be described as the *minimum of health and decency level*. It is this level which the United States Bureau of Labor Statistics, in the study cited above, sets forth as the bottom level "below which a family cannot go without danger of physical and moral deterioration." Life at such an income level is far from ideal, but consumers' choice is not as harshly limited as in the other two groups. Expenditures to gratify some of the higher wants need not be made at the expense of basic necessities, the consumption of which should not be curtailed. The minimum of health and decency level includes a "sufficiency of nourishing food for the maintenance of health"; sanitary housing; "the upkeep of household equipment"; clothing "of a sufficiently good quality to be economical" and respectable; and "a minimum of essential sundries," including street-car or bus transportation, some insurance, medical and dental care, contributions, amusements, and some education.

Beyond these three minimum groups—the poverty group, which is on the verge of constantly slipping over into pauperism, the mere subsistence group, and the minimum of health and decency group—at least two other income groups must be distinguished. These are the groups of consumers that we find at the *moderate income level*, and at the *level of affluence*. Life at the moderate income level is very much easier than at any of the three lower levels. The range of consumers' choice is much wider. Greater freedom from economic pressure shows itself in expenditures for better clothing and housing and most of all in greater outlays for desired sundries. Consumers at the level of affluence are usually not worried about any budgetary problems; they have income sufficient to cover all contemplated expenditures. Obviously, real freedom of consumers' choice is sharply limited by the particular income level of a given group of consumers.

That much the larger part of the people of every country live at the lower income levels is strikingly shown by all the quantitative studies that have been made into the distribution of income. A study of the National Bureau of Economic Research points out that for the United States in 1918 "to include five per cent of the income receivers, we have to descend to incomes of \$3,200—3,300. To include ten per cent, we must take in part of the \$2,300—\$2,400 class; and to include twenty per cent we must include part of the \$1,700—\$1,800 class."⁷ This means that almost eighty per cent of the income recipients had incomes amounting to less than \$1,700—\$1,800 per year. Another study of the National Bureau of Economic Research made by Maurice Leven shows that in 1919, 1920, and 1921 fully 98 per cent of the population of the United States depended upon family incomes smaller than \$5,000 each.⁸ The report of the National Resources Com-

⁷ *Income in the United States, Its Amount and Distribution, 1909-1919* (New York, Harcourt, Brace and Company, 1921), I, p. 147.

⁸ *Income in the Various States* (New York, 1925), pp. 291-293.

mittee for the twelve-month period July, 1935, through June, 1936, shows that for the United States "Nearly one third (32 per cent) of the total number of families and single individuals had incomes under \$750, nearly one half (47 per cent) received less than \$1,000, and more than two thirds (69 per cent) received less than \$1,500. At the other end of the income scale, about 2 per cent had incomes of \$5,000 and over, and less than 1 per cent incomes of \$10,000 and over."⁹ Half of the consumer-units (families and single individuals) had incomes of less than \$1,070 and the other half of more than this amount. While the median income was \$1,070 the arithmetic mean was \$1,502. More recently still, the "1950 Survey of Consumer Finances" sponsored by the Board of Governors of the Federal Reserve System indicates that 77 per cent of the family units in this country had incomes under \$5,000 in 1949, and that their total money income before deducting federal income taxes was 52 per cent of the total money income of all groups. Such quantitative studies conclusively show that size of income is the limiting factor in consumers' freedom of choice.

INCOME GROUPING OF FAMILY UNITS AND MONEY INCOME BEFORE AND AFTER
FEDERAL INCOME TAX, 1949
(Percentage distribution)

INCOME GROUP	FAMILY UNITS		TOTAL MONEY INCOME	
	<i>Before Federal Income Tax</i>	<i>After Federal Income Tax (disposable income)</i>	<i>Before Federal Income Tax</i>	<i>After Federal Income Tax (disposable income)</i>
Under \$1,000	13	13	2	2
\$1,000-\$1,999	15	16	6	7
\$2,000-\$2,999	18	22	12	16
\$3,000-\$3,999	19	19	18	19
\$4,000-\$4,999	12	12	14	16
\$5,000-\$7,499	15	12	23	21
\$7,500-\$9,999	4	3	} 25	19
\$10,000 and over	4	3		
All income groups	100	100	100	100
Median income	\$3,100	\$2,950		
Mean income	\$3,760	\$3,460		

Federal Reserve Bulletin, Vol. 36 (1950), p. 965. Family units in the above table include single-person families. The money income figures exclude capital gains or losses and tax estimates make no allowance for such gains or losses.

⁹ National Resources Committee, *Consumer Incomes in the United States* (Washington, 1938), p. 5.

Consumers' choice influenced by relative importance of necessities and luxuries. There are few people, indeed, who never want to use their income for some of the luxuries of life, for things that are quite beyond their ordinary standard and scale of living. It may be fine furs, costly jewelry, an expensive style of automobile, or anything else that is outside the normal range of one's expenditures. Most people at some time or another experience an irresistible desire "to have a fling." It may not amount to very much when judged by conventional standards, but for a passing moment, at least, it enables them to escape from the drab humdrum of their routine spending and living. On the other hand, there are those with whom the desire for luxuries is a matter of "conspicuous consumption" (in the fine phrase of Thorstein Veblen).¹⁰ Lavish expenditures attest their ability to spend and proclaim their economic and social status. This desire for luxuries is a force to be reckoned with when accounting for consumers' choice.

Relativity of luxuries and necessities. Sharp differences of opinion often exist with reference to classifying a given good as a luxury or a necessary. To say, as one writer has, that luxury is "excessive personal consumption" ¹¹ is immediately to raise the question: When is consumption excessive? To say that "luxury in its ordinary acceptation means anything that satisfies a superfluous want" ¹² is at once to plunge the inquirer into the difficulty of determining when a particular want is superfluous. Such difficulties raise the question: Is it possible to formulate a definition of luxury that is at once universally applicable and generally acceptable? In partial answer to this question, it must be said that it is at least quite impossible to draw a hard and fast distinction between luxuries and necessities. The dividing line between the two constantly shifts. There is no one class of goods that to all persons and at all times are luxuries, all other goods being regarded as necessities. It is a well-known fact that what one regards as a necessary, or at least a comfort or decency, another may consider a luxury. To an American farmer an automobile may seem a necessary; to most Europeans, also living on the land, it seems the height of luxury. In the experience of the same individual, moreover, goods that at one time seemed remote luxuries come in the course of time, perhaps, to be necessities. More rarely does it happen (and yet the First and the Second World Wars repeatedly demonstrated the fact) that goods once established as necessities are again placed in the class of luxuries. All of which goes to emphasize the relativity of luxury. It is the person and the

¹⁰ *The Theory of the Leisure Class* (New York, The Macmillan Company, 1912), Chap. 4.

¹¹ Ely *et al.*, *Outlines of Economics*, 6th ed. (New York, The Macmillan Company, 1937), p. 150.

¹² Charles Gide, *Principles of Political Economy*, tr. from 23d French edition by Ernest F. Row (New York, D. C. Heath and Company, 1924), p. 495.

time, and not the specific character of the good, that makes a good a luxury or a necessary. As long as there are different social classes with varying standards of living, it seems impossible to arrive at any consensus as to what constitutes luxury. Each individual, reflecting the standards of his group, regards the goods that make up his customary mode of living as necessities, and considers as luxuries only those goods that are ordinarily beyond his ability to buy. Dissatisfied with a purely relative conception of luxury and desiring something more definite and objective, some writers have tried to define luxury in terms of goods in excess of a stipulated standard of living. The stipulated standard always includes as a minimum the basic necessities of food, clothing, and housing, and usually provides for some things besides, such as some educational training and recreation. To define luxuries as goods acquired and consumed in excess of an accepted minimum standard of living assuredly provides a tangible test, but it is still relative—relative, that is, to a more or less arbitrarily established standard of living.

Alleged justification of luxury. To label a certain good a luxury is not necessarily to condemn the consumer who chooses to buy it. We may very properly hope that it will become increasingly possible for larger numbers of people than are now doing so to buy and to enjoy some of the luxuries of life. Some of the reasons, however, that are very generally offered in justification of spending money for luxuries do not bear very close scrutiny from an economic and social point of view. How often people in defending themselves against some direct or implied criticism of their expenditures say substantially this: "After all, the money is ours. Why may we not do with it as we please? If we choose to spend it in decorating our houses with orchids every morning, or in supplying our tables with rare delicacies, or in maintaining expensive cars and yachts, whose concern is it other than our own?" This argument, that people may do with their money whatever they please, and that their expenditures are of no concern to society, ignores the fact that the present income of no nation is sufficient to satisfy all of its wants both basic and trivial. In the markets of the world a dollar is a dollar regardless of who holds it. If the rich holders of dollars demand luxuries, luxuries will be produced, for supply follows demand. While the rich may be amply able to afford any luxury they desire, the bigger question often is: Can society afford to have them spend their money in that way? The dollars of the rich no less than those of the poor requisition materials and services and tie them up in industry. In times of national emergency, like war, such industries may prove to be non-essential; and even in time of peace they may represent a deflection of capital and labor from the production of goods of greater importance to larger numbers of people. To defend expenditures for luxuries on the ground that such expenditures are the private concern of the spenders

only is to ignore the fact that at present there are not enough productive resources to satisfy all wants however inconsequential.

Again, it is often said that, since expenditures for luxuries put money into circulation and consequently make work for people, they are socially desirable. New Year's Eve celebrations, particularly in our large cities, usually involve in the aggregate a lavish expenditure of money, most of which goes for luxuries. Such celebrations of course do make work for some people and are eagerly welcomed by them. Dressmakers and tailors, hair-dressers and barbers, caterers and waiters, decorators and florists, chauffeurs and bell-boys, perhaps detectives and policemen, find additional work or new employment as a result of these celebrations. They do put money into circulation. The tradespeople immediately affected are benefited. But if the purpose of these celebrations were only to make work for people, that end could be accomplished much more effectively in other ways. The money might be given to the poor who could buy necessities with it, which would also make more work for someone. It could be invested in productive industries needing expansion, which would provide additional or new employment for others. It would not be the same people, to be sure, but who will say that those engaged in the production of necessities are not even more deserving than those employed in the creation of extravagant luxuries?

Real justifications of luxury. But it is possible to offer a much stronger defense for choosing luxuries than those just considered. If the desire for luxuries stimulates economic effort, and if it tends to elevate tastes, much can be said in favor of the gratification of such a desire. Primitive people with few wants, and these of a kind that can be easily satisfied, are usually not noted for high productive efficiency. It is the inclusion of luxuries in their standard of living that quickens effort and causes them to rise in civilization. There are people today who are spurred on in their productive and acquisitive activities by the hope of commanding luxuries whenever they desire. Who will say that in such cases the desire for luxuries is not socially useful?

Unquestionably, too, the gratification of the desire for luxuries may result in the elevation of tastes and so prove a useful educational agency. Beautiful pictures on the walls of our homes are not indispensable. Doubtless they may be classified as luxuries. But they contribute very largely to the esthetic enjoyment of people and constitute a standard of enjoyment that we may well hope may become more general.

PRODUCERS' INFLUENCE UPON CONSUMPTION

Recognition of the final authority of the consumer is not to be understood as a denial of another important fact, namely, that the consumer

is often more servant than master of the producer. While it is true that production is undertaken in response to the present and future demands of consumers, it is also true that production has become highly specialized and that enormous investments have been made in productive enterprises. Mass production requires sales volume to justify itself. Producers wish to sell the goods they produce and so to maintain their businesses as "going concerns." In consequence, great pressure is brought to bear upon the consumer through the whole marketing organization of modern business to induce him to buy what the producer has to sell. Consumers' choice is usually limited by the goods that are available in the market. What goods shall be available, and in what qualities and styles, the modern producer usually decides with seemingly little, if any, aid from the great mass of consumers.

The technique of producers in creating and guiding the demand of consumers is principally expressed in elaborate marketing methods, including *advertising* in its various forms, *sales promotion*, and retail *salesmanship*. It is estimated that in the United States alone total advertising expenditures for 1949 amounted to \$5,202,000,000, a 7 per cent increase over expenditures in 1948.¹³ Even larger than these impersonal selling costs of advertising are the direct costs of personal selling. Through such prodigious expenditures of money and energy producers hope to create and retain demand, to guide and control it. Advertising was once in disrepute; the notion still persists in the minds of some people. The best business houses at one time did not advertise. Manufacturers, particularly, left such selling efforts to the retailers. But with the rapid growth of large-scale competitive enterprise, business became more aggressive in order to ensure its own survival. Now the slogan "It pays to advertise" is widely accepted in the business world. Few indeed there are who do not sooner or later, perhaps even unknown to themselves, fall under its suggestive influence. Effective advertising is partly based upon the psychology of repeated suggestion. The cursory reading of a single advertisement may or may not leave a distinct impression upon the reader's mind. What appeal it had, if any, may be lost. The clever and persistent repetition of a given advertisement, however, in the long run usually overcomes "sales resistance" and may make the consumer a partisan of the cleverly advertised good. The cumulative effect of national advertising slogans such as "The pause that refreshes" and "The cigarette that satisfies," of constant reiteration of the statements "Best bet's Buick" and "The world's most honored watch," of repeated display in magazines and posters of the allurements of cosmetics, the open-door invitation of some elegant waiting automobile, or the merits of books and study courses in increasing one's earning capacity, is to awaken wants for such goods in susceptible individuals.

¹³ *Printers' Ink*, Vol. 231, No. 11 (June 16, 1950), p. 28.

In a more limited way skilful salesmanship accomplishes the same results as clever advertising. While the appeal of the latter is impersonal, the appeal of the former is highly personal. An expert salesman through judicious suggestion not only helps the buyer to reach a decision as to what good to buy but frequently persuades him to buy goods that he had not thought of buying.

Advertising is so extensive and marketing is so aggressive that some people are inclined to think that consumers' choice is fictitious or at most nominal, not real. A most elaborate marketing organization has been built up. With ubiquitous advertising by day and by night, with "high-pressure salesmanship," with "fall openings," with special "sales" for every month in the year, with "selling campaigns" for this and for that, what chance has the ordinary consumer to express his own judgment? It does often seem as if consumption were merely incidental to production; as if the producer were more concerned with developing markets for his goods than with satisfying the wants of the consumer. Certain it is that the consumer in our modern exchange economy occupies no such position as he held in the custom-order stage, when he virtually initiated all production. He is no longer king upon a throne issuing orders. He is subject to a bombardment and barrage of suggestions from producers, which seemingly often leave him little real liberty of choice. While there is much truth in this view of the position of the modern consumer, it must not be overlooked that most advertising is competitive. Much of it represents the antagonistic effort of rival producers. For the consumer there is still some safety in numbers. While producers may seek to convince and persuade, to cajole or coerce the consumer, in the end when they have used all their devices it is still true that the consumer must make the final decision. And he usually has alternatives among which to choose. In spite of strong social stimulation of wants and social influence over decisions concerning their gratification, this much freedom still remains for the consumer.

One of the devices to which producers resort in their attempts to influence consumption is to place *brands* upon their products, and then to popularize these brands. It was once customary to sell many goods in bulk and to sell most goods without any special designation by the producer. Then no particular attempt was made to influence the demand of the consumer. The establishment of market brands, however, marked a change in selling policy. Presumably goods which bear the brand or trademark of the producer carry with them his endorsement and his bid, on the strength of the quality and price of the commodity, for a continued and growing volume of business in the future. Through extensive and expensive national advertising the producers of different brands of merchandise have cleverly sought to develop partisanship for their particular brands in the minds of as many consumers as possible. How far-reaching and effective

the influence of producers over consumers in such matters really is will doubtless always be a matter of conjecture and dispute. The deciding facts are unknown. Unquestionably, the suggestibility of most consumers is such that clever advertising and salesmanship, sometimes subtle, frequently bold, can "overcome sales resistance" and stimulate the reaction desired by the producer. One force counteracting the wiles and pressure of producers to secure volume consumption of their goods is the desire of consumers for something that is individual and different in at least some of the goods they buy.

Rapid changes in *styles*, together with a steady attempt to extend the sway of fashion over more and more of the field of consumption, are other means adopted by producers to affect consumption. In matters of fashion the new is the enemy of the old. The new comes to supplant the old. It matters not that the old has not yet outlived its usefulness. The appearance of the new makes it obsolete, if one would be in fashion. Some consumers adopt the latest fashion (however it may have originated) for the sake of being among the first to display the new. Others bow to the decrees of fashion because they do not wish to be conspicuous by their non-conformity. Fashion to a greater or lesser extent permeates virtually every phase of consumption, but it is perhaps most conspicuous and dictatorial in matters of clothing, particularly for women. Men's clothing does not escape the sway of fashion, but the cycles of changes are longer and non-conformity is not so conspicuous. The choices of consumers for such goods as clothing, home decorations, and even house architecture and automobiles are stimulated by the vogue of the moment. So rigorous are the dictates of Dame Fashion that one must be a rugged individualist, indeed, largely indifferent to social approval in such things, in order to ignore her decrees, if economic resources would otherwise permit one to conform. Producers have sought by means both fair and foul to stimulate the competitive spirit among consumers, to quicken the desire not to be outdone by others, or at least not to be conspicuous through non-conformity to prevailing modes. Upon their success in this respect depends much of their influence over consumption.

Producers are concerned with the strategy of persuading consumers to spend their money and to buy with it what they have to sell. The real education of the consumer, in the sense of giving him unbiased information upon which to base a discriminating judgment, is usually lacking. Producers seek primarily to influence the buying of consumers and only secondarily, if at all, to educate and benefit them. In the stimulation and development of new wants, such as the use of household electrical appliances, there are considerable educational work and value. But in the main, the selling technique of producers is dominated by the spirit of competition. Every producer is under the necessity of winning patronage for

himself, which often means an attempt to take business away from his competitors. What is more, it is to the decided advantage of the producer to induce the public to consume those goods in which his margin of profits is greatest. Such an intensely competitive contest, involving the life or death of business enterprises, does not furnish the proper agency for the disinterested education of the consumer or for selling him only that which will benefit him most.

The chief protection of the consumer against misrepresentations and the exercise of unfair influence by the producer is the desire of the latter to please and satisfy the customer, so that he may continue to do business with him. Established business houses are not much concerned with the single sale; but they are vitally interested in transactions which so satisfy customers as to give rise to repeated patronage in the future. In his power to withhold patronage from producers who deceive him or otherwise take an unfair advantage the consumer finds his best protection. Of course if either the producer or the salesman that represents him is not interested in anything but the sale of the moment, even this protection fails the consumer. But usually both the continuance of his own patronage and the good-will which the consumer creates by favorable "word-of-mouth advertising" are so important to the producer that it is good business to satisfy the consumer.

FORMAL SOCIAL CONTROL OVER CONSUMPTION

Under normal conditions in modern economic society the consumer's freedom of choice is nearly unrestricted, as far as any external authority is concerned. He is free to buy or not to buy, as his judgment prescribes and his purse permits. What control exists is control by price—the ability to pay the necessary price. But at times there has been and is substituted control by public authority. In the past laws have sometimes sought to regulate what men shall eat and wear. Such sumptuary legislation was once used to establish and to maintain class lines. An old French regulation, apparently designed to differentiate between the bourgeoisie and the upper classes, stipulated that "No bourgeois, man or woman, shall wear green or gray, or ermine, and they shall dispose of those they have, by a year from Easter next. They shall not wear, nor will they be able to wear, gold, precious stones, or coronets of gold and silver."¹⁴ Certain communistic societies have tried to regulate the dress and mode of living of their members. Even in modern industrial society in time of peace there has been some restriction upon the consumer's freedom of choice. The eighteenth amendment to the Constitution of the United States, for example, and the

¹⁴ Jérôme A. Blanqui, *History of Political Economy*, Eng. trans. (New York, 1880), p. 175.

enforcement statutes growing out of it, sought to restrict, if not completely to prohibit, the consumption of alcoholic liquors.¹⁵ Sumptuary legislation is almost always unpopular because it is regarded as interference with personal liberty and consequently is hard to enforce.

It remained for the First and Second World War periods, however, both in Europe and in America, to give us a gigantic demonstration of social control over consumption. The issues in those struggles were so stupendous and operations were on so large a scale that war required the complete mobilization not only of the fighting forces of the nations but of the people themselves. In the First World War period there were mistaken leaders who proclaimed the doctrine of "business as usual." No slogan could have been more economically fallacious. It was based upon the false assumption (if it was based upon anything at all) that there were material resources and manpower enough to meet all of the ordinary demands of peace as well as the extraordinary demands of war. But the unusual conditions of war-time soon compelled the curtailment of expenditures for non-essentials in order that the essentials for successful prosecution of the war—ships, food, supplies, and munitions—might be forthcoming in sufficient quantities. The World War proved a stern taskmaster compelling people to learn self-restraint and forcing them to abandon "business as usual." Germany and France quickly saw the necessity of shutting down their non-essential industries and of transferring workers to industries essential to the winning of the war. England and the United States were much more dilatory in recognizing the need of completely readjusting their industries to war conditions. Both voluntary control and direct public regulation of consumption became necessary. In the United States we had sugar-less meals, wheat-less and meat-less days, some gasoline-less Sundays, and in industries where it could be done coal-less Mondays. In such ways we conserved our resources, thereby making them available for other people needing them more vitally, or for other purposes in which they were more indispensable. It is doubtful that the world ever before witnessed on so large a scale a demonstration of voluntary control over consumption as during the First World War period. But great as it was, voluntary control was not enough. It is hard for the ordinary consumer to see all the ulterior consequences of his purchases; how they help to tie up labor and materials in industries that perhaps ought in war-time to be operating only part-time, if at all. In consequence voluntary control had to be supplemented by government regulations. A number of administrative boards were created, with far-reaching influence and power, for

¹⁵ Directly the amendment declared that "the *manufacture, sale, or transportation* of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof, for beverage purposes is hereby prohibited." The purpose of such prohibition, however, was to restrict consumption.

the purpose of so readjusting normal economic relations as to eliminate waste and to subordinate the consumption of non-essentials to the single task of winning the war.¹⁶

During the Second World War period, control over consumption in the United States was both more formal and extensive. The direct purpose of the control agencies set up by the government was to protect the individual consumer both as to the price he had to pay and the volume of goods he could buy. Indirectly, these control agencies proved indispensable in combating inflation.¹⁷ Since at the peak of the war effort about one half of the goods produced were war goods, it became necessary to ration the distribution of the other half. Without rationing, prices would certainly have soared and some consumers would have been deprived of goods essential to the maintenance of their standards of living and their productive efficiency. The rationing of available supplies was accomplished through the establishment of priority, coupon, and point systems in the distribution of goods. They were all plans for the sharing of scarcity. To get certain acutely scarce goods, such as automobiles and tires, consumers had to establish their priority claims and to get permission to buy from the controlling government agency. Both the coupon and point systems were devised to make the procuring of controlled goods easier and more equitable. The coupon system for procuring one's quarterly allotment of gasoline, and the point system for the distribution of meats, canned vegetables and fruits will doubtless never be forgotten by the present generation of Americans.

Such direct social control over consumption is tolerated during war because it is recognized as necessary for the achievement of a supreme purpose. In peace no such compelling purpose exists, and in consequence sumptuary legislation and control are reduced to a minimum.

THE BALANCE OF CONSUMPTION AND PRODUCTION

Consumption guides and sanctions production. Production influences and sometimes controls consumption. It is futile to consider which is primary or the more important. The most distinctive thing that can be said about the relation of consumption and production is that the two are completely interdependent. Just as demand and supply are not independent but interdependent forces in the establishment of market prices, so consumption and production are interdependent processes in the maintenance of our modern industrial life.

¹⁶ Among the more important of such boards in the United States were the Food Administration, the Fuel Administration, the War Industries Board, the War Trade Board, and the Shipping Board.

¹⁷ See Chap. XXI, "Price Under Regulation by Public Authority," pp. 484-487, for statement of the legal sanctions supporting the regulation of prices.

Too much emphasis cannot be placed upon the indisputable fact that the smooth functioning of capitalistic industrialism depends upon maintaining the best possible balance between consumption and production. If consumption outruns the current production of a particular good, there will soon be an acute shortage. If production outruns consumption, there may be an unmanageable surplus. When production has been properly geared to consumption, and the production of various kinds of goods has been brought into such reasonable balance that ready exchanges may be made at prices that justify the cost of producing the goods, the sudden development of either large surpluses or shortages is apt to play havoc with the entire price system. While it may seem that it ought to be easier to handle a surplus than a shortage, both present adjustment problems of unusual difficulty. Modern industrialism works best and with the fewest interruptions when consumption and production are most nearly in equilibrium. An economic society in which production is geared to consumption and in which one line of production is geared to all the rest is not to be thought of as something static. Its equilibrium is the equilibrium of a mechanism in motion rather than at rest. It does not preclude such expansion of business enterprise as comes with the normal development of increased population and wealth, which lead to greater consumption. Such expansion, however, is gradual and rarely proves a serious disturbing element. It does not even preclude an increase in production all around, within the limits of consumption physically possible, for the reason that John Stuart Mill long ago pointed out when he said: "Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should by the same stroke double the purchasing power. Everybody would bring a double demand as well as a double supply; everybody would be able to buy twice as much, because everyone would have twice as much to offer in exchange."¹⁸

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. To get the largest gratification out of one's expenditures for consumption, it is necessary to maintain the best possible balance of one's marginal utilities.
2. Advertising destroys the strategic position of the consumer in directing production, and is therefore socially undesirable.
3. Advertising is objectionable because it increases the costs of goods to the consumer.
4. Advertising cannot be justified from the point of view of consumers unless it makes of them more competent buyers.

¹⁸ *Principles of Political Economy*, edited by W. J. Ashley (London, Longmans, Green and Company, Ltd., 1920), p. 558.

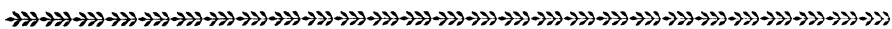
5. The consumer, by his decision to buy or not to buy, is the director of social energy: he determines what shall be produced and who shall produce it.
6. By their control over the types and quantities of goods to be placed on the market, producers have destroyed the consumer's power to direct production.
7. Lavish consumption of luxuries by the rich may be adequately justified by arguing that it creates jobs for less fortunate people.
8. Education raises a person's standards of consumption.
9. The fact that the amounts spent for each "category of disbursements" by the upper third of the consumer units in the United States are greater than those spent by the lower two-thirds combined is of great significance for economic and social policy.
10. Control over consumption through public authority rather than through price is always unwarranted interference with the rights of individuals.
11. Even though sumptuary legislation does interfere with the free choice of consumers, it may sometimes be desirable.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXIX

Spending, Saving, and Investment



MOST OF THE spending for consumers' goods in the United States is done by women, who learn the art of spending in the school of experience. There is little formal instruction or expert guidance. While constant practice together with economic necessity results in the development of considerable skill, the consumption needs of the average household are too small to warrant engaging the services of professional purchasing agents, such as many institutions, governmental units, and business enterprises regularly retain on their staffs. Buying is apt to remain the work and play of millions of individual consumers, who may or may not develop any special aptitudes for it. Moreover, while buying by professional experts would doubtless result in very great economies and in improvements in the quality of goods bought, it would deprive consumers of what pleasure there is in making their own selections and in general of spending their money as they please.

There are two interrelated ways of looking at consumer expenditures, both of which are of importance in economics. The first is the spending behavior of individuals and groups, the latter illustrated by occupation- and income-groups. The second is the spending in the aggregate of all the people of a country. Similarly, the savings and investments of the people may be considered from the point of view of individuals and groups, or from the point of view of the economy as a whole.

FINANCING CONSUMERS' EXPENDITURES

In general, the expenditures of consumers must come out of their incomes. Temporarily, necessity may compel people to draw on their accumulated and invested capital, provided they have any and it can be converted into cash. While the main reliance is on current income, the income that finances the expenditures of consumers is both present and prospective. For the year 1949 personal income before taxes in the United States was \$206.1 billion. Of this amount, wages and salaries constituted \$132 billion, proprietors' and rental income \$41.7 billion, and dividends and personal interest income \$17.2 billion. In the same year, personal con-

sumption expenditures totaled \$178.8 billion.¹ The United States Census reports that for 1939, of the total volume of purchases made, 65.8 per cent were made for cash, 22.8 per cent on open credit, and 11.4 per cent on an instalment credit basis.² The practice of buying goods on credit is very much more prevalent in acquiring some kinds of goods than it is in acquiring others. Purchases of household furniture and appliances, fur coats, and automobiles are commonly financed with the aid of credit, either open or instalment.

The use of credit for present consumption puts a lien on future income. If the credit obligations thus created are promptly and quickly met, the extension of credit is not only a convenience but a stimulus to business. But when consumers with uncertain or irregular incomes become parties to long-term credit transactions there may be danger ahead for both them and their creditors. Buying now and settling by a series of partial payments in the future, which is the essence of the instalment buying or credit plan, affords consumers the opportunity to enjoy desired goods without waiting for the accumulation of the entire purchase price. But it also means assuming prior obligations which will greatly restrict future liberty of economic action. Since the cost of purchasing goods on the instalment payment plan is generally higher than when purchased for cash or on an open credit account to be settled "the first of the month," it is obvious that consumers should proceed cautiously in the number and amounts of their financial commitments of this sort. It is a sound rule in making purchases by this method to buy only the more permanent and valuable goods which will continue to afford utilities to the consumer after the instalment payments have all been made. In charge accounts or open credit sales, and also in instalment credit sales, credit is extended by the seller. Only a minor percentage of consumers' expenditures is financed by means of loans from the regular commercial banks.

That the extension of consumer credit runs into figures of considerable magnitude is shown by the table on the following page.³

Of the consumer instalment loans made by the principal lending institutions during 1949, it is estimated that the commercial banks made loans totaling \$3,282,000,000, the small loan companies \$1,737,000,000, the industrial banking companies \$752,000,000, and the credit unions \$712,000,000.⁴ It is apparent that the small loan companies still do a large volume of business and render a necessary service. If it were not for them, pawnbrokers and their kind would handle even more business than they do. Social workers, generally, regard the small loan agency as indispen-

¹ *Federal Reserve Bulletin*, Vol. 36 (1950), p. 1393.

² *Sixteenth Census of the United States (1940)*, *Census of Business*, Vol. I, *Retail Trade*, Part I, pp. 38, 39.

³ *Federal Reserve Bulletin*, Vol. 36 (1950), p. 1394.

⁴ *Ibid.*, p. 1394.

TOTAL CONSUMER CREDIT IN UNITED STATES
(Estimated amounts outstanding, end of 1949)

	<i>Millions of Dollars</i>
Instalment sale credit	6,240
Instalment credit loans (including repair and modernization loans, insured by Federal Housing Administration)	4,650
Single-payment loans (extended by commercial banks and pawnbrokers)	2,988
Charge accounts	3,909
Service credit	992
Total consumer credit	18,779

sable to our credit system as now organized. But the rates are high. Charges as high as $3\frac{1}{2}$ per cent per month on any loan not in excess of \$100, or 42 per cent per year, have been legally authorized and commonly made. The alternatives have usually been the pawnbroker, with even higher charges, or no loans at all, no matter how necessitous the circumstances. Such businesses require ceaseless surveillance by the state to prevent the imposition of unnecessary burdens upon consumer-borrowers who have no other access to loanable funds. The state, too, may very properly extend its aid in developing sound credit agencies to render this socially necessary service at lower costs.

PROTECTING CONSUMERS IN THEIR SPENDING

Financial help to make desired expenditures is not the only kind of aid the consumer needs. He also needs education, guidance, and protection in the spending of his money. But one of the oldest rules of the marketplace is *caveat emptor* ("let the buyer beware"). The principle of *caveat venditor* ("let the seller beware") has only recently received legal sanction in the marketing of some goods.

The much too common ignorance of the consumer, no matter what his or her native and developed intelligence in other respects may be, is of momentous consequence to our economic life. It is responsible for many of our most objectionable selling methods, for the almost endless duplication of brands each with its partisan purchasers, and for the investment of much capital and energy. And yet in some respects the consumer is hardly to blame. How can he be expected to know either the quality or the relative value of many goods competing for his money? Superficial differences in quality may be easily detected, but unfortunately many, if not most, important qualitative differences in goods are not apparent on the surface. And in the bewildering variety of choices offered in many lines at a wide range of prices, how many consumers can say with any real assurance that a certain article is worth the difference in price of 25

per cent, or 50 per cent, or 100 per cent relative to another article sold in competition with it? The average consumer has neither the expert knowledge nor the testing facilities properly to appraise both the quality and the price of many of the goods he buys. In so common an article of purchase as clothing, misrepresentation and deception have always been easy. In garments offered as "part wool" or "part silk," how many consumers can be at all sure of their judgment as to the relative amount of mixture or substitution of the much cheaper cotton or rayon? In the marketing of furniture, veneers over cheaper woods are so much more prevalent than solid walnut or mahogany or oak, for example, and imitations of all sorts are so much more common than the highly prized woods that consumers are easily misled. Imagine the chances of unaided newlyweds, totally inexperienced in buying furniture, of making discriminating purchases in quality and price. It takes a connoisseur to judge the merits of Oriental rugs at the prices offered. But if only such experts were to buy, trade would languish and many consumers would be deprived of much enjoyment. Few consumers have either the knowledge or the experience properly to appraise the value of an automobile (or are apt to get either) for after all the number of motor-cars bought in the average consumer's lifetime is very limited. The best refuge of the inexperienced consumer in all such business transactions is to deal only with honest and reliable merchants who are interested in retaining his good-will and patronage.

What the consumer needs to protect himself is education and the wisdom that comes with experience. There is no substitute for this, no matter how much help he may be given or how many safeguards may be thrown about him. While most of this education will doubtless continue to be informal and experimental, some more formal instruction is beginning to be available. Widespread advice in budget-making, with its percentage of income allotments to various classes of expenditures so as to maintain a desirable balance, has been distinctly helpful. Some of the courses in home economics, and also the more generalized courses dealing with the economics of consumption, are making consumers realize that spending is an art, which only the painstaking can master.

Many consumers have come to realize the need of expert guidance in making their purchases. On a very limited scale it is possible to engage the services of professional "shoppers," or to subscribe for the services of an organization which specializes in analyzing the relative merits of competing consumption goods and in supplying consumers with accurate information on which to base decisions to buy or not to buy. Telling the truth in advertising, including giving accurate descriptions rather than fulsome praise, is of the greatest possible help to the consumer. Fortunately, the movement to tell the truth in advertising has made and is making commendable progress. The Better Business Bureaus, functioning

in many of the larger cities of the country, and the National Better Business Bureau, which is a federation of them all, are rendering the consumer valiant service in sponsoring respect for the truth in advertising and fair practices in all merchandising. The Better Business Bureaus have taken up the cudgels against deception of the consumer in all its forms. They have furnished information and sounded warnings which have prevented some consumers from making costly mistakes or have guided them to wiser choices. But if surveyed as a whole the great field of consumer guidance is still largely virgin territory.

Of the greatest help to the consumer in the spending of his money have been various forms of protection given him by the government. One of the earliest of such aids was the regulation of weights and measures. Without standardization in this respect, deception was easy. But with standardization, short weights and measures were outlawed under both state and national statutes. Government inspectors were provided whose business it is to detect any violations of the law. Curiously enough, however, in spite of the obvious need of such protection of buyers, many goods are still sold in containers or other measures that are not standardized, or not regularly inspected for accuracy. Many governments, for example, do not check the accuracy of the gasoline pumps that dot their highways. So common an article of consumption as a loaf of wheat bread varies distinctly in weight at different times and places.

Another form of governmental protection is afforded by various measures designed to prevent the exploitation of the consumer through selling him adulterated products or goods that are otherwise misrepresented as to quality. The Federal Pure Foods and Drugs Act, which dates back to 1906, seeks to exclude from interstate commerce adulterated or misbranded foods and drugs. It tries to protect the consumer by restricting the volume of business in such commodities. The Federal Trade Commission seeks to prevent the dissemination of false advertisements of food, drugs, cosmetics, and devices which may be injurious to health. The Federal Meat Inspection Act prohibits interstate commerce in meats which do not conform to the standards set up by the government. Unfortunately, except as comparable legislation regulating intrastate commerce has been passed by the several states, the consumer is still without adequate protection. It is the practice of some states to require the periodic testing of dairy herds for tuberculosis and to condemn cattle which cannot pass the test. Similarly, some cities prescribe quality standards for the milk to be sold within their limits. The government has also done a good deal, although it could do much more, in setting up reasonable standards of quality and in classifying goods into definite grades. The marketing of many agricultural products, including wheat and cotton, fruit and butter, has been influenced to the advantage of the consumer by the use of such

governmental standards. While the use of governmental grades and standards could easily be made mandatory, as a matter of practice it is generally voluntary. But the voluntary acceptance of standards, like the voluntary acceptance of a code of fair practices in industry, is of great importance. The demand for quality goods is apt to be stimulated and the supply of inferior products may be curtailed because it proves less profitable or even unprofitable to market them. Both the development of demand for goods of quality and the curtailment of supply of inferior products operate to the advantage of the consumer.

At times and under certain conditions the government attempts the more difficult task of fixing or regulating prices in order to protect the consumer. The intervention of the government in price-determining operations occurs much more frequently and extensively than is commonly supposed. When the government owns a public service enterprise, such as the postal system or a municipal water-works, the task of price-fixing is relatively simple. Usually in such cases, charges to the consumer are fixed at the lowest possible price consistent with rendering efficient and continuous service. The government not only fixes the prices of publicly owned enterprises but also regulates the prices of the privately owned public utilities, such as the rates of rail ways and of electric light and power companies. The fact that such businesses are natural monopolies, having it within their power to exploit the consumer, is the occasion for the exercise of regulatory powers by the government on behalf of the consumer. Occasionally in times of national emergency, such as war or a severe depression, the government is called upon to regulate still other prices, which are normally left to the free operation of market forces.

Education, guidance, and protection with reference to the quantity, quality, and price of goods bought are the needs of consumers in the spending of their money. Consumers are the most important unorganized group in modern economic society; consequently, these educational and protective measures are essential if their economic interests are to be properly safeguarded.

THE NEED FOR SAVING

Upon the shoulders of ultimate consumers rests the responsibility not only of making wise purchases so as to get their money's worth and to keep the wheels of industry turning, but also in normal times of saving part of their incomes for future needs.

Saving is an indispensable condition for the greatest economic progress of both individuals and nations. As long as the energies of an individual must be concentrated upon the single task of meeting the subsistence demands of today, there is neither opportunity to develop nor leisure to

enjoy the finer things in life. But when men succeed in producing more than they use for immediate consumption, wealth begins to accumulate and gradually the severity of the struggle for a living is somewhat softened.

Individuals need to save and do save for a variety of reasons. It may be to accumulate a sum of money for some relatively large purchase, such as a house; or to provide for future contingencies, like sickness; or to supply means for the education of children; or to be financially independent in one's old age. Whatever the reason, the accumulation of a surplus, as a sort of financial backlog for the home hearth fires, is highly desirable in every individual's economy. The pity is that so few have been able to obtain it. It is said that 90 per cent of all persons over sixty-five years of age are dependent upon others for their support. Statistics common in life insurance circles show that of 100 men starting life with about equal opportunities at the age of twenty-five, forty years later only one is rich, four are well-to-do, five are still at work, thirty-six have died, and fifty-four are dependent upon others for their support.

A nation, no less than an individual, in order to make economic progress must produce more than it consumes. It is such a surplus, created by the efforts of many individuals and business units, that supplies a nation with capital for the expansion of old enterprises and the development of new ones. Since productive equipment of all kinds is constantly wearing out, much of the wealth produced annually must be used to replace worn-out agents of production. Wealth so appropriated merely keeps intact the capital equipment of society. It provides for the steady and unavoidable depreciation of capital involved in every productive operation. The saving that makes for economic progress means something more than this. It represents the surplus of wealth produced over current expenditures, including all necessary capital replacements.

Necessary as saving is to individual and social progress, it is often exceedingly difficult to know where to draw the line between consumption and saving so as to ensure the best results for both the individual and society. It calls for nicety of judgment to steer one's course safely between the Scylla and Charybdis of penuriousness on the one hand and extravagance on the other. To strike either is to shipwreck life or fortune. When saving for the future is done at the expense of present needs for physical and mental development, it may jeopardize the very future for which it seeks to provide. The penurious individual may lose capacity to enjoy the future. Often it is better to spend than to save. But when spending in the present is extravagant, recklessly unmindful of individual and social needs in the future, it is equally perilous. The prodigal spender may be without substance in the future, and in the meantime he contributes nothing to the accumulation of capital, upon which economic progress so largely depends. From a social point of view the gay spendthrift

does not deserve the popularity which he enjoys. Neither does the miser deserve all the calumny that is heaped upon him, for money saved is usually also spent. The difference between income spent and income saved lies in this: the former is spent for consumption goods while the latter is normally spent for production goods. The individual thinks of the income he has saved as being invested rather than spent. From his point of view this is true, but it is equally true that in most cases the invested savings of an individual are directly or indirectly spent for goods that will increase the future production of wealth.

Both individually and socially, saving is essential to security and progress. But individually and socially, too, saving may be carried too far. In an individual's economy saving is excessive when it means stunting one's present development for the sake of providing for a future which may never materialize or find one unable to enjoy it. Socially, saving is excessive when it is impossible to find relatively secure and desirable forms of investment.

FORMS OF SAVING

There are two important forms of saving in the economy of both individuals and nations. The one may be designated as conservation, and the other as accumulation. The latter is the more common meaning conveyed by the term "saving," but the former is also of the utmost significance.

Saving as conservation. If an individual makes want-satisfying goods last as long or reach as far as possible, he conserves their use. Conservation does not mean to withhold from use, but it does mean to procure the most economical use of a good. Anyone who helps to eliminate waste in production, as well as anyone who practises conservation in consumption, is rendering service that is a form of saving. The elimination of stupendous waste in the use of such natural resources as coal and minerals, forests and running water, is conservation. The substitution of sunlight for artificial light in some places, by the simple device of moving the hands of the clock forward one hour during the summer months, is conservation. (Such daylight saving has proved more acceptable in industrial centers than in the rural districts, where work had long ago been adjusted to synchronize with the movements of the sun.) Cooks blessed with imagination and grown wise through experience are among society's greatest conservationists. The efforts of all producers and consumers in conservation result in no inconsiderable amount of saving.

Saving as accumulation. But the more usual meaning conveyed by the term "saving" is not so much economy in consumption as the postponement of consumption. In the case of many saving individuals, the consumption is permanently postponed. Since saving today is predominantly

made in the form of money or its equivalent, many people prefer never to exercise their rights to spend the principal sum at all, but instead to be content with spending the income which it yields.

Income that is saved rather than spent may be either hoarded or invested. Whether an individual hoards his surplus or invests it, he forgoes, for the time being at least, his undoubted right to convert it into consumption goods. Silas Marner typifies the hoarder for every English-speaking boy or girl. Every night when his day's weaving was done, he drew his shutters, bolted his door, and from a hole beneath his floor drew forth the bags which contained all that gave meaning to life for him. He loved to pour the gold upon the table before him, to pile the coins into stacks, and to feast his eyes upon the symbols of his toil. His hoarding was saving, even though it was not the kind that promotes the greatest economic good. Of a similar sort was the hoarding of the one-talent man of the biblical parable, who hid his talent of silver in the earth and gave it back to his master upon his return. But the master condemned him as a wicked and slothful servant and told him that he should have placed the money with the exchangers, so that the master might have reclaimed his money with usury.

A different sort of saving was that of the five- and of the ten-talent servants. These two invested their talents of silver in trade, and each made 100 per cent on his investment. Savings today are almost always invested rather than hoarded, but the usual rate of return is much lower than that of the well-known parable.

While the process of saving takes the form of either conservation or accumulation, the goods that are saved are both consumption goods and production goods. It is reasonable to assume that saving began with the accumulation of such consumer's goods as could be preserved for future use. With the accumulation of producers' goods, man greatly improved his equipment for future production and simplified the problem of getting an increasingly better living. While from the social point of view saving consists in producing more commodities than are consumed, the individual's savings are usually expressed in money or its credit equivalent. They represent his claim upon the existing supply of consumers' or producers' goods, as well as upon the supply of goods to be created in the future.

THE INVESTMENT OF PERSONAL SAVINGS

Accumulated private savings, in the form of investment funds, are derived from two principal sources: business surplus, which represents that part of the net earnings of a business that is not distributed to the owners but is allowed to remain invested in the business; and individual incomes which are not spent for the direct and immediate gratification

of wants. The retention rather than distribution of business surpluses is a matter of judgment on the part of the owners or their representatives. Saving any part of the income received by individuals is a matter of economy, sometimes calling for great foresight and self-denial.

Since the accumulated savings of most individuals today are made in the form of money or its credit substitute, the safe and profitable investment of savings is a problem of major importance. For those whose principal savings consist in material goods other than money, the problem is simple, as, for example, for the farmer whose net savings may largely consist in the increase of his flocks and herds. For the accumulator of monetary investment funds a great variety of savings institutions and of investment opportunities has been created. All who desire a competence or who aspire to be financially independent some day have occasion to become familiar with the services of savings and investment institutions (such as banks and trust companies), of building and loan associations, and of insurance companies. As of September, 1950, the demand and savings deposits of the American people aggregated over \$154 billion.⁵ Private investors, other than banks and insurance companies, owned government securities aggregating \$86.9 billion.⁶ Savings and loan associations in 1948 had assets of more than \$13.1 billion to aid in owning homes.⁷ Approximately \$215 billion in life insurance was in force in 1949.⁸

Savings deposits in banks. Banks exist in part for the custody and investment of savings. Almost everyone who undertakes the process of accumulation in our time makes use of a savings deposit account in some bank. Old-fashioned hoarding is no longer necessary or desirable in countries where political and financial security prevails. While the so-called "commercial" banks exist primarily for the purpose of helping business by making short-term loans, they also encourage the opening of small savings accounts, for which they pay a low rate of interest.

Some banks, known as mutual savings-banks, exist exclusively for the accumulation and investment of savings. They solicit and accept deposits from their customers, invest in high-grade securities and real estate loans, and pay their customers interest on deposits left with the banks a specified period of time. The small savings in millions of deposit accounts, aggregating billions of dollars, are thus made available for conversion into real estate mortgage loans, the bonds of conservative private businesses, and the bonds of governmental units. The number of such banks in the United States is not large; on June 30, 1950, there were 530 out of a total of 14,674, including all types of banks and trust companies.⁹ The number

⁵ *Federal Reserve Bulletin*, Vol. 36 (1950), p. 1493.

⁶ *Idem*, p. 1512. The figure is for August 31, 1950.

⁷ *Statistical Abstract of the United States*, 1949, p. 1021.

⁸ Institute of Life Insurance, *Life Insurance Fact Book*, 1950, p. 6.

⁹ *Federal Reserve Bulletin*, Vol. 36 (1950), p. 1495.

is showing no marked tendency to increase because of the growing "departmentalization" of the commercial banks. It is now very common for commercial banks not only to perform their primary function of facilitating business transactions but it is also common for them to conduct savings departments and often to affiliate with trust companies or operate trust departments for the carrying-on of business that calls for the services of trustees.

Investments in government and corporation securities and real estate mortgages. The financing of the First World War, and even more so, of the Second, taught the American people the investment-value of government bonds. "Buy them and keep them," was the frequently reiterated advice for many a selling campaign. It is fair to say that the American people were not "bond conscious" before these huge United States Government bond issues were successfully floated. Now United States bonds are the easiest and safest investment medium for the savings of the great masses of people, if inflation can be kept under control. A very popular investment opportunity, particularly for those who are at least somewhat familiar with such matters, is provided through the offer for sale of corporation securities and real estate mortgages. Investment banks, bond houses, stock-brokers, and investment companies specializing in real estate mortgages are among the agencies that have been organized to facilitate investments of this type. An investment bank, or other agency doing an investment business, buys securities at wholesale and sells them at retail. When a large and important new bond issue, for example, is to be "floated," it is usual for a number of the well-known investment houses to cooperate in underwriting the loan (which means to take it) and then to dispose of it in small lots to customers who have savings to invest in such properties.

The business of making both safe and profitable investments is fraught with great perils. Reliable investment banks and other agencies render valuable service in giving prospective investors intelligible information and wise counsel. So intricate are the questions involved in the valuation of assets, the interpretation of earnings, the forecasting of future earning trends, and the appraisal of the qualities of management that a distinct business of selling financial advice to investors has developed.

Building and loan association payments. Many people of limited means have been greatly helped in solving the problem of home-ownership by converting their savings into shares of stock in building and loan associations. The primary purpose of such associations is the accumulation of a loan fund to aid in financing the building of houses. Members of any association usually acquire their stock through small weekly or monthly instalment payments. When the available funds of the association permit, members may secure loans to defray the greater part of the cost of building, provided the proposed sites are owned free from all debt by the prospective builders.

The borrower-members, for every borrower *ipso facto* becomes a member, must subscribe for a large enough number of shares so that the aggregate maturing or par value of the shares will equal the amount of the loan. A member borrowing \$5,000, for instance, must make payments on twenty-five shares, the maturing or par value of each of which is \$200. If he regularly pays his dues (which are applied on the stock he has purchased), he will at the maturity of his shares have a capital sum sufficient to extinguish the debt and will own his home free from all encumbrances. The monthly dues are arranged in such a way that part of each payment represents principal and part interest on the loan. Not all of the stockholders of building and loan associations have become such for the ultimate purpose of borrowing capital to build a home. Some persons find it advantageous to become depositing rather than borrowing members by making the usual monthly instalment payments on the shares of stock purchased solely to build up a relatively secure and profitable capital investment. Building and loan associations furnish the opportunity for coöperative saving and lending for home-building purposes. In the United States there were 6,000 such associations in 1949 with assets in excess of 13.1 billions of dollars.¹⁰

Insurance as an investment. While insurance is primarily bought as protection against risks,¹¹ it is also widely used as a means of building up one's estate. In the case of endowment life insurance the insured himself may come into possession of the principal sum of the policy together with its accrued earnings, provided he survives the maturity of the policy. The maturities of endowment policies can be so selected as to return to the insured the proceeds of the policies at any desired age, provided only that the premium payments be regularly paid. In the case of all other forms of life insurance, the estate of the insured or stated beneficiaries receive the amounts of the policies. For the insured the annual premium payments represent a form of saving. For some who find the art of saving difficult to practise, the necessity of being ready to make an insurance premium payment may serve as an effective stimulus to save. Some people prefer to carry as much insurance as their annual savings permit in order to avoid the responsibility and troubles of making other investments for themselves. In such cases the insurance company functions as the insured's investment banker.

While savings accounts, corporation and government securities, real estate mortgages, building and loan association shares, and insurance represent the larger part of a people's savings, there are still other forms. Some persons put their savings into individual businesses or partnerships; some into real estate in the hope that it will appreciate in value; others into silver foxes, for example, in the expectation that they will multiply; still

¹⁰ *Statistical Abstract of the United States*, 1949, p. 1021.

¹¹ Cf. Chapter XXX, "Providing Protection Through Private Insurance."

others into diamonds or Oriental rugs or rare antiques on the chance that over a period of time they will show a handsome profit. Whatever the concrete form of investment chosen for accumulated savings, the investor must satisfy himself on such points as these: Will my principal be safe? Can I count on regular income? Is the rate of income on the investment fair? Is there reasonable chance for the value of the investment to appreciate? Is the investment readily marketable in case personal circumstances or market conditions prompt me to sell?

AGGREGATE CONSUMPTION, SAVING, AND INVESTMENT

Consumption, saving, and investment in the economy of individuals constitute the thought "arterial" so far traveled in this chapter, but they also lead to points of observation on the economy as a whole. Spending for consumption goods is the modern way of bringing about maximum want-satisfaction. The family that itself produces most of the goods which it consumes is exceptional. Aggregate personal consumption expenditures in the United States in 1949 amounting to \$178.8 billion reveal something concerning the level of living and well-being reached. When comparisons are made between countries, or within the same country between periods of time, corrections must of course be made for changes in the price level.

Aggregate personal savings from year to year tell us something as to whether economic life is hard or easy, and whether society is making any economic progress. For an individual, saving is what he has left of his income after he has met his consumption expenditures. Dis-saving consists in spending more than one's current income on consumption. It is made possible by consuming the savings of the past or borrowing to cover the deficiency. For the economy as a whole personal savings represent the difference between disposable personal income and personal consumption expenditures. Savings are corporate as well as personal. For a corporation the part of its net income which it retains in the business instead of distributing as dividends to its stockholders constitutes its surplus or savings for the year.

As far as investments are concerned, the individual is apt to look upon any asset which he acquires and from which he expects to derive future income, as an investment. The asset may be shares of capital stock, bonds, notes, real estate, or similar holdings. What the individual regards as an investment, however, may not be an investment for the economy as a whole. That depends on the ultimate form that the savings take. If savings are converted into a net increase in capital goods they represent an investment for the economy. Such investments are usually made by those who borrow the savings of others rather than by the primary savers themselves.

Economists and other students of our economy now have at their disposal vast quantities of statistical data pertaining to production, consumption expenditures, saving, and investment, which only a few years ago were not available at all. Among the most comprehensive and valuable of such studies are those of the United States Department of Commerce on the national income, its sources and disposition.¹² The study of such data not only leads to more detailed information but also to an over-all picture of the functioning of the economy as a whole. From them some important conclusions can be drawn, even though guardedly on account of the limitations of the statistical method, and with the understanding that they apply in the aggregate but not necessarily to a specific situation.

That consumption expenditures vary enormously in years of prosperity and depression is a commonplace of observation and experience. But the estimates of such consumption expenditures in the aggregate are even more impressive and illuminating. The following table taken from the continuing studies of the national income by the United States Department of

PERSONAL INCOME AND DISPOSITION OF INCOME, 1929-1949
(Millions of dollars)

	<i>Personal Income</i>	<i>Disposable Personal Income After Taxes</i>	<i>Personal Consumption Expenditures</i>	<i>Personal Saving</i>
1929	85,127	82,484	78,761	3,723
1930	76,195	73,688	70,789	2,899
1931	64,835	62,977	61,153	1,824
1932	49,274	47,819	49,208	-1,389
1933	46,629	45,165	46,346	-1,181
1934	53,230	51,635	51,882	-247
1935	59,861	57,973	56,215	1,758
1936	68,353	66,095	62,515	3,580
1937	73,976	71,055	67,121	3,934
1938	68,327	65,465	64,513	952
1939	72,607	70,167	67,466	2,701
1940	78,347	75,743	72,052	3,691
1941	95,308	92,015	82,255	9,760
1942	122,721	116,740	91,161	25,579
1943	150,286	132,441	102,244	30,197
1944	165,892	146,957	111,550	35,407
1945	171,927	151,060	123,079	27,981
1946	177,724	158,916	146,907	12,009
1947	191,000	169,494	165,570	3,924
1948	209,531	188,380	177,446	10,934
1949	206,118	187,444	178,832	8,612

Survey of Current Business, Vol. 30, No. 7 (July, 1950), p. 9.

¹² Cf. Chap. VIII, "The National Income Analysis of Production and Other Economic Functions."

Commerce compares various items in the national income analysis over a range of years. If we compare consumption expenditures in 1933, the year of deepest depression, with such expenditures in 1948, the year of greatest post-war prosperity, it is apparent that measured in current dollars the consumption expenditures of 1948 were nearly four times as high. When corrected for the rise in the price level between 1933 and 1948 they are still more than twice as high.

How personal savings were affected by the war is strikingly shown in the table "Aggregate Personal Savings in the United States, 1939-1949" that follows. The years 1941-1946 reveal the rise and fall in the amount of such savings. In their accumulation both the patriotic motive to save and to lend to the government in aid of the war effort, and the inability to spend freely because of declining supplies of civilian goods, played important parts.

AGGREGATE PERSONAL SAVINGS IN THE UNITED STATES, 1939-1949¹³

<i>Year</i>	<i>Millions of Dollars</i>
1939	2,701
1940	3,691
1941	9,760
1942	25,579
1943	30,197
1944	35,407
1945	27,981
1946	12,009
1947	3,924
1948	10,934
1949	8,612

The Department of Commerce for the period cited above also estimates the undistributed corporate profits as shown in the next table.

UNDISTRIBUTED CORPORATE PROFITS IN THE UNITED STATES,
1939-1949¹⁴

<i>Year</i>	<i>Millions of Dollars</i>
1939	1,209
1940	2,398
1941	4,921
1942	5,136
1943	6,153
1944	6,128
1945	3,803
1946	8,073
1947	11,988
1948	13,444
1949	9,203

¹³ *Survey of Current Business*, Vol. 30, No. 7 (July, 1950), p. 10.

¹⁴ *Idem*, p. 10.

It is out of such savings both personal and corporate that future investments are made—investments that result in a net increase in capital goods for the economy as a whole.

The relation between gross savings and investment, and the extent to which the latter absorb the former, are shown in the following table on the "Sources and Uses of Gross Saving, 1939-1949." How government deficits in war-time consume savings the data for 1942-1945 clearly show.

While consumption expenditures, savings, and investment involve decisions that each person must make for himself, they are matters that profoundly affect the national level of employment and income. One person's expenditures, either on consumption or investment, become another person's opportunity for employment and source of income. The corner grocer can remain in business only so long as his neighbors purchase enough of his goods to assure him a livelihood. Similarly, most men have jobs and incomes because others invest their savings in capital goods, the payment of wages, and the other outlays incidental to production.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Instalment buying is socially desirable, since it makes possible for a great many families a much higher standard of living than they would otherwise be able to maintain.
2. Instalment buying is to be commended from a social point of view, since by increasing consumption it stimulates production and helps create prosperity.
3. "Let the buyer beware" is an old maxim which adequately describes the policy of government in relation to all purchases by consumers.
4. While saving is desirable from an individual point of view, it is socially objectionable since it represents a withdrawal of purchasing power from circulation.
5. Individuals, corporations, and government must resist spending all of their income for current consumption if productive equipment is to be increased.
6. "Sums saved" are often distinguished from "sums spent for consumption," but in reality saving is only a different kind of spending.
7. The total amount of new savings (in the entire economy) equals the total amount of new investment (in the entire economy) for each year period.
8. A prolonged period of generally low interest rates is adequate proof that there has been too much saving and too little consumption.
9. A more equal distribution of the national income would tend to increase both consumption and savings.
10. Efforts to make consumers more intelligent in their buying are just as important from a social viewpoint as efforts to increase their income.
11. Aggregate personal income can never be as great as or greater than national income.

SOURCES AND USES OF GROSS SAVING, 1939-1949

(Millions of dollars)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
Gross private saving	12,672	16,005	22,951	41,829	47,381	56,977	48,534	28,706	25,339	36,842	36,872
Personal saving	2,701	3,691	9,760	25,579	30,197	35,407	27,981	12,009	3,924	10,934	8,612
Undistributed corporate profits	1,209	2,398	4,921	5,136	6,153	6,128	3,803	8,073	11,988	13,444	9,203
Corporate inventory valuation adjustment	-714	-148	-2,617	-1,204	-773	-287	-564	-5,193	-5,757	-2,932	2,233
Business depreciation charges	6,895	7,038	7,686	8,517	9,307	10,384	10,682	9,606	11,867	13,937	15,562
Institutional depreciation	187	190	192	195	197	200	203	211	219	223	227
Accidental damage to fixed business capital	222	246	273	484	399	360	381	407	567	570	528
Capital outlays charged to current expense	797	966	1,143	785	777	943	1,144	1,939	2,192	2,665	2,455
Excess of wage accruals over disbursements	0	0	0	0	209	-193	14	-30	15	30	-45
Statistical discrepancy	1,375	1,624	1,593	2,337	915	4,035	4,890	1,684	324	-2,929	-1,903
Gross investment	10,805	15,458	19,458	10,666	3464	5,615	9,295	33,287	39,082	45,047	33,450
Gross private domestic investment	9,917	13,945	18,334	10,873	5,709	7,714	10,733	28,726	30,187	43,124	33,028
Net foreign investment	888	1,509	1,124	-207	-2,245	-2,099	-1,438	4,561	8,895	1,923	422
Government deficit (+) or surplus (-) on income and product transactions	1,867	547	3,493	31,163	43,917	51,362	39,239	-4,581	-13,743	-8,205	3,422
Federal	2,213	1,409	4,889	32,949	46,389	54,004	41,819	-2,612	-12,855	-8,423	2,163
State and local	-346	-862	-1,396	-1,786	-2,472	-2,642	-2,580	-1,969	-888	218	1,259

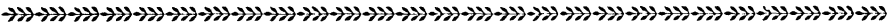
12. If in a particular year the national income was \$200 billion and disposable personal income was \$170 billion, the difference between them (\$30 billion) would represent the total amount of corporate and personal savings in the entire United States economy for that year.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXX

Providing Protection Through Private Insurance



RISKS IN MODERN ECONOMIC SOCIETY

RISK IS UNIVERSAL in man's experience and uncertainty pervades all of his activities. There are the risks to person lurking in accidents, sickness, and death. There are risks to property provided by the elements of nature, fire, and the depredations of avaricious men. All business, either in the short run or the long run, is uncertain as to outcome. And the jobs, with the income which they afford, upon which hundreds of millions of people must depend for a living are notably insecure.

Some risks are pleurably exciting, while others arouse dread and fear. Some are deliberately courted, even created, while others are shunned or avoided by all means known to man. The risks of business, for example, are willingly assumed in the hope of ultimate gain. Gambling hazards are artificially created both for the hope of gain and the excitement of something at stake on an event the outcome of which is as yet unknown. It is to be hoped, if gambling is indulged in at all, that the pleasures of taking chances are sufficient compensation for the losses that are bound to accrue to many. The risks of fatal accidents, on the other hand, most persons seek to avoid. The risk of long-continued unemployment is the curse of honest, capable, and industrious workers. Nothing is so prejudicial to the best results as the constantly haunting fear of insecurity. Most people would agree that human beings have a right to look forward to learning how to do things that will provide fairly steady employment and a fair return, of establishing decent homes, of accumulating a little reserve to provide for the contingencies of life, of satisfying some of the higher cultural wants of life, of spending their declining years in a modicum of comfort free from the more pressing financial worries of life. But these are blessings that are as yet denied to millions of our fellow-men. The short-time wage contract gives no assured status in our economic society. The modern laborer has no permanent and guaranteed association with production. No one is under any obligation to renew his wage contract when it expires. Uncertainty and insecurity are his usual lot.

The incidence of risks. From the individual's point of view some risks are inescapable, others can be prevented, and still others for a relatively small consideration can be shifted to and shared by others. The risks in so-called "acts of God" are beyond human calculation and control. Natural catastrophes like droughts and floods may play havoc with man's investments and enterprises in spite of all that men may do to circumvent them. Such risks are unavoidable. Risk-taking is also inescapable in normal business operations; indeed the *raison d'être* of entrepreneurs is found in their willingness to assume the risks essential to business enterprise. Through careful study and analysis of market trends, either by their own research departments or by outside advisory services, the more successful business men endeavor to substitute whatever information is available for haphazard estimates and guesses, and correspondingly to reduce their risks.

Some risks can be either greatly reduced or prevented entirely. Much has been done in reducing the hazards of fire through modern fire-proof construction and the provision of efficient fire-fighting apparatus and agencies. The risk of industrial accidents has been sharply reduced through the installation of many safety devices and measures. Prophylactics against disease, particularly of the sort that used to result in widespread epidemics, have at least curbed the risks to health. Automatic burglar alarms and safety deposit vaults have reduced the risks to certain valuable forms of property.

Still other risks can be transferred to other persons or at least shared by them. The vast business of insurance has developed in response to the demand of men for cooperation in the bearing of losses arising out of the risks of life and of business. To afford protection against losses that might prove unbearable to the individual is the fundamental principle in the insurance business.

INSURANCE AS A MEANS OF SHIFTING RISKS

Insurance is a business the chief function of which is the assumption of risk by distributing among many the losses sustained at any given time by a few. For procuring the security of coöperative relief men agree to pay designated sums, called premiums, and thereby substitute the outgo of a small known premium for the large, unknown, and perhaps unbearable loss which might befall them. Insurance creates a feeling of security in the individual; it facilitates business because it reduces risks and prevents the disorganization of business when certain losses occur; it may even reduce losses through the superior care which the insurance companies make it to the advantage of the insured to take.

Insurance is not a gigantic wager on the part of the companies against the probability of certain contingent events becoming actual occurrences.

While some forms of insurance are still highly speculative, such as insurance against bad weather on a particular occasion, insurance and gambling on the whole represent an almost direct antithesis. Insurance requires cooperation in the bearing of necessary risks; gambling implies the creation of artificial risks. Insurance results in some gain to all parties concerned in an insurance contract; gambling means certain loss to some, with gains, often only temporary, to others. The scientific basis of insurance, which differentiates it from a mere wager on a fortuitous event, is found in the laws of large numbers and of probabilities applied in experience tables. Life insurance offers the best example, since death, the event insured against, is bound ultimately to become a certainty for all. Certain as death is for all, its time is uncertain in the case of any individual. But data collected for large numbers of insured and since 1868 embodied in the American Experience Table of Mortality show the probability of any person's dying or surviving at any given age. The American Experience Table of Mortality, used almost exclusively by insurance companies in the United States, postulates 100,000 persons just beginning the tenth year of life. Past experience shows that 749 will die during the year. At the beginning of the fiftieth year 69,804 are left, but 962 will not survive the year. Of the original 100,000 only 3 enter upon their ninety-fifth year, and according to the American Table none survives it. John D. Rockefeller, Sr., and a few others have proved that the table is not perfect in its accuracy, but these few exceptions to the rule do not affect its practical validity and usefulness in computing insurance premiums and costs. If the probability of the occurrence of an event can be determined by actuarial means and large numbers of such risks can be combined, insurance contracts can be bought and sold on a scientific basis.

For many, if not most, of the economic risks of life, forms of insurance have been developed. Leading types of insurance cover risks of person, including death, accidents, sickness, and old age; risks of property, including fire, wind-storm, burglary, marine loss, and casualties of many types; some risks of business; and in a rudimentary way, some risks of unemployment. While the business of insurance is built on the idea of combining risks of the same kind for the purpose of protecting each member of the group, no other risks in the aggregate are as neatly calculable as those covered by life insurance. The reason is obvious—"All men are mortal"—but not all must suffer accidents. The contingencies covered by insurance in the great majority of property insurance contracts do not become actualities at all. The present chapter deals with insurance provided through private initiative; the following chapter, with insurance, provision for which has been made by legislation.

INSURANCE AGAINST THE RISK OF DEATH

While death is certain for all, its exact time is highly uncertain. Men try to protect themselves against the risk of dying without provision for their dependents. This the purchase of life insurance policies may accomplish. A life insurance policy is a written contract between the insurance company, as insurer, and the insured, stipulating, whatever other details the contract may contain, the amount of the policy to be paid together with its time of payment, the annual premium to be paid by the insured during the life of the policy, and the name of the beneficiary. Although there are many forms of life insurance policies, new features are frequently introduced in the contracts as a result of the highly competitive nature of the business of selling life insurance. Certain distinctions are important. Policies may be classified according to maturity, participation in the earnings of the company, and the type of premium plan.

Policies classified according to maturity. Classified according to the date of maturity of the policies, there are four important forms of life insurance: *term*, *ordinary life* (sometimes called "whole" or "straight life"), *limited payment life*, and *endowment*.

Term insurance is temporary insurance. The insured buys protection from an insurance company for a designated period of time. The amount of the policy is payable only if death occurs within the designated period; nothing at all is either refunded or paid if the insured survives the term for which the insurance ran. Term insurance is the cheapest of the four forms here considered. It appeals to men who want the maximum of protection for the minimum outlay during a limited period of time. Protection of a young family against the contingency of the untimely death of the chief or sole breadwinner is a case in point. Unusual but temporary risks in business furnish another.

In an ordinary life policy the amount of the policy is payable upon the death of the insured, premiums being payable throughout life. If the policy happens to be written by a mutual life insurance company (a company in which policy-holders participate in the net earnings), and if the dividends to which the policy-holder is entitled are left with the company, such dividend accumulations may be used to buy "paid-up" insurance for the amount of the policy even before the death of the insured. Ordinary life insurance is the cheapest available form of permanent insurance. The insured becomes a party to a contract which not only guarantees him protection but ultimately enables him to leave a bequest to his designated beneficiary. The chief objection to this type of insurance is the continued payment of premiums throughout the life of the insured; in certain cases this objection can be overcome in the way that has been indicated.

A limited payment life insurance policy calls for premium payments

only during a limited number of years, the face amount of the policy, however, being payable at death. The premium payments usually run from ten to thirty years, the "twenty-payment life policy" having proved the most popular. The premium payment is of course larger than in the case of "straight life" policies. The limited payment life policy has the undoubted advantage to the insured, if his income permits, of paying for his insurance during the most active and productive years of life. Moreover, there is some satisfaction in knowing that at some definite time in the future the job of building a life insurance estate for one's beneficiaries will be finished.

Term, ordinary life, and limited payment life policies all call for payment of the face amount of the policies only upon the death of the insured. An endowment policy, which runs for a fixed term of years, not only provides for payment of the policy upon death of the insured, if he dies within the period, but also guarantees payment at the expiration of the period, if he survives. An endowment policy provides protection for one's beneficiaries during the period of the policy and at the same time provides a competence for the insured if he survives. If a man forty-five years of age buys a twenty-year endowment life insurance policy and survives the period of the policy, he will at age sixty-five be able to enjoy the funds represented by whatever amount of insurance he has been able to carry. The annual premium per thousand dollars of insurance is higher than in the case of the other types of policies. An endowment policy practically combines in one contract the protection which insurance affords and an investment which accumulated savings at the disposition of the insured, if he lives to use them, represent. The particular advantage of an endowment policy for some persons lies in the incentive to save, which periodic insurance premiums offer. Except for the necessity of meeting insurance premiums in order that the insurance itself may not lapse, many persons would not make the extra effort to save and thereby eventually build up an insurance estate.

Policies classified according to participation in earnings. A second important classification of insurance policies pertains to their participation in the earnings of the company. From this point of view policies are either participating or non-participating; they either share or do not share in the profits of the company. The surplus earnings of an insurance company are the difference between the assumed cost of doing business as represented in the premiums collected, and the actual cost of meeting its insurance contracts. There are four main sources of such surplus earnings. The company may be able to invest the huge trust funds committed to it at a higher rate of interest than that assumed in computing the annual premiums to be paid. If a company can earn 4 per cent on its investments and a 3 per cent return has been assumed in fixing the premium rate, it is obvious that here

is one possible source of surplus. Again over a period of years a company may not actually have so heavy a mortality as that assumed in the table on which its premiums were based. There may also be savings in estimated expenses. Premiums are "loaded" to allow for contingencies and the expenses of the company. "Loading" is a term used in the insurance business to cover expenses. Finally, certain adventitious gains, more apparent than real, result from the lapse and surrender of policies, when the cash surrender values are less than the reserves set up for the policies. The policies of a mutual insurance company participate in the earnings of the company, whatever the source of such earnings may be. In mutual insurance companies the policy-holders constitute the company and ultimately control its management. The policies of a stock insurance company, if it is strictly of the stock type, do not participate in the earnings. (Some stock companies issue participating policies, but the amount of such insurance written by the stock companies is relatively small.) What dividends are disbursed out of surplus earnings go to the stockholders who have supplied the capital stock. The early premiums on non-participating policies in stock companies are lower than similar premiums in mutual companies, which helps to even the competition between these rival forms of insurance company organization. The higher charges of mutual companies, not needed to meet their obligations, together with available surplus earnings, are returned to the policy-holders in the form of dividends.

What the holder of a participating policy does with his dividends is a matter for him to determine. A number of options are open to him. He may draw the dividends in cash or apply them on his annual premiums. He may use them to buy paid-up additions to the face amount of his policy. He may allow them to accumulate with the company and thus shorten the premium-paying period, for whenever the reserves set up against his policy together with the dividend accumulations will at the insured's then attained age command an amount of insurance equal to the face of the policy, his policy may be indorsed as fully "paid-up insurance." He may simply allow the dividends to remain with the company drawing interest at a stipulated rate and withdrawable on any annual premium date.

Policies classified according to premium plan. Classified according to their type of premium plan insurance policies fall into two large classes: those built on the natural premium or "step-rate" plan and those built on the level premium plan. Under the natural premium plan the insured pays a premium each year just large enough to cover the cost of protection for the then attained age of the insured. Renewable one-year term insurance offers an illustration. Since the probability of death increases with advancing age, it follows that the annual natural premiums must correspondingly increase until at last they become prohibitively burdensome.

This is the rock on which many of the early fraternal organizations founded in their attempts to provide cheap insurance. They began by making a "flat" assessment against all their members, regardless of age, to provide insurance benefits for a deceased member. This crude method was superseded by assessments "graded" according to the age of their members upon admission to the order, but the gradations were not sharp enough wholly to cover the cost of insurance for the attained ages of the insured, which is the essence of the natural premium plan. Strict adherence to the latter, however, would have meant prohibitive rates for those in the older age groups. It is apparent that in order to profit by the low cost of the natural premium plan the policy-holder must die young. In practice the plan of paying for insurance protection as one gets it and enjoys it did not work satisfactorily. Companies offering it had to rely upon the constant accession of new members to keep going. A modification of the natural premium plan is furnished by the "step-rate" plan under which the same premium is paid for a term of years, such as five, after which it is advanced for successive similar terms. At age sixty or thereabouts, however, the rates become level for the rest of life.

While the natural premium plan calls for an increasing payment with advancing years, the level premium plan provides for the same annual payment throughout the life of the policy. Payments during the early years of the policy are greater than the actual cost of providing the protection, as determined by the mortality tables, and during the later years are less. The excess of the early years must be set aside and held as a reserve for the benefit of the policy-holder to offset the deficit of later years. Accumulating reserves are further increased by the interest which their investment earns. The holding of reserves in invested trust funds makes it possible to offer insurance at attractive level premium rates throughout the life of the insured or the term of the policy. The existence of reserves is the *sine qua non* of all scientific insurance. Such insurance is sometimes called "old line insurance." The phenomenal growth and success of modern life insurance is largely attributable to the employment and wise application of the reserve principle.

Since the life insurance contract usually involves rights and benefits beyond the lifetime of the insured, the insurance business offers a fruitful field for the exercise of state supervision and control. Moreover, the many scattered policy-holders, who are incapable of unified action, must be protected against possible misrepresentations and dishonesty on the part of occasional unscrupulous officials. State laws have been enacted and control bodies set up governing both the organization and the operation of insurance companies. Prior to the establishment of effective state control there were numerous "insurance scandals."

INSURANCE AGAINST THE RISKS OF ACCIDENTS AND SICKNESS

Insurance against accidents, sickness, old age, and invalidism may be either private or social, voluntary or compulsory. Many individuals make their own insurance provision against these personal hazards. Thoroughly established and financially sound insurance companies stand ready to sell it. Whenever a given risk is widespread, of frequent occurrence, and lends itself to actuarial determination, insurance for it can be safely bought and sold. Accident insurance falls within this category. Voluntary measures and agencies, however, do not reach many persons most urgently in need of such protection, and who on account of insufficient forethought or income have failed to provide for themselves. Only socially provided insurance, compulsory in character, can meet the situation.

No progress comparable to the social insurance of industrial accidents has yet been made in the United States in providing for the economic risks of illness. Yet illness is widespread, of frequent occurrence, and capable of statistical measurement. To the individuals afflicted it is often a costly experience. Insurance against the economic losses of illness is just as feasible as it is in the case of accidents. Public poor relief, often extended to the sick, and the sickness benefits of fraternal orders and trade-unions are the forerunners of systems of sickness insurance. Only in the past half-century has the need of compulsory health insurance been socially recognized. In the United States, we have left sickness insurance very largely to individual initiative and private enterprise. The result is that most persons, and particularly those who are in greatest need, are unprotected. Some employers have established private insurance plans for their employees, but they do not begin to furnish any real mass protection.

INSURANCE AGAINST THE RISKS OF PROPERTY

For most of the ordinary risks of property an appropriate form of insurance has been developed. The chief types include protection against loss due to fire, wind-storm, burglary (theft and larceny), marine accidents, and many other casualties and risks, such as damage done by and to automobiles, the breakage of plate glass, the explosion of steam boilers, unknown defects in the title to property, and dishonesty and negligence on the part of the officers and employees of a business enterprise. All such risks, and other similar risks, are insurable. They are widely distributed within the business community. They are of sufficiently frequent occurrence to make protection desirable and at the same time are statistically measurable so that the probable cost of such insurance can be calculated. The contingent events against which property insurance is written do not

occur with the regularity and certainty of death in the case of life insurance policies. There is sufficient accumulated experience, however, concerning the property hazards involved, and the losses sustained, to make possible the determination of proper rate schedules. These will vary widely on account of the inherent nature of the particular hazard and various factors affecting it. Property insurance rates of all kinds are frequently revised as experience demonstrates that the existing rates are either unreasonably high or too low to cover the losses involved. To protect themselves against crushing losses property insurance companies generally resort to reinsuring some of their risks in other companies and thus distributing the risks. Naturally they reduce their own earnings by this procedure, but at the same time they procure greater stability for themselves and are enabled to write policies for larger amounts covering any particular risk.

INSURANCE AGAINST THE RISKS OF BUSINESS

The "entrepreneurial" risk in business is of course unavoidable and inescapable. Risk-taking is the essence of business. Entrepreneurs, whether operating as sole proprietors or organized in partnerships and corporations, assume the risks in the hope and expectation that they will be successful and will be rewarded by profits. Certain characteristics of modern business have accentuated the element of risk in business enterprise. Industrialized production is essentially "round-about" production, which means that relatively large amounts of capital are tied up in it. A modern plant for the manufacture of steel, or almost any of the plants of the heavy goods industries, represents a large capital investment, the ultimate value of which depends upon the successful termination of long-drawn-out processes of production. Some industries are chronically in the "prince or pauper class," showing large profits or heavy losses through the fat and lean years respectively of the business cycle. Business risks have also grown heavier as production has shifted more and more from the custom-order variety to the speculative sort. Heavy commitments must be made and production itself must be carried on in advance of demand and on an estimate of it. Plants do not operate at near-capacity except as orders for their goods warrant such production. But it costs a good deal of money even though they stand idle, on account of the heavy investment in them and the constant inroads of depreciation.

The incidence of such business risks properly falls upon the entrepreneurs who have chosen to shoulder them. If the entrepreneur is to find justification as a distinct factor in production, it is through his assumption of socially necessary risks. Naturally, however, he seeks to circumscribe his risks as much as possible and to avail himself of any aid that he can get in bearing the risks that are inherent in his business. In the case

of large corporations with ample resources, elaborate statistical and analytical departments have been established for the purpose of studying business trends. If the future can be even partly foreseen, more intelligent business commitments of all sorts are possible. To aid business men in the more successful discharge of their risks a number of well-known research and commercial organizations make a business of supplying them with a sort of forecasting service, in which market trends are analyzed and the impact of probable economic and political events is estimated. Other organizations supply the credit rating of present and prospective customers. Soundly conducted businesses themselves seek to "cushion" the shocks of adversity by building up reserves in times of prosperity for use during periods of depression. Companies that went into the great depression of the nineteen-thirties, for example, strong in working capital were for the most part able to weather the storm. Most corporations had to draw upon their cash reserves and surplus to make such dividend payments as were possible during the depression. The existence of such dividend reserves, even though soon depleted, helped their recipients materially in carrying many risks in a period of exceptional business uncertainty. Dividend reserves, functioning as shock-absorbers, have suggested to many the desirability of comparable unemployment reserves to soften the jolts on the wage-earner during periods of depression.

Although the risks of business must principally be borne by entrepreneurs, however wisely or unintelligently they accomplish the task, some business risks can be shifted to other special risk-takers. Property risks of many kinds can be insured. Some businesses carry life insurance policies protecting themselves against the loss by death of officers and employees whom they regard as indispensable. An interesting development in the field of business risk insurance is the insurance offered against losses due to bad weather occasioned by rain. Business promoters of out-of-door events such as athletic sports, races, prize-fights, fairs, and exhibitions often find it desirable to carry some rain insurance. Baseball games scheduled on holidays or other days when large crowds are expected may be insured against bad weather which might cancel the games or deplete the crowds. Summer hotels sometimes insure themselves against bad weather over week-ends, and department stores do likewise on the days of important advertised special bargain sales. Still another device for shifting certain types of business risks is presented by what is known as hedging. A miller buying wheat outright for manufacture into flour, the price of which will be influenced when he sells it by the then prevailing price of wheat, runs the risk of a fall in prices. Since he wishes to confine his business operations to milling and to eliminate if possible the hazards due to changes in the price of wheat, he may protect himself by hedging. When he buys wheat for immediate delivery to himself, he also sells wheat in the

speculative market for future delivery to others. If the price of wheat subsequently falls, he loses on the wheat that he bought for milling, but he gains a corresponding amount on the price of the wheat he sold in the speculative market, since he sold it at the higher price and can himself buy it for delivery at the lower price. Hedging is an attempt to play safe and to eliminate some business risks.¹

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. The institution of insurance eliminates loss both for the individual and for society.
2. Insurance cannot relieve society of the burden of economic risks, but can benefit the individual by distributing the burden of risk over many.
3. Since it is impossible to predict when any person will die, it is evident that life insurance companies are engaged in a highly speculative type of business.
4. Life insurance is on a more scientific basis than property insurance.
5. Although term insurance is the least expensive type of life insurance, it is not as satisfactory as ordinary life insurance in building up the insured's estate.
6. Since both term- and limited-payment life insurance policies require the payment of premiums for a limited number of years, there is no real difference between them.
7. When insurance companies operate on the level premium plan, it becomes necessary for them to maintain large reserves.
8. From the standpoint of the policy-holder, the level premium plan of insurance payment is preferable to the step-rate plan.
9. A life insurance company operating on the level premium plan can pay out as dividends at the end of each year the amount by which its receipts exceed its expenditures.
10. The level premium plan is inferior to the natural or "step-rate" plan in which a person always pays the exact cost of protection.
11. Business risks cannot be eliminated by means of insurance.

SUGGESTIONS FOR FURTHER READING

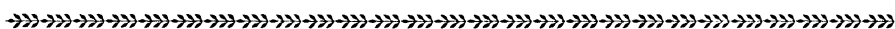
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¹ For further discussion of hedging cf. Chap. XIV, "Organized Markets," pp. 382-384.

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CHAPTER XXXI

Providing Security Through Social Insurance



CERTAIN FORMS OF insurance have come to be called "social insurance" because provision for them has been made by legislation. To be sure, all insurance is essentially social, since it substitutes social or coöperative action for individual action. But the term "social insurance" is most frequently used to designate the insurance plans and agencies provided under authorization and regulation of the state for the protection of lower-paid workingmen. To be really effective such insurance must be general, which means that it must be made compulsory by law. In the absence of compulsion there are always plenty of persons who would be willing to take a chance. For over half a century certain European countries have been gradually developing comprehensive plans for the relief of economic insecurity. Forty years ago the United States made a beginning in the insurance of industrial accidents under workmen's compensation laws. The idea spread rapidly from state to state. Only recently, however, have we seen the development of a more comprehensive plan to cover the major personal hazards contributing to economic insecurity. Doubtless in the long run we shall regard social insurance as one of the greatest contributions to the improved economic status and outlook of the wage-earners of the country.

WORKMEN'S COMPENSATION IN THE EVENT OF ACCIDENTS

Social insurance against industrial accidents generally took the form of workmen's compensation legislation. Under most statutes the employer liable for compensation to his injured workingman is obliged to insure his risk in order to make sure that there will be no question about his ability to pay. The economic losses of industrial accidents, which involved not only medical care, supplies, and possible hospitalization, but also the loss of wages due to inability to work, often fell with crushing force upon the injured workingman and his family. Prior to the days of workmen's compensation legislation with insurance of the risks involved, his only means of redress was a successful suit for damages establishing the negligence of

the employer under either the common or statute law of employer's liability. Bringing legal action was a wasteful and often futile procedure. But the modern system of accident insurance had its inception in this legal liability of the employer for his own negligence. Today in Europe and the United States industrial accidents are generally regarded as a charge against the industry; the employer pays the compensation provided by law or by the supervising governmental agency, and the employer's risk may be carried by insurance companies or associations specializing in this type of business.

Employers' liability under the common law. Modern industry with all its impersonal complexities inherited a legal doctrine of liability that arose when the contact between master and servant was direct and individual liability could easily be determined. Such a theory of liability soon proved pitifully inadequate protection for the injured workingman under the conditions of modern industrialism. Under the common law it is the duty of the employer to use reasonable care in providing for the safety of his employees while they are engaged in his service. It is his duty to use reasonable care (1) in providing a safe place to work, (2) in furnishing safe tools and other equipment, and (3) in selecting competent fellow-workmen. He is liable for damages if his negligence in any of these respects leads to the injury of his employees. The concept of "reasonable care," however, proved somewhat elastic. In practice it did not mean all possible care, but only safeguarding the worker against those dangers of which the employer had knowledge or might be presumed to have knowledge through the exercise of diligent watchfulness. When in spite of such "reasonable care" accidents occurred, they were regarded as inevitable; the employer was without fault and the burden rested upon the injured workingman.

To establish the liability of the employer and to recover damages for injuries sustained, it was necessary for the injured workman to bring suit against his employer and to prove that he had failed to exercise reasonable care in protecting his employees against injury. Such litigation was usually both time-consuming and expensive. It was often defeated by the shrewd lawyers retained by the employer or by the insurance company that fought the case for him. Experience proved that in the aggregate, even where damages were recovered, only a minor percentage actually reached the injured workman.

Common-law defenses of the employer. The common law, moreover, permitted the employer to set up certain defenses, which in practice very often made the recovery of damages impossible, even though it was a denial of justice to make the injured workman carry the burden that the industry should have borne. These celebrated common-law defenses of the employer in damage suits are (1) the contributory negligence of the

employee, (2) the negligence of a fellow-servant, and (3) the assumption of risk by the employee. No matter how great the negligence of the employer, if he could show in defense that the injured workingman's negligence contributed to the accident, the case of the workingman was lost. Similarly, an injured workingman's suit for damages was usually defeated if the employer in his defense could show that the negligence of a fellow-servant was responsible for the injury. To cap the climax, it was held that the employee assumed not only the ordinary hazards inherent in the industry (it was part of the assumption-of-risk doctrine that compensation was adjusted accordingly, although this was often fiction), but also any special risk of which the employee became aware but in spite of which he continued at work. Should an accident result from such risks, the workingman could not expect to recover damages.

A simple English case, the case of *Priestley v. Fowler* decided in 1837, illustrates the application of the last two of these doctrines. The case was as follows.¹ Priestley and a fellow-worker, both employed by Fowler, a butcher, were moving goods one day, in the ordinary discharge of their duties, when their cart broke down and one of Priestley's legs was badly injured. Priestley sued Fowler, alleging in his complaint that the defendant did not use proper care to see that the van was in a proper state of repairs and was not overloaded, and that in consequence of the defendant's neglect in each of his duties the van gave way and broke down, and the plaintiff was thrown to the ground. Although the jury found for Priestley and awarded him damages amounting to £100, when the case was appealed to a higher court this decision was reversed. The court held that there was no ground for action, since the employee must be held to have assumed the risk of his employment and himself must be the sufferer for the negligence of a fellow-employee. The same principle was enunciated in two American cases a few years later.

It is not surprising that a system of employers' liability hedged in by such defenses often appeared a caricature of justice to the workman and, to the employer not solely moved by monetary considerations, an ugly thing to utilize. It was slow, expensive, wasteful, unjust, irritating, and ineffective in preventing accidents. The grave shortcomings of the system of employers' liability as established under the common law led to the substitution of a system of workmen's compensation provided for by statute law and usually administered by some compensation board.

Workmen's compensation legislation. No other form of labor legislation has ever been so quickly or widely adopted as has workmen's compensation legislation. Europe took the initiative in the movement, and at present all European countries have established systems of workmen's compensation as substitutes for common-law systems of employers' liability.

¹ *Priestley v. Fowler*, 3 Meeson and Welsby, 1-5.

ity. In the United States by the close of 1949 every state² had a compensation system, although the first compensation laws to become effective had not been enacted until 1911.³

As pointed out in the preceding discussion, under the time-honored plan of employers' liability for negligence, the injured workman had to litigate and to depend upon a jury for an award of damages. Workmen's compensation legislation, on the contrary, grants the injured workman compensation according to a predetermined schedule of benefits fixed by the law or by a board designated for the purpose. The new plan of compensation is altogether superior to the old plan of damages. It is fixed, where the older plan was indefinite; it is cheap, while the other was expensive; compensation is easy to secure, whereas damages were usually obtainable with difficulty; compensation payments are fairly adequate, while damages were notoriously inadequate. Carl Hookstadt, a careful student of compensation legislation, expresses the contrast in the following way:

The theory underlying the old employers' liability system is the payment of damages to an employee for an injury resulting from the employer's fault or negligence. It is recompense for a wrong. The new compensation system, with unimportant exceptions, abolishes the whole question of negligence and bases its justification upon economic necessity. Instead of the least able unit of industry assuming its risks, the consuming public acting through the employer, furnishes relief to injured workers by fixed awards.⁴

Types of compensation systems. Two principal systems of workmen's compensation are in operation: the compulsory and the elective. Under a compulsory system all employers coming under the act (and usually employees as well) are obliged to accept its provisions, paying and receiving the scheduled benefits. They have no alternative. Under the elective system both employers and employees have the option of accepting the provisions of the compensation act or of continuing under the old liability law. As a means of inducing employers to accept the principles of workmen's compensation rather than of clinging to the antiquated protection of employers' liability under the common law, most statutes provide that in the event of the employers' failure to accept the compensation act he shall be deprived of the ancient common-law defenses in case suit for damages is brought against him. The penalty he pays for his unwillingness to accept workmen's compensation is the forfeit of the

² *Social Security Bulletin*, Vol. 11, No. 5 (May, 1948), p. 52 and Vol. 13, No. 7 (July, 1950), p. 24.

³ By Wisconsin, Nevada, New Jersey, California, and Washington in the order named.

⁴ *Comparison of Workmen's Compensation Laws of the United States and Canada up to January 1, 1920*, United States Bureau of Labor Statistics, Bulletin 275 (1920), p. 59.

protection afforded by pleading the employee's contributory negligence, the negligence of a fellow-employee, or the employee's assumption of risk. While in some states operating under the elective system the employer must make a positive choice, in most states he is under the act automatically unless he elects to stay out. Of the states in this country having compensation acts the large majority have enacted elective measures. The chief reason for this was the desire to reduce the risk that the acts be declared unconstitutional.⁵

Scope of compensation laws. In passing judgment upon the adequacy or inadequacy of a given compensation statute, four features are of the greatest importance: (1) the scope of the compensation act; (2) the scale of benefits provided; (3) the insurance of risks involved; and (4) the administration of the compensation law.

While a perfect compensation system should cover all accidental injuries in all employments, no compensation law so far passed attempts to do this. In practice it has been found necessary to restrict the application of the law. In the United States almost all states exclude agriculture and domestic service. Casual laborers are usually not covered, and about a dozen states exempt employments that are not carried on for the gain of the employer. After exempting certain groups, the scope of the act is usually determined either by enumerating the hazardous occupations to which it shall apply or by making it cover all employments having a specified minimum number of employees. Of these methods the first is much the less satisfactory. It always results in arbitrariness of classification of industries. If a workingman is maimed or killed, it does not help matters one whit to know that the injury or death occurred in a normally non-hazardous occupation. Human suffering and often privation result wherever accidents or deaths occur in industry. There compensation is needed. Much more satisfactory, because more inclusive, is the method of determining the scope of a compensation act by including all employments, except those specially exempted, that have a specified minimum number of employees, such as three or four or five. There is some truth in the contention that the risk of accident is less in employments in which there are few fellow-employees.

To obtain compensation it is necessary to show that the injury resulted from a hazard of the employment and usually, too, that it occurred during the course of the employment.

⁵ New York's Compensation Law of 1910, the first comprehensive statute of the kind passed in this country, while elective for some industries was compulsory for the more hazardous occupations. It was declared unconstitutional the following year on the ground, among others, that to *compel* an employer to compensate an injured workman for an accident for which the employer was not responsible is to deprive him of property without due process of law. Cf. *Ives v. South Buffalo Ry. Co.*, 201 N.Y. 271.

Scale of compensation benefits. The compensation actually received by an injured workman is usually a composite of three elements: the rate (which is generally a percentage of the weekly wages), the period of time for which it is paid, and a fixed maximum amount which it cannot exceed. The rate varies in the several states of this country, ranging from 50 to 66 $\frac{2}{3}$ per cent of the weekly or monthly wages. In most states the period of payment is shorter than the period of disability, being arbitrarily fixed by statute. Consequently, since an injured workman's income is reduced from one third to one half as a result of his incapacity, since it usually cannot exceed a stipulated maximum, and since it ceases altogether if the period of disability extends beyond the prescribed time limit, it is evident that even under a compensation system a considerable part of the economic loss falls upon the injured workman and his family.

The compensation benefit also varies with the result of the injury, be it death, total disability, or partial disability, and, in the case of disability, with the permanent or temporary nature of such disability.

In the case of death, the general rule is that the compensation paid the dependent survivors shall equal a stated percentage of the wages of the deceased employee for a specified period of time. This is usually the equivalent of three or four years' earnings. Settlement is usually not made in a lump sum but in weekly or monthly instalments.

For permanent total disability, which often involves a greater economic burden for the injured workman's family than death itself, a few States specify life payments without any restriction upon the total amount to be paid.⁶ In Wisconsin in 1949, for example, if an employee earning \$46.50 per week is totally disabled, he receives 70 per cent of his weekly wage or \$32.55 as compensation for every week of his total disability. (This is the maximum payment provided.) If the total disability proves permanent, this compensation is for the rest of life. In the majority of states, however, the compensation paid equals 50 to 66 $\frac{2}{3}$ per cent of the weekly wages for a specified period of weeks. Permanent total disability, as far as compensation laws are concerned, is illustrated by "total blindness of both eyes, or the loss of both arms at or near the shoulder, or of both legs at or near the hip, or of one arm at the shoulder and one leg at the hip."⁷

Fair compensation for partial disability presents the greatest difficulties. The chief reason for this lies in the fact that although the injured employee returns to work, he may be handicapped for life. To help meet the loss due to such partial disability, state laws commonly provide compensation, both the amount of which and the length of time during which it is paid depending upon the type of injury. The law may contain a

⁶ United States Bureau of Labor Statistics, *Monthly Labor Review*, Vol. 57 (1943), pp. 737-738.

⁷ Wisconsin Statutes (1943), Section 102.44.

schedule of bodily injuries together with the number of weeks during which there shall be payment at the designated rate of compensation for each injury.

In order to restore the injured workman as rapidly as possible to earning power, surgical and medical care and hospital service are necessary. While virtually all states make some provision for such service, only eleven states and the federal government limit neither time nor amount.⁸

Insurance of compensation risks. To guarantee security of payment of compensation to the injured workman and to protect the employer against the risk of heavy loss, almost all compensation states require the employer to insure his risk. This he may do by carrying his insurance in a private insurance company or in a state insurance fund, if the state concerned provides one. Self-insurance is permitted in a majority of the states, if the employer can furnish proof of his ability to meet possible compensation payments and to deposit the bond or other security sometimes required.

Administration of compensation law. In order that the injured workman may promptly and regularly receive the full compensation to which he is entitled, some administrative system is essential. Two plans are in operation in this country: the commission plan and the court plan. Under the former a central board, usually consisting of three or five members, is responsible for the administration of the compensation law. Under the latter, compensation matters are settled directly between the employer, or the insurance company as his representative, and the workman. In the event of a dispute the questions involved may be taken to the court for settlement. More than three fourths of the states are operating under the commission plan.

Legislation to protect safety and health. Important as it is to compensate an injured workingman, it is even more important to protect him against industrial accident and disease. Safety and health legislation is directly due to the greatly increased physical hazards of modern machine industry, as compared with the lesser risks to life and limb of the earlier handicraft system. As long as men worked with hand tools rather than with power-driven machines, worked at their own speed rather than at the pace set by machines, and worked under conditions subject to their own control rather than that of managers whom they rarely, if ever, saw, these men might reasonably be expected to look out for their own safety and health. Under modern industrial conditions, however, the pressure of competitors and the lure of quick profits are so strong that individual employers frequently cannot be depended upon to safeguard the worker, even though prompted to do so by considerations both of humanity and

⁸ Charles F. Sharkey, "Principal Features of Workman's Compensation Laws, as of January 1, 1940," *Monthly Labor Review*, Vol. 50 (1940), p. 595.

of long-run efficiency. Labor-unions have rendered valiant service in protest and constructive criticism. Governmental legislation and regulation, however, have proved the only effective means of procuring both adequate and uniform protection.

In order to reduce the toll of industry, safety codes of regulations have been developed and then made effective by the supervision of some governmental agency. Safety devices, both simple and ingenious, have been very generally introduced into industry, mining, and transportation. Illustrative of what has been done to reduce the risks of death and injury in present-day work places, the following safety appliances and practices may be mentioned: the guarding of the working parts of machines, such as circular saws, as well as the protection of workers by means of casings, screens, or rails against the gears, shafts, and belts that transmit the power; the countersinking of set-screws on shafts so that workers may not get caught by them; the installation of hoods to catch fine splinters thrown off by emery wheels in grinding operations, and the use of goggles by the operator; the protection of elevator shafts by automatic or other locking devices; the use of "safety nets" to catch falling workmen or materials in building construction; the use of safety lamps in mining; and the installation of automatic couplers on railroad equipment. Experience has proved, however, that neither the legal requirement nor the actual installation of safety appliances is enough; workers must be taught to use them. This is accomplished through systematic education in "safety first" and through the organization of rotating safety committees among workers.

Among diseases directly attributable to industry was the loathsome disease, popularly known as "phossy jaw," which was due to poisoning by phosphorus in the match industry. Long before social conscience was aroused on the matter in the United States, most European countries had prohibited the use of white phosphorus in the manufacture of matches.⁹ Although a non-poisonous substitute was discovered, it required an act of Congress to compel all the manufacturers of matches in the United States to abandon the somewhat cheaper but poisonous phosphorus and thus to banish "phossy jaw" from the land. Lead poisoning, due to the gradual absorption of the poison in painting, has been similarly treated by some European countries. In addition to such prohibitory measures, many provisions have been made looking to the creation of more sanitary and wholesome working conditions in order to counteract the development of industrial disease.

⁹ Finland in 1872 and Denmark in 1874. The Congress of the United States did not take similar action until 1912.

COMPENSATION IN THE EVENT OF UNEMPLOYMENT

One of the greatest risks in modern industry, which has received rather belated general recognition, is the risk of unemployment. When widespread unemployment is long-continued, its human hardships are so severe and its disastrous effects upon the entire economic system so pervasive, that the desirability of greatly reducing the risk of unemployment becomes evident to all. A widely accepted definition of unemployment has been offered by the British authority, B. Seebohm Rowntree: "A person is unemployed who is seeking work for wages, but unable to find any suited to his capacities and under conditions which are reasonable, judged by local standards."¹⁰ The definition excludes from the ranks of the unemployed those who are unemployable for physical or psychological reasons, but includes the labor unionist who refuses to work for wages he regards as unreasonable even though work might be available at such rates. The magnitude of the problem of unemployment is evidenced by the fact that at one time during the depression of the thirties, in the United States alone, about 14,000,000 normally employed persons were unemployed, representing nearly one third of all those gainfully employed. The severe consequences of such extensive unemployment, particularly when protracted, are revealed by the further fact that in the United States, long hailed as the land of boundless opportunities, approximately one out of every six persons in the total population was the recipient of some form of public relief. Not merely the mitigation of the evils of unemployment but the regularization of employment itself constitutes one of the greatest economic and social problems of modern industrialism.

Causes of unemployment. To help solve the problem and find the most effective remedies, rather than mere palliatives, many earnest and competent students of the problem have searched for the underlying causes of unemployment. These of course are multiple, and consequently there is no single remedy. It is frequently asserted that the only real cure for unemployment is employment, which is true enough but not particularly enlightening; the problem is how to provide it in times of economic stress and how to make more steady the fairly general employment of periods of prosperity. It is well to remember that even in prosperous years we have a normal number of unemployed persons in the United States that approximates two millions. The number is an estimate because there are no accurate figures of unemployment registration. The personal composition of the group changes from time to time, but the total remains substantially the same.

The out-of-work sometimes the unemployable. Persons out of work

¹⁰ B. Seebohm Rowntree and Bruno Lasker, *Unemployment: A Social Study* (London, Macmillan and Company, Ltd., 1911), p. xiii.

are sometimes unemployable for personal reasons, and so cannot strictly be considered unemployed under the definition previously cited. They may be too old to hold jobs. Physical or mental disabilities may make them temporarily or permanently unable to work. They may be chronically "work-shy." Such persons call for relief or rehabilitation before there can be any opportunity at all for employment. There is a considerable number of casual laborers who work intermittently by choice or habit; they work at odd jobs for a few days and then are on the march again. The migratory workers that invade our wheat fields in the summer and our lumber camps in the winter are not trained for regular employment. Others were unfortunate enough early in life to go to work at jobs that led them nowhere, and they later became the derelicts of our industrial system. In most of these groups of persons there are qualities which unfit them for steady employment, even if it were available. Unemployment is a state of enforced idleness on the part of persons both *able* and *willing* to work but unable to find a suitable opportunity.

Changes in industry. Seasonal, technological, and other economic changes in industry itself, entirely beyond the control of the workers affected, are responsible for a great deal of unemployment. Fruit and vegetable canning, confined as it is to the summer months, is a wholly seasonal industry. So is the extensive summer or winter resort business. Most industries have a seasonal peak, during which there is greater activity and employment than at any other time. Natural causes, such as the weather in the case of agriculture and construction, or social customs, such as Christmas shopping, may be responsible for this. In general, business is at a peak during the spring and fall and dullest during the summer and winter. Climate affects the human urge to activity, and with it the peaks and valleys of employment.

Certain technological changes in industry may at least temporarily increase unemployment. All through the period of the industrial revolution, the introduction of new machines and processes has made some trades obsolete. While new ones have usually developed, this was of little comfort to the displaced worker unless he could find the new trade and qualify for it. Moreover, many technological changes have not only displaced workers but also enabled industry to produce as much as or more than before the change was made. Changes in agricultural methods since the First World War are a notable illustration. In the field of industry organized labor has sought to control the introduction of new machinery as a means of protecting the jobs of the workers. From the social point of view unemployment due to technological changes is only temporary. Such changes are made in order to secure more efficient production. More efficient production usually means lower prices. Lower prices are apt to stimulate greater demand for the commodity in question, or to release purchasing

power for other commodities. In either case employment will increase in the long run. But from the individual point of view these technological changes may come so swiftly and repeatedly that many workers are left stranded. It takes time for the long run to materialize and for displaced workers to be reabsorbed by industry.

There are still other economic changes within industry which affect employment. Particular industries flourish for a time, then decline and perhaps decay. The saddlery and bicycle industries declined with the coming of the automobile; the phonograph with the radio. This necessitated shifts in workers. Industries may migrate from one part of the country to another on account of easier access to markets, to raw materials, or to cheaper labor. This inevitably means unemployment for some who were previously employed. The reorganizations and consolidations of business units usually result in some unemployment.

Cyclical fluctuations of industry. The great peaks in unemployment, however, are not brought on by these seasonal, technological, and economic changes within industry itself. Rather they are associated with the cyclical fluctuations of industry.¹¹ Business, as everyone knows, has its ups and downs, its alternating periods of prosperity and depression. General employment is characteristic of the former and widespread unemployment of the latter. A steady decrease in the number of the unemployed is one of the surest signs that a country is well on the road to recovery from depression. The last four major depressions in the United States have brought on our greatest volume of unemployment—the depressions of the seventies, nineties, twenties, and thirties. In the primary post-war depression of 1920-1921 it is estimated that more than 5,000,000 persons were unemployed. In the secondary post-war depression which began in the summer of 1929, the number of unemployed has been placed at about 14,000,000. In November, 1937, the United States Government undertook its first national unemployment census. Census cards were distributed through the postal service to every house and family in the United States, calling for the voluntary registration of the unemployed. As a result of a "follow-up" personal check of 1,950,000 persons in a house-to-house canvass, the unemployment census agency announced that the total number of unemployed in November, 1937, may have reached a maximum of 10,870,000. In periods of depression production and consumption are out of gear. The purchasing power that comes through the exchange of commodities and services is sharply decreased. With curtailed markets for goods part-time work and unemployment ensue, which aggravate the difficulties of the period. It is these periodic fluctuations of industry which are the cause of the greatest volume of unemployment.

¹¹ For discussion of the nature and causes of business cycles and their effects upon unemployment, cf. Chap. XXVII, "Business Cycles."

Existence of labor reserves to meet peak demands of industry. Industrial plants tend to collect about themselves a reserve supply of labor to meet the peak demands of their greatest prosperity. When the dull season or a depression comes, large numbers of these "industrial reserves" are laid off to await the coming of better times. They are not entirely free to seek work elsewhere because their mobility is circumscribed by the homes they have established. Even if they were, similar plants in which they could work at their trades are apt also to be experiencing a slump and to have no need for additional labor. Consequently these labor reserves become "hangers-on," swelling the army of the unemployed whenever economic conditions necessitate a slowing-down of the wheels of industry.

Means of reducing the risk of unemployment. For reducing the risk of unemployment and mitigating its evil effects four measures have received major consideration: the establishment of a comprehensive system of labor exchanges, government employment through systematic distribution of public works, the stabilization of industry itself, and compulsory insurance against unemployment.

Labor exchanges. Since unemployment always means a lack of balance or equilibrium between the demand for and supply of labor, and because this maladjustment is sometimes local rather than general, it has been proposed to establish in an industrial country a national system of employment or labor exchanges. The idea is to match the surplus of labor in some localities against the shortage in others. Established homes and local ties may prove a handicap in effecting a transfer of workers, but there is always a considerable percentage of workers upon whom such ties rest lightly. Private employment agencies, which charged a commission, and the employment bureaus of labor organizations, which rendered the service to their members, had blazed the trail to unemployment prevention. But they operated in too narrow a field and did not reach the masses. A score of the American states—New York, Massachusetts, and Wisconsin among them—had prior to the First World War established systems of free public employment offices. The federal government did likewise under the spur of war-time necessity, but after the close of the war the United States Employment Service almost starved to death for lack of funds to maintain its work. The Wagner National Employment System Act (approved June 6, 1933) revived the service and supplied it with fairly adequate appropriations. The United States Employment Service aims to coördinate the activities of the states in this field, aiding them with funds on a dollar-for-dollar basis, and to pioneer in states that do not have systems of their own. National systems of labor exchanges have been in operation for many years in Great Britain, Germany, France, and other European countries. Excellent as is the limited service which employment exchanges can render, such labor exchanges are no real solution

of the unemployment problem. All that even a comprehensive national system of labor exchanges can do is to bring jobless workers quickly and economically into communication with such opportunities for work as already exist. Although invaluable agencies for relaying information concerning jobs and counseling concerning means of transfer to them, labor exchanges do not and cannot create new jobs.

Government employment on public works. Perhaps the most strongly urged means of stabilizing employment is necessary public works. The intelligent and deliberate planning ahead of necessary public works for execution during periods when private industry is not demanding the full labor force of the country has long been advocated as the most promising method of combating unemployment. No American government, however, state or federal, has ever been ready with such a plan when depression overtook us. Under the administration of Franklin D. Roosevelt, which was faced with the necessity of fighting the greatest unemployment in our history, the philosophy of public works became familiar to all even casually acquainted with the problem.

But a dozen years earlier during the primary post-war depression President Harding's Conference on Unemployment just as unequivocally endorsed the long-time planning of public works. The report in part stated:

When public works are done in greatest volume during periods of active industry the same men and material are being competed for by both public and private employees. The inevitable result is to raise the height of the crest of the wave of cyclical business inflation and to cause a greater crash when the heightened wave breaks, as it always does.

In a growing country like the United States the aggregate volume of public works of cities, counties, states, and of the federal government is so great that if a larger proportion were executed in years of depression than in years of active industry a powerful stabilizing influence would be exerted. In the past, however, public works officials have felt poor when business was depressed around them and conversely have often executed their chief undertakings when the contagious enthusiasm of captains of industry and of the general public has hailed a period of prosperity at hand. . . .

Certain works of the federal government, such as reclamation, flood prevention, river and harbor work, roads and public buildings, are peculiarly suited for consideration as large undertakings covering a long period and capable of elasticity of execution to synchronize with cycles of business depression. . . . Available estimates show that if 20 per cent of ordinary necessary public works were deferred each year and the accumulation executed in a year of depression occurring once in 10 years, the lifting power of public works would be at least one-third the dead weight of such a depression as the present.¹²

¹² *Report of the President's Conference on Unemployment*, October, 1921, pp. 96-97.

No ambitious public works program, however, was either undertaken at once or even seriously planned for the future, although a beginning was made by the federal government in 1930. It remained for the Roosevelt Administration to work out the idea on a large scale. The Public Works Administration, the Civilian Conservation Corps, the Civil Works Administration, and the Works Progress Administration are the better-known governmental agencies set up to translate the idea into action. Highways, streets, grade-crossing elimination, rural rehabilitation, rural electrification, reforestation, flood control, prevention of soil erosion, deepening of rivers and harbors, development of waterpower, housing, and construction of public buildings are the outstanding projects to which the governmental agencies have devoted their energies and funds.

The thought behind advocacy of public works as a means of controlling unemployment runs something like this: public works will provide direct employment for those that secure the jobs; they will provide indirect employment because materials will be needed; the wages paid, directly and indirectly, together with other outlays, will stimulate business as a whole and help revive industry. If public works can be made to synchronize with periods of slack demand in business and industry, they may be expected to have a stabilizing effect upon employment. It is obvious from this argument that if public works are to have their maximum preventive effect upon unemployment their proper timing is the essence of the matter. The electric spark of a motor must be accurately timed if the machine is to move along with full power. So it is with public works in relation to general business activity. Without such timing the stimulus to business in general may prove only temporary, the industrial machine will continue to be stalled, and the public works expenditures will amount to little more than "work-relief."

Stabilization of industry. Both responsibility and opportunity for the partial stabilization of employment rests upon industry itself. Something can be done through the coöperation of employers, employees, and the buying public in the prevention of some unemployment. The dovetailing of seasonal industries under a single management offers one such possibility (the coal and ice business used to be a more familiar example than it is now). Another possibility of spreading work somewhat more uniformly through the year lies in the stimulation of buying by the consuming public through advertising and attractive prices. Whatever stimulates business in a normally slack season will help to make employment more steady. Special bargain sales of one kind or another are now regularly advertised during every month of the year. An attempt is thereby made to develop a more steady demand and to reduce "rush orders." Still another possibility consists in anticipating future orders by manufacturing goods in advance during the seasons of slack demand. This of course increases the manu-

facturer's inventories and puts an additional drain upon his working capital. It also requires careful estimates of what the future demand and probable prices will be. Finally, the reduction of labor turnover offers some possibility of stabilizing employment. Haphazard methods of hiring workers and of assigning them to their jobs have in the past resulted in frequently "hiring and firing" during the course of a year a labor force several times the size of the force needed if employment were steady. Personnel departments skilled in the selection, assignment, and training of workers have materially reduced labor turnover in many establishments and at the same time improved the efficiency and morale of the workers.¹³

Unemployment insurance. Whatever labor exchanges, government employment on public works, and the self-stabilization of industry may accomplish in reducing the risks of unemployment, they will not eliminate unemployment altogether. It takes time for labor exchanges to function and for public works to get under way. Business and industry in a competitive society can hardly be sufficiently stabilized to cope unaided with the major unemployment hazards. To fill the gap unemployment compensation or insurance has commended itself to the thinking of many persons and has been provided through legislation and administrative agencies.¹⁴ Just as a business may for a time pay unearned dividends on its capital stock by drawing on its accumulated reserves, so it is argued businesses should at least for a time pay unemployment compensation benefits to workers who have lost their jobs through no fault of their own. If such payments are a charge upon the industry, in part or in whole, they will constitute a powerful incentive to exhaust every possible means to stabilize employment and to eliminate or reduce the necessity of making unemployment payments.

Unemployment insurance is based upon the idea that unemployment is not the fault of the individual but rather of the industrial system; that complete loss of the worker's purchasing power is a detriment not only to him but also to economic society. Voluntary unemployment compensation plans were developed by European trade-unions and in the United States have been set up by a few progressive employers' and employees' associations. The plan of the Procter and Gamble Company is non-contributory as far as the employees are concerned. A notable example of a voluntary contributory plan is furnished by the agreement between

¹³ For full discussion of the whole subject of the regularization of industry in relation to unemployment cf. John B. Andrews, "A Practical Program for the Prevention of Unemployment in America," *American Labor Legislation Review*, Vol. 5 (1915), pp. 176-192; Lewisohn, Draper, Commons, and Lescoghier, *Can Business Prevent Unemployment?* (New York, 1925), Chap. 2.

¹⁴ The term "insurance," if used strictly instead of loosely, is a misnomer, because the risks of unemployment are not predictable and calculable. "Unemployment compensation" or "benefit" describes the plan more precisely, but the term "insurance" has become established in popular usage.

the Amalgamated Clothing Workers' Union and the Chicago Industrial Federation of Clothing Manufacturers. Both employers and employees contribute to the fund which is jointly administered by them, but the conspicuous shortcoming of voluntary plans is that they merely scratch the surface of the problem.

Great Britain led the way in 1911 with the establishment of a national compulsory insurance system. The original act applied only to a limited number of trades, but in 1920 the scope of the act was enlarged to cover the greater part of the working population. No more trying period for the inauguration and conduct of such a social experiment can very well be imagined than the quarter-century that included the First World War and one of the most severe and prolonged depressions in industrial history. But the system is still in operation. The last comprehensive revision was made in 1946. The system provides a weekly contributory plan under which employers, employees, and the government make contributions, though they are no longer equal. Contributions of employers and employees are collected through affixing stamps to an insurance stamp book with which each employee is provided. The stamps are sold by the government through the post-offices. The employer affixes the stamp which represents the joint weekly contribution of himself and his employee, deducting the worker's contribution from the weekly wage. The governmental contribution is added to the fund as a whole. If a worker leaves a given employer, his insurance stamp book goes with him. It must be deposited with a labor exchange office until he secures another job. If he remains unemployed, after a short waiting period he is entitled to modest insurance benefits. During the depression of the thirties the government was forced to make huge appropriations to the unemployment fund. Because the direct connection between contributions and benefits was obscured by the relief needs of the depression, the unemployment payments came to be called "doles." There is no valid reason, however, for concluding that a contributory insurance system, once fairly started, would not materially help in meeting the needs of an ordinary unemployment situation.

The Social Security Act passed by Congress in 1935 makes possible unemployment insurance on a national scale. Unlike the contributory old age insurance features of the same law, unemployment insurance does not call for any contributions from the workers. The burden is entirely upon the industry. Funds are provided through the imposition of an excise tax upon the pay-rolls of employers of eight or more persons, who are employed for twenty weeks or more in each year. The pay-roll tax began at 1 per cent in 1936, rose to 2 per cent in 1937, advanced to 3 per cent in 1938, and remains there for subsequent years. Since January 1, 1940, only the first \$3,000 earned in any year from any one employer have been subject to the Federal Unemployment Compensation tax. The act pro-

vides an unemployment compensation system which calls for the coöperation of the states with the federal government. All of the states have established unemployment insurance plans. Employers paying taxes to state unemployment funds receive credit up to 90 per cent of what they owe the federal government under the law. The Social Security Act allows the states very great latitude in setting up systems to meet their own particular requirements. During periods of unemployment benefits are paid in accordance with regulations adopted by the several states. In general, the pattern followed by these state regulations includes a waiting period (one or two weeks, for example) after the loss of employment before compensation begins, benefits not to exceed a stipulated percentage of the weekly wage (50 per cent, the most common rate), minimum and maximum payments (a minimum of \$5 to \$10 and a maximum of \$15 to \$22 being representative figures), a maximum period for such payments in any year commonly set at sixteen to twenty weeks. The first unemployment compensation benefits under the system were paid in Wisconsin beginning July 1, 1936. The last of the state systems to become effective was on a compensation-paying basis in 1939. According to the Social Security Board during the fiscal year 1949, for example, the sum of \$1,192,701,000 was paid in unemployment benefits to a weekly average of 108,557 beneficiaries. The average beneficiary received \$217 for a period of approximately 10.9 weeks.¹⁵ More than thirty-one million workers in the United States were covered by the unemployment compensation system in June, 1949.

Both the proponents and opponents of unemployment insurance agree that greater security for the workingman is a desirable social objective. They differ in their appraisal of the means to this end. In the long run the consumer of the products of industry will have to pay the bill. But it must not be overlooked that the public must pay the bill for unemployment anyway—in relief or doles, if not in compensation. There is little doubt that in one form or another the plan of unemployment compensation has come to stay. The success of any system of unemployment insurance will probably turn on the measure of job assurance that economic society can offer. With a fair degree of stability in employment, insurance problems will prove manageable.

PENSIONS AND INSURANCE AGAINST THE RISK OF OLD AGE DEPENDENCE

The risk of dependence upon others in old age is the dread, and sometimes the nightmare, of countless persons. And yet the great majority of

¹⁵ *Social Security Administration, Annual Report of the Federal Security Agency, 1949*, p. 206.

persons over sixty-five years of age are partly or wholly dependent upon others for support. Those with sufficient income during the most active and productive years of life can protect themselves through the purchase of annuity insurance. An annuity insurance contract is an agreement between the insurance company and the insured in which the company agrees to pay the annuitant a stipulated annual sum until death. The annuity may be purchased by the payment of a lump sum or single premium. If the annuitant prefers he can enter into a contract for a "deferred annuity," the annuity payments to begin at a designated age. The premiums may be arranged either in a lump sum or on the limited payment plan. Excellent as is annuity insurance in accomplishing the purpose for which it was designed, only comparatively few persons are in a position to take advantage of it, and many of these either neglect the opportunity or think they can invest and protect their savings more advantageously themselves.

Old age is a problem which modern industrialism has greatly accentuated. Men still young in years are often too old for industry. Many men early in life are told that their "services are no longer needed." If a man past forty-five is without a regular job, he usually has great difficulty in getting one "on account of his age." Children have often been looked upon as old age insurance, but children often prove bad insurance. Straight non-contributory pensions and compulsory insurance have been the social solutions of the problem most commonly proposed. They have now been very widely adopted.

Pensions, which are non-contributory because the recipient himself pays nothing directly toward them, may be provided either by business or by the government. Many of the largest and strongest corporations in the United States have established private pension plans during the past generation. The establishment of private pension plans was prompted by the desire to reward long and faithful service and at the same time to enlist loyalty to the organization by giving employees some "stake" in the enterprise. The amount of the pension may vary with the length of service and the wages received. Most frequently it is a percentage of the compensation received during the final years of employment. The disadvantages in private pension plans are that they are not universal, that some of them were not financially sound and in times of economic stress have had to be discontinued, and that most of them contain no real guarantee of permanence and certainty that the pensions will be paid.

Alongside of private pension plans, old age pensions provided by the state have gradually grown up. Prior to 1935 some of the states had made special provision for certain employees such as teachers and civil servants. Municipalities had provided pensions for policemen and firemen. The United States Government had set up its Federal Employees' Retirement

system in 1920 for all employees under the classified civil service. Employees, however, must contribute to the pension fund.

The foundations for a much more comprehensive system of old age assistance in the form of both pensions and insurance were laid by Congress when the Social Security Act of 1935 was passed. As far as pensions are concerned, the act provided for emergency federal grants to states to assist them in caring for needy persons over sixty-five years of age or for those who attained this age before the regular contributory old age insurance plan became effective. Under the Act as amended in 1948 the federal government now pays 75 per cent of the first \$20 of the pension, and 50 per cent of the balance of the pension, provided the combined federal-state total does not exceed \$50 per month for each pensioner. The maximum payment of the federal government, therefore, is \$30 per month. The states may pay more if they wish. All the states are participating in this old age pension program.

More important in the plan than the temporary free pensions are annuity payments provided in the "Federal Old Age and Survivors' Insurance Benefits" section of the amended Social Security Act. The most comprehensive of these amendments was that passed in 1950. It increased coverage of workers from thirty-five to forty-five million persons, including for the first time about five million self-employed persons, one million household servants, and 750,000 farm workers.

The old age annuities are in part at least based upon insurance principles. A so-called "income tax" on employees and a "pay-roll" tax on employers provide the funds out of which the annuities are paid. Interest on currently unused balances at present provides a substantial yearly amount of income. For both employees and employers the rates started at 1 per cent in 1937, the first year in which the system was in operation. Under the original act they were to be advanced $\frac{1}{2}$ of 1 per cent at the close of each three year interval until they reached a maximum of 3 per cent in 1949. By successive amendments to the act, however, the 1 per cent rate remained in effect through 1949. Beginning with 1950 it was advanced to $1\frac{1}{2}$ per cent. The Amendment of 1950 provides an advance of taxes on both employees' pay and the employers' payrolls to 2 per cent effective in 1954. The rates are to rise by stages, unless Congress further amends the act, until they reach $3\frac{1}{4}$ per cent in 1970. The rates are applicable only to the first \$3,600 of income. Old age annuities thus are payable out of a fund created through the joint contributions of employers and employees. The tax rate for self-employed persons is $1\frac{1}{2}$ times the rate for an employee.

The payments of old age annuities began in 1940. (The date was advanced from 1942 under a 1939 amendment to the act.) Monthly payments are now being made to workers who qualify under the act and

retire at the age of sixty-five. No payments are due the insured worker until the retirement age of sixty-five has been reached. Annuity payments, moreover, are made not only to insured workers but to wives and children of retired workers, and to widows, orphans, and dependent parents of deceased workers. On the assumption that the family is our social unit, benefits are based on the needs of the family rather than merely on those of the individual. The amount of the benefit payment now ranges from a minimum of \$20 for an individual per month to a maximum family benefit of \$150 per month. The total family benefit payment, however, cannot be greater than 80 per cent of the average monthly wage.

The old age annuity payable to any retired worker is calculated on the basis of his average monthly earnings. Under the act as it now stands (1950) the retirement allowance is 50 per cent of the first \$100 of the average monthly wage received plus 15 per cent of the next \$200 or part thereof. If we assume that an insured worker, sixty-five years old, retires with an average monthly wage of \$200, his annuity would be computed as follows:

(1) 50% of \$100	\$50.00
(2) 15% of \$100	15.00
	<hr/>
	\$65.00
(3) 12 x \$65	\$780.00

He would be entitled to a monthly payment of \$65 or \$780 per year for the rest of his life.¹⁶

The wife of an insured retired worker is entitled to a supplementary benefit payment of 50 per cent of her husband's annuity when she, too, attains the age of sixty-five. In the preceding illustration the supplementary monthly income would amount to \$32.50. This makes a total of \$97.50 for husband and wife, who are retired and both sixty-five or more years of age. If at the time of the worker's retirement there are dependent children under eighteen years, a similar supplementary benefit payment of 50 per cent is allowable for each such dependent child. The total payable to any family, however, may not exceed 80 per cent of the average monthly wage of the retired worker.

When the insured worker dies, either before or after retirement, his widow is entitled to "survivor benefits" that depend upon her age and the number of her dependent children. If she is under sixty-five at the time of her husband's death and has dependent children, she is entitled to a "survivor benefit" for herself equal to 75 per cent of the benefit that would have been due on her husband's wage record, plus a benefit of 75 per cent

¹⁶ If after retirement, and between the ages of sixty-five and seventy-five, a person still earns more than an average of \$50 per month, he is not entitled to receive his old age retirement allowance. After the age of seventy-five he may earn what he can without placing the payment of his old age allowance in jeopardy.

of such amount for the first dependent child. Further provisions are made for additional dependent children, possible remarriage of the widow, or the establishment of a wage record of her own that entitled her to a larger benefit.

If the insured worker leaves neither wife nor dependent children, but is survived by dependent parents over sixty-five years of age, each parent is entitled to receive for life 75 per cent of the deceased worker's monthly benefit. To qualify for such full payments, parents must not be entitled to receive any other insurance benefits.

By January, 1949, more than 78,900,000 old age insurance accounts had been established on the books of the Social Security Board. In May, 1950, 1,827,200 persons were drawing old age or survivor's benefits amounting to about \$42,371,000 for the month.

There is no doubt that the Social Security Act is giving aging workers some relief from the financial worries of old age. Young workers coming under the system, and remaining through most of life in the lower wage scales, can look forward to an annuity which will be a substantial percentage of their monthly wages. The social need for such a program of old age annuities is widely proclaimed and generally admitted. Its effectiveness in achieving a greater measure of security is steadily increasing. As the system stands today it is the broadest in scope and most liberal in terms ever undertaken by any government.

The system of old age pensions or insurance, which the United States Government has recently undertaken in a comprehensive way, has been in process of development in various European countries for more than half a century. Germany and Great Britain are notable examples. The German system of invalidism and old age insurance prior to the first World War covered most of the country's wage-earners. Employees and employers regularly contributed equal amounts, and the government added a subsidy. The British system began in 1908 as a straight non-contributory pension to those over seventy years of age and qualified to receive it; later (1925) the system was modified to apply to persons sixty-five years of age and contributions from both employers and employees were provided. In one form or another, both in the United States and in Europe, old age and other forms of social insurance have come to stay as parts of the industrial system.

PROBLEMS

A

Comment briefly on the following statements, explaining why they are *true*, *false*, or *inadequate*.

- 1 Workmen's compensation legislation deprives the employer of his "common law defenses" and thus makes it possible for an injured

- employee to sue for damages in the courts with some possibility of success.
2. The viewpoint of workmen's compensation laws with regard to the responsibility for industrial accidents is entirely different from that of the common law.
 3. Workmen's compensation legislation tends to discourage the working-out of safety programs by employers.
 4. Under most current state laws, employers are financially responsible for on-the-job accidents to their employees, regardless of which party's negligence caused the accident.
 5. The cost of workmen's compensation must ultimately be borne by consumers, which is unfair to them because they have no direct or indirect responsibility for the accidents.
 6. Because the "fear of unemployment is a powerful incentive to efficiency in production," compulsory unemployment insurance is not economically sound.
 7. Compulsory unemployment insurance is undesirable under American conditions, because the individual worker himself should provide against a rainy day.
 8. Since unemployment is usually not the fault of the employer or the employee, it would be desirable to have the cost of unemployment compensation borne entirely by the federal government.
 9. Unemployment insurance, if properly administered, will eliminate unemployment.
 10. Unemployment insurance can no more reduce unemployment than workmen's compensation legislation can reduce accidents.
 11. Widespread development of social insurance is rapidly destroying the usefulness of privately owned insurance companies.

B

1. Social security in the United States embraces four general programs: workmen's compensation, unemployment compensation, old age and survivor's insurance, and old age pensions. For *each* program:
 - a. Indicate whether it is a state, federal, or state-federal venture.
 - b. Indicate whether the benefit payments are financed chiefly by the employer, the employee, the state government, the federal government, or the state and federal governments.
2. In a certain factory a freight elevator guard was left insecurely closed. An employee fell down the elevator shaft, sustaining internal injuries.
 - a. Explain the liability of the employer under the common law.
 - b. How could the employer seek to defeat the suit brought by the injured workman?
 - c. What facts would the injured workman have to establish under the common law in order to recover damages?
 - d. Show how such a case would be settled under a statutory workingmen's compensation act.

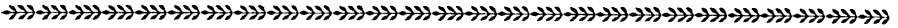
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CHAPTER XXXII

The Population Factor in Production and Consumption



THE FAMILIAR lines of Oliver Goldsmith's "Deserted Village,"

Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay

suggest a proper warning concerning overemphasis upon wealth production and accumulation at the expense of the development of human personality. Wealth production and accumulation are, of course, essential to the gratification of the wants of men, but it is the character of men's wants that reveals the nature of their civilization. Wealth is produced both for man and by man. The labor of the population of a country, manual, mental, and managerial, largely determines the character and efficiency of its wealth production. Changes in both the quality and quantity of the population profoundly affect the economic life of every people.

QUALITATIVE POPULATION PROBLEMS

The qualitative aspects of population problems have not commanded the same attention from economists as quantitative changes in population, which have been seriously studied for a century and a half. Biologists, sociologists, and other specialists are much concerned with them. If by the quality of a people is meant their capacity to do and to enjoy, it is obvious that the quality of the population has much to do with economic life and progress. Quality in peoples as in individuals is both inborn and acquired; heredity and environment always interact in creating qualitative differences. Knowledge and the power to do are passed on through the cultural environment, but the capacity to acquire and to use is largely hereditary. How much of these qualitative differences is attributable to heredity and how much to environment it is impossible to say because the factors involved are not susceptible of precise measurement.

One qualitative population problem of much concern is the so-called differential birth-rate. It is well known that the fertility of certain groups in the population is much higher than that of others. In general, groups

at or near the bottom of the economic scale are more prolific than the middle and upper groups. If the differential mortality is not correspondingly heavy, it is apparent that the greatest expansion in numbers is at the bottom of the economic scale and that the middle and upper groups will not long maintain their respective ratios in the total population. Whether the fact of this differential birth-rate is of any social significance depends upon what one's assumptions are concerning the hereditary quality of the various economic and social groups. If the middle and upper groups owe their positions largely to the superior opportunities which they have had, and if there is as much native ability, which has merely been denied opportunity, at the bottom of the economic scale as at the top, then the differential birth-rate is of no particular importance. But if these assumptions are not well founded, then it is of tragic significance. To describe the situation of a differential birth-rate in which the better and more successful elements of the population are failing to hold their own. E. A. Ross coined the suggestive term "race suicide."¹

The subject of "eugenics" is concerned with and the eugenics movement is directed toward the relative increase of the superior hereditary strains and the relative decrease of the unfit.² The positive program of eugenics is befogged with uncertainties as to the identity of the psychophysically most fit and beset with all the vagaries of choice in the selection of matrimonial partners. On the other hand, to the extent that the eugenics movement aims to preclude through segregation or sterilization the propagation of the mentally and physically defective, particularly in cases where such defects are clearly hereditary, it rests on surer grounds and its program is more practical. Society can neither afford the progressive dilution of its own blood nor the steadily mounting economic burden of caring for rapidly multiplying defective family strains.

QUANTITATIVE POPULATION PROBLEMS

Important as are the qualitative aspects of population problems, it is the quantitative aspects that have chiefly arrested attention. The size of the population seeking to make a living within a given geographic area is a fundamental factor in determining the economic life of the people. New and undeveloped countries invite larger populations for the proper development and utilization of their resources; the colonies established on the American continent are a familiar example. In older and more thickly

¹ Address before the American Academy of Political and Social Science, Philadelphia, April 12, 1901, on "The Causes of Race Superiority." Reprinted in *Foundations of Sociology* (New York, 1905), p. 383. Originally the term was literally applied to the differential birth-rate of races rather than of social groups within a population.

² The term "eugenics" (from the Greek meaning "well-born") was first used by Sir Francis Galton in 1883.

populated lands there may be actual pressure of population upon the means of subsistence, unless an intensive economic life has been developed which finds an outlet in world markets. Parts of the Orient have long suffered from such population pressure. Belgium, on the other hand, with the greatest density of population per square mile of any country in the world, has compensated for this fact by the intensive industrialization of her economic life.³ Population growth has always been and is today one of the most dynamic forces in the economic, social, and political life of any people. Its international implications are well known, Italy and Japan furnishing contemporary illustrations.

From earliest times and well into the modern industrial era large populations were associated in the thinking of people with economic and political strength. As long as man's power over the forces and materials of nature kept growing more rapidly than the population, so as to give assurance of abundant and regular food supplies and other means of living, this was largely true. When opportunities are plentiful, growing populations are a help rather than a hindrance in the development of a rich and diversified economic life. A large population under such conditions may mean greater productivity and general prosperity.

The industrialization of economic life beginning in England about the middle of the eighteenth century and gradually spreading through most of the Western World brought new population problems. The substitution of power-driven machinery for much hand labor led to considerable unemployment during the early part of the industrial period. Ultimately, increased production with lower costs per unit of product resulted in an increased demand and the reabsorption in one industry or another of most of the available labor. But the transitional difficulties were immense. What is more, it soon appeared that the cheaper labor of women and children could be used in the factories to operate many of the new machines. Children, even very young children, were able to work, and at first there were no social prohibitions against employing them. Wages fell. Poverty was extreme. It took the combined efforts of parents and children to provide even a low scale of family living. Since children were an economic asset rather than a liability, population grew. The misery of the working classes, the relationship of population to wealth production, attracted the attention of scholars and reformers.

The Malthusian theory of population. Chief among these was Thomas Robert Malthus, who in 1798 published the first edition of his celebrated *Essay on the Principle of Population*. In it he announced a doctrine and drew conclusions which have been the storm-center of discussions on

³ The area of Belgium is 11,775 square miles; the population in 1947 was 8,512,195; the density of population per square mile, 723. The United States in contrast has a density of population of only 50 per square mile of land area (1950).

population ever since. The book is one of the great classics of economic literature. Charles Darwin, who developed the modern theory of evolution in his *Origin of Species* (1859), acknowledged his indebtedness to Malthus. Malthus was a clergyman and reformer whose conclusions and program of action were, however, sharply at variance with those of some of his contemporaries. He became convinced that much of the misery of people was due to an excessive growth of population, and he was the first to try to establish a theory of population with such scientific evidence as he could assemble.

The essence of the Malthusian doctrine is that population increase, like that of the lower animals, has a tendency to outrun the food supply. By way of illustration Malthus pointed out that population, if unchecked, tends to increase in a geometric ratio: 1, 2, 4, 8, 16, 32, 64, etc. He estimated that population had a tendency to double every twenty-five years. On the other hand, the best that can be hoped for as far as the food supply is concerned is that it be increased in an arithmetical ratio: 1, 2, 3, 4, 5, 6, 7, etc. The inevitable consequence of these comparative increase tendencies is pressure of population upon the means of subsistence, and the poverty and misery of human beings.

Two classes of checks prevent population from actually outrunning the food supply—the one, positive, and the other, preventive. The positive checks to population increase operate through a high death-rate. Disease, plague, pestilence, epidemics, bad housing, urban congestion, famine, and war are the most important of such positive checks. The preventive checks operate through a low birth-rate. According to Malthus the principal preventive check was “moral restraint,” by which he largely meant the postponement of marriage.⁴ He came to recognize the influence of the standard of living in raising the age at marriage. Limitation of numbers, he insisted, was essential to improvement in the economic lot of mankind.

Appraisal of the Malthusian doctrine. What may fairly be said in appraisal of the Malthusian theory of population? Most economists and sociologists accept it, though they make various modifications in it. The basic premise of the theory, that population has a *natural* tendency to increase faster than the food supply, is most widely accepted. It is the biological part of the doctrine which Charles Darwin made the basis of his great theory of evolution. If the human race actually reproduced itself in accordance with its physiologically maximum possibilities it would soon overrun the earth. Malthus contended that the food supply was the limiting factor; that there was inevitable pressure of population upon the means of subsistence with resulting low standards of living and misery for people. The only escape he offered was postponement of marriage.

The pessimistic conclusions which Malthus drew in reasoning from

⁴ The modern birth-control movement is sometimes described as Neo-Malthusian.

his major premise have not generally been substantiated by experience. Man's control over both the food supply and population increase, except in the most static and unprogressive societies, has proved very different from what Malthus supposed or could very well be expected to foresee. Agricultural technology based upon scientific research has enormously increased actual and potential food supplies, and modern means of transportation have enabled nations to draw upon the ends of the earth for their sustenance. To be sure the world's population has also greatly increased with the production of larger food supplies. It is estimated that the European population, including peoples of European extraction, has more than trebled since Malthus published his celebrated essay, and the population of the world has more than doubled. During the same period, however, the standard of living has risen rather than fallen, and the abject misery prophesied has been averted. Evidently the relation between population and resources has improved rather than grown worse.

In large parts of the world what increase in population has occurred is due more to a sharply falling death-rate than to a mounting birth-rate. The discovery of the germ theory of disease and the conquest of certain diseases through sanitation and the use of antitoxins and serums have appreciably lengthened the span of life expectancy. The most striking progress has been made in reduction of infant mortality and successful fights against many of the diseases that threaten the lives of young adults. Reducing the ravages of death among these groups naturally leads to population increase, since they are the groups that will reproduce themselves. The least progress has been made in combating the degenerative diseases of maturity and old age. So great have scientific and medical triumphs been that in many countries the death-rate has been cut in two and even reduced to one third of what it was when Malthus wrote. The most advanced nations now have death-rates under 15 per thousand of population.

New factors sharply affecting the birth-rate have developed since Malthus' day and largely prevented the predicted population pressure. Chief among these are the democratic movement beginning with the American and French Revolutions, which exalts the individual, whets ambition, and limits numbers when too many children per family prove a drag on the upward climb; the woman's movement, which is effecting the social, economic, and political emancipation of women; the rising standard and scale of living, which stimulate demand for more of the good things of life and greater leisure in which to enjoy them; the cost of having and rearing children; and Neo-Malthusianism, which emphasizes the volitional factor in the increase of family size. The result of the operation of these and other forces is that the birth-rate has been declining in most Western nations from the former 50 or more per thousand population to half that number or less.

The dire consequences of population pressure anticipated by Malthus, whatever the natural tendencies of population increase may be, have not been experienced generally because of man's growing control over both the food supply and the birth-rate. Population increase is no longer solely upon a biological plane limited by means of subsistence; psychological, sociological, and economic influences are rapidly becoming predominant. This does not mean, however, that there is no longer a quantitative population problem. It is improbable that there can be such constant improvement in the technology of production as to banish the specter of over-population. All of the arable areas of the world may be drawn upon for subsistence, but sooner or later a limit is reached and man's productive efforts must meet with diminishing results. Malthus' forebodings have not come true largely because of the amazing technological progress of the industrial period just getting under way during his lifetime.

Population pressure relieved by emigration. From earliest times to the present men have sought to escape population pressure by migrating to regions of greater opportunity. As methods of locomotion and means of transportation were developed and improved, wider and more distant territories became available. The New World was discovered. Old continents were opened up. Nations established colonies. New nations were founded. Everywhere the world's resources were developed at an accelerating pace. Trade flourished, brought prosperity, and created still larger economic opportunities. In the absence of barriers to migration men sought to improve their lot by "pulling up stakes" in the home land and beginning life over again in the new. The most extensive, prolonged, and influential movement of this sort in the history of the world was the emigration of European peoples to the Americas, Africa, parts of Asia, and Australasia. European institutions and culture were established everywhere. The United States became the destination of a mighty European exodus. After 300 years of emigration (a human stream fed by every European people) problems of immigration control began to develop. While every nation is concerned both with the emigration of its own people and the number and quality of the immigrants seeking to cross its borders, the United States has been chiefly confronted with an immigration problem rendered acute by the large numbers who sought admission during the first decades of the present century.

THE RISKS IN UNCONTROLLED IMMIGRATION: FACTORS CREATING THE IMMIGRATION PROBLEM IN THE UNITED STATES

During the past century and a half more than thirty-five million persons have been admitted to the United States as immigrants. Until a

quarter-century ago no serious attempt was made to control this flow of immigration. America was a new country, and a large population was needed for its greatest economic development. Accordingly, people who came here in the expectation of making this country their permanent home were welcome. And the country in its turn proved a powerful magnet. In the beginning it offered an abundance of land for the "land-hungry," which meant easier conditions of living. It offered the social equality of the frontier, where every man must stand on his own feet. As the country became more settled, there was still the prize of higher wages than older countries could offer, which meant higher standards of living. For most people, too, there was the lure of political liberty and religious freedom and public education. It was for such reasons that people left the old country and migrated to the new.

As long as the movement of immigrants to a new country resembles a stream that adds to the productiveness of the land, there is no problem of control. But should the movement become a tidal wave and threaten submergence and destruction, some form of control becomes inevitable. This was the situation in the United States shortly before the outbreak of the World War of 1914. The developments of this world upheaval hastened the extension of effective control over immigration by the United States Government. The demand for public control of immigration was based upon the allegation that unregulated immigration was a menace—economic, social, and political.

The economic threat of unrestricted immigration consisted largely in its tendency to reduce wages and consequently to lower the American standard of living. This became most evident with the heavy influx of immigrants after 1900, who crowding into our industries brought about an over-supply of labor in many occupations. The immigrant fresh from Southeastern Europe had a lower standard of living than prevailed here among the native-born, and consequently he was willing to work for somewhat lower wages. This low standard of living of the immigrant was a constant menace to the American level of wages and standard of living. Whenever unemployment was general this threat became a grim reality. It is not surprising, therefore, that organized labor came to look upon unrestricted immigration as a menace to the success of collective bargaining.

Unrestricted immigration, however, did not lack for zealous champions who defended it on economic grounds. Many large-scale employers were emphatic in their assertions that America needed a steady supply of cheap labor for her greatest industrial development. They were obviously interested in low labor costs as one means of marketing their goods to the best advantage of themselves as profit-seekers. But certain post-war developments and fears caused many large employers to join with organized labor

in advocating the restriction of immigration in spite of the fact that this would mean higher labor costs.

Until toward the close of the nineteenth century Americans had looked upon immigration with the utmost complacency. There had usually been work enough for all, and the newcomers, for the most part kindred in blood, customs, and traditions to the earlier settlers here, had readily adapted themselves to the life and thought of the land of their adoption. America was described as a "melting pot." It was hoped that the comingling of European strains here would ultimately produce as strong a people and as fine a civilization as the world had ever known. The prospect was pleasing.

But with the shift in the main sources of our immigrant supply this hope was rudely jolted. Most of our later immigrants did not readily acquire our language, adopt our mode of living, or adjust themselves to our institutions. For reasons peculiar to themselves, and to changed conditions here, they remained aloof. We had great faith in the Americanizing influence of our public schools, but in millions of cases the public schools had no chance to demonstrate their effectiveness with either the adult immigrants or their children. Failure to assimilate the immigrant was a menace to the social unity of the American people.

Imperfect assimilation of hordes of newcomers in a country where citizenship and voting rights could be acquired with relative ease carried a political threat as well. It was a pretty sentiment that the United States should serve as a land of refuge for the politically oppressed everywhere. Many indeed came here to find greater liberty and in turn contributed substantially to the enrichment of our life. But when great masses of citizens and voters remain alien to the language and institutions of a country, when clannishness among them persists, and when they are easily swayed by the influence of some "boss" who has befriended them, then the political danger, in a country where one man's vote counts as much as another's, is appalling.

The American people gradually came to sense these dangers to our economic well-being, our social unity, and our political democracy. The result was a series of control measures that became more rigorous as the problem of the absorption of the immigrant into our life and blood assumed larger proportions.

CONTROL OF IMMIGRATION BY EXCLUSION

The immigration control policy of the United States Government has been developed in three steps. No step once taken, however haltingly, has been abandoned. Each step has been in the direction of more complete control. All three control measures are in force today.

The first limitation upon immigration to this country came in the form of agreements and measures providing for the exclusion of certain aliens whom it was obviously impossible to assimilate, if the United States was to remain a white man's country. The Indian was here when Captain John Smith and his companions landed at Jamestown, and when the Pilgrim Fathers disembarked at Plymouth. After 300 years what Indians remained had either been absorbed or had become wards of the state. The Negro was brought here as a slave—the first shipload in 1619. Three hundred years later there were more than 10,000,000 Negroes in the American population. They presented enough of a "color" problem for one nation to solve without inviting any more. It is not surprising, therefore, that the first positive limitation upon free immigration to this country took the form of excluding the people of a race and color different from our own. This was the Chinese Exclusion Act of 1882 which was finally repealed in 1943. With Japan our government negotiated a "gentlemen's agreement" in 1907, under which in lieu of American exclusion of Japanese immigrants the government of Japan declined to issue passports to her citizens who would like to emigrate to the United States. Subsequently in 1917 our policy of exclusion was extended to cover other Asiatic areas, described by specifying degrees of latitude and longitude, and including notably India and the East India islands. The "gentlemen's agreement" with Japan was terminated by the Immigration Act of 1924 which contained an exclusion clause denying admission to the Japanese people.

The exclusion of Asiatics by these measures and agreements applies only to those who without them might want to settle in this country. Those who wish to come here for purposes of travel, education, or business are free to come and go as they please. It is fair to say that our policy of exclusion does not mean to imply any invidious distinction between Occidental and Oriental peoples, or between the white race on the one hand and the yellow and brown races on the other. There is no question involved of the superiority or inferiority of cultures. The policy simply recognizes that there is so great a difference between these peoples as to render their living together impracticable and their assimilation impossible. Asiatic governments would be entirely justified in adopting a similar policy of exclusion if there were ever any migration of Americans to the Orient.

Our policy of exclusion also covers immigrants from any country who for one reason or another are regarded as undesirable acquisitions. We do not admit criminals, paupers, the insane, or the hopelessly diseased. Anarchists and other social revolutionists are also barred.

CONTROL OF IMMIGRATION BY SELECTION

The control of immigration by a process of selection was primarily designed to improve the quality of immigration without necessarily affecting its quantity. On a small scale the exclusion of the undesirables just mentioned represented a process of selection. The first comprehensive attempt, however, to select immigrants was made in the Immigration Act of 1917. This set up not only certain physical, mental, and moral criteria of fitness but also prescribed an educational standard to be followed.

The literacy test of the Act of 1917 requires all prospective immigrants, sixteen years of age or over, to demonstrate their ability to read some language. It may be English or any other language. As a means of procuring better educated, and by implication more intelligent, immigrants, the literacy test is a practical test. It is practical because it is simple; because it is incapable of evasion, for one either can or cannot read; and because its results can be foretold before prospective immigrants ever break their home ties in their native lands. Those advocating the literacy test do not claim that it works perfectly in selecting only the most desirable immigrants, but that it is much better than no test at all.

The Congress of the United States four times passed selective immigration laws containing the literacy test. President Cleveland vetoed the bill in 1896, President Taft vetoed a similar measure in 1913, and President Wilson did likewise with the proposed measures of 1914 and 1917. In his first veto message President Wilson said:

In this bill it is proposed to turn away from tests of character and of quality and impose tests which exclude and restrict; for the new tests here embodied are not tests of quality or of character or personal fitness, but tests of opportunity. Those who come seeking opportunity are not to be admitted unless they have already had one of the chief opportunities they seek, the opportunity of education.

On the occasion of the veto of the bill of 1917 Congress, influenced by war-time conditions and prospects, passed the bill over the President's veto, and the literacy qualification has since remained part of our established immigration standards of admission.

CONTROL OF IMMIGRATION BY RESTRICTION

The last and most drastic step in controlling immigration to this country was taken when Congress in 1921 adopted the principle of quantitative restriction, limiting the number of immigrants who might enter our ports in any given year. The literacy test, designed as a qualitative selective device, incidentally tended to restrict numbers, but it set no numerical limit to those who might try to pass the examination. The Im-

migration Act of 1921, and still more so that of 1924, fixed a quota which the immigrants from any country could not exceed in any given year.

The Act of 1921 restricted the number of immigrants from any country during any year to 3 per cent of the number of foreign-born of that nationality living in the United States in the census year of 1910. But taking the foreign-born population resident in the United States in 1910 as a base, after twenty years of heavy immigration from Southeastern Europe, gave too large "quotas" to those countries whose immigrants were least easily assimilated. Accordingly Congress changed the base of calculations in the Act of 1924 which is now in force. This act temporarily provided that the number of immigrants from any country during any year should not exceed 2 per cent of the number of foreign-born of that nationality residing in the United States according to the census of 1890. The independent countries of North and South America are not included within the scope of the quota law, nor are the countries of Asia from which immigration is barred by other means. The maximum number of immigrants under the Act of 1924 that could be admitted annually from the quota area was 164,667. For the period since 1924 the number of non-quota immigrants has been almost as large as that of the quota immigrants. This is principally explained by the relatively heavy immigration from Canada, Mexico, and other parts of the Western World that lie outside the quota zone.

The Act of 1924 further specified that beginning July 1, 1927, the total annual quota of immigrants should be reduced to 150,000. To make sure that future immigration to this country should in its composition correspond to the present make-up of the American people, Congress incorporated a special provision in the act that the quota allowed any country after July 1, 1927, shall be weighted in accordance with the past contribution of that country to the American people. This is the national origins basis of immigration restriction. To select the number of foreign-born residing in the United States in any census year such as 1910 or 1890 as a basis for determining quota allotments might do great injustice to the older strains in our population. In spite of the fact that perhaps 50 per cent of our population could trace their ancestors to a particular nation, if the number of persons *born* in that country and residing in the United States in a given census year was relatively small, it is obvious that the quota allowed such nation would be correspondingly small. To base quotas upon the number of foreign-born of any nationality here in a given year, Congress recognized, was to establish a principle of restriction at possible variance with the real contributions of nations to the composition of the American people. Accordingly, after July 1, 1927, immigration from the quota area was to be restricted to 150,000 persons per year, the quota of each country to depend upon its relative contribution to the

American population as determined by the census of 1920. If a study of immigration and emigration figures from the earliest records to 1920, together with an analysis of the rates of population increase as revealed by successive decennial censuses, showed that Great Britain and North Ireland, for example, had contributed 43.8 per cent of the American population, their quota apportionment for any year would be 43.8 per cent of 150,000 or 65,721. The national origins basis of quota determination classifies the elements in our population according to countries of birth or extraction. After a number of postponements in the effective date of this method of quota apportionment, it was finally put into effect on July 1, 1929, and is the present method.

The depression of the thirties, which affected the United States perhaps more deeply than any other major country, naturally witnessed a sharp drop in immigration to this country. Indeed for the period 1931-1936 the number of voluntary emigrants and of those deported exceeded the number of alien immigrants.

The manifest purpose of the restrictive measures that have been adopted is both quantitative and selective. Smaller numbers of immigrants and those of the kind most readily assimilated are the aims of our present policy of restriction. The administration of our immigration law has been both simplified and made more humane by requiring that prospective immigrants obtain visas or passports, issued in accordance with quota allotments, from the American consuls residing in their native countries. This arrangement avoids the many cruel disappointments that arose in the earlier years of our restriction law due to rejection at the American port of entry.

There is no doubt that the adoption of our present policy of immigration restriction was at least greatly hastened by developments of the First World War period. The threatened high tide of disaffected immigrants from war-torn European nations, and the fear that those who came might contribute to the unsettlement of some of our established institutions, caused even the large-scale employers of "cheap" labor, who had been the most ardent advocates of unrestricted immigration, to favor some measure of control. Organized labor had long since favored reduction of immigration in self-defense. A large part of the general public had become imbued with the idea of "America for the Americans." With such a combination of forces working to the same end, the rearing of effective immigration barriers was greatly accelerated.

CONSEQUENCES OF IMMIGRATION CONTROL

More than a quarter century has now passed since the abandonment of the American open-door policy of immigration. What results are evident

in consequence of the inauguration of the new policies of selection and restriction? With the reduction in our labor supply the "mechanization of industry" was greatly stimulated. Wherever possible, labor-saving equipment was introduced to offset possible labor shortage. This proved especially necessary in the industries that long drew heavily upon immigrant labor, notably construction, mining, and some kinds of manufacturing. Immigration restriction also effected some shifting of workers from industry to industry. Such increased mobility of labor was bound gradually to bring about more uniform wages in different industries. Finally, organized labor gained by the new policy of restriction. The labor-union movement in this country had failed to organize the unskilled. One basic reason for this was the ceaseless crowding of new immigrants into the ranks of labor. The skilled American workman usually felt that he had very little in common with the unskilled immigrant. The latter's inability to understand or to speak English made his induction into the labor movement difficult. But with restriction in immigration this heterogeneity among our workmen is disappearing and is making more effective organization possible. As far as the general public is concerned the effect of restriction seems wholesome. It is giving the American people a chance to become more unified through the processes of assimilation, which are slow at best. If future increases in number can be more largely through the natural increase of the people who are here, rather than through accretion from without, it will greatly simplify our economic, social, and political problems.

THE OPTIMUM POPULATION IN PRODUCTION AND CONSUMPTION

For any given economic area and prevailing technology of production there is an optimum population which will secure the highest per capita productive results. Malthus assumed such limited areas and a given technique of production. A country may be under-populated as well as over-populated from the standpoint of the most effective production. The territory that is now the United States was under-populated in our colonial days. It is reasonable to conclude that parts of the Orient are at present over-populated. Per capita production is low, though production per unit of land is high. When more people are needed to develop the resources of a country, to secure the advantages of specialization in production and of large-scale industry, to provide and support the many arrangements and institutions which make for a higher cultural life, it is safe to conclude that the optimum population has not yet been reached. But when with growth in numbers life becomes harder rather than easier, worse rather than better, it is equally safe to conclude that for the given

conditions there is too great density of population. Economically, the most effective population is reached when the per capita production of goods stands highest. This makes possible, too, the highest levels of consumption and highest standards of living. How widely diffused these benefits are depends upon the social policies of each people and their government.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

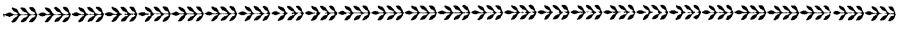
1. The Malthusian theory of population is a statement of the natural growth tendencies of the population and its food supply.
2. The development of factors which Malthus was unable to anticipate has altered the strict applicability of his theory.
3. The strict Malthusian theory applies more to peoples employing primitive methods of agricultural production than to those producing with modern techniques.
4. An increase in a population apart from an increase in its food supply results in lower standards of living in the short run and a lower birth-rate in the long run.
5. The more Americans the better, since every mouth that comes into the country brings two hands with which to feed it.
6. A sudden and sharp increase in the number of immigrants coming to the United States could be expected to depress the general level of industrial wages in this country.
7. The natural origins basis of immigration control, which provides for quantitative restrictions, has supplanted all other forms of control over immigration into the United States.
8. Denial of admission to this country of those who would become direct public wards has been in the past and is now the principal purpose of immigration restriction.
9. If all immigrants were of good quality, there would be no more valid reason for restricting immigration into this country at the present time than there was in 1850.
10. From an economic point of view, the most effective proportion of population to resources is reached when per capita production is low, and when production per unit of land is high.
11. A decrease in disposable real income over a period of time would probably result in either a decline in population or a lowering of standards of living.
12. A prolonged period characterized by a decline in the rate of growth of population would tend to retard economic progress.

SUGGESTIONS FOR FURTHER READING

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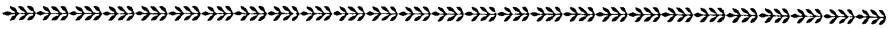
PART VI



Financing Government

CHAPTER XXXIII

Public Expenditures



AMERICAN NATIONAL ECONOMY, BOTH PRIVATE AND PUBLIC

THE PRECEDING PARTS of this book have dealt with the processes by which men, living in a world of scarcity, obtain the goods with which to gratify their wants. Production is the process of creating these want-satisfying goods. In the process of exchange we are concerned with all the means that have been invented to facilitate the transfer of goods from productive specialists to final consumers. Specialization in production and the resulting need of exchanging commodities and services occasion the process of price determination. And together these processes make consumption possible, the ultimate gratification of human wants. In the description of this flow of goods from producers to consumers, the assumption has been made that for the most part men gratify their wants through individual effort or private coöperation. But increasingly in the highly complex economic life of today men seek to gratify some of their wants through the public coöperative agency represented by government. There is both a private and a public economy. The foregoing discussion of production, exchange, valuation, distribution, and consumption has furnished the outlines of our private economy. The discussion that follows will deal more particularly with our public economy. Part VI of this treatise deals with the income and expenditures of government, and Part VII with the relation of government to a nation's economic life under various possible economic systems.

A public economy, no less than a private economy, is concerned with problems of income and expenditure. That part of general economics which is concerned with the revenues and expenditures of government is sometimes known as public economics, but more commonly as public finance. Part of the income of its citizens and residents the government takes for the gratification of some of the wants they have in common, such as safeguarding person and property. What are the sources of public revenue? What are the principal forms of taxation? For what main purposes are the public funds expended? How does it happen that public expenditures are often in excess of public revenues, with a resulting deficit

FEDERAL AND ESTIMATED STATE AND LOCAL
GENERAL-GOVERNMENT EXPENDITURES, 1941
(In thousands of dollars)

Function	Total		Federal	State	Local
	Amount	Per Cent			
Total	\$25,796,790	99.96	\$13,829,004	\$5,184,004	\$6,783,732
General government	1,229,504	4.76	438,590	189,704	601,210
National defense	6,685,427	25.92	6,685,427	—	—
Police and other protection	767,224	2.97	46,476	140,110	580,638
Agriculture and natural resources	1,471,515	5.70	1,287,676	113,999	69,840
Public works:					
Highways	2,221,792	8.61	205,005	1,189,821	826,966
Sanitation	302,823	1.17	11,549	—	291,274
Waterways and other	326,078	1.26	326,078	—	—
Health and hospitals	676,692	2.62	68,755	323,419	284,518
Correction	169,175	0.66	17,827	85,720	65,628
Welfare (including social security)	5,778,472	22.40	3,101,840	1,918,766	757,866
Schools and libraries	3,469,430	13.45	169,043	1,014,012	2,286,375
Recreation	207,944	0.80	22,825	14,616	170,503
Contributions to credit corporations and public service enterprises	295,614	1.14	191,314	3,100	101,200
Interest	1,703,837	6.60	1,110,205	122,259	471,373
Miscellaneous	491,213	1.90	146,394	68,478	276,341
Per cent of total expenditure	100.0		53.6	20.1	26.3

Based on Department of Commerce, Bureau of the Census, *Financing Federal, State, and Local Governments, 1941*, Special Study No. 20, September, 1942, p. 52.

that necessitates the flotation of loans and the accumulation of public debts? An answer to these questions will be sought in the following four chapters.

DISTRIBUTION OF PUBLIC EXPENDITURES AMONG FEDERAL, STATE, AND LOCAL GOVERNMENTS

Every branch of government spends money. Because government in the United States is less centralized than in most other countries, a true picture of the expenditures of government must include the expenditures not only of the federal, but also of the state and local governments. In 1941, the last year before heavy and direct war expenditures distorted the fiscal picture, the federal government made 53.6 per cent of the expenditures of public funds, the state governments 20.1 per cent, and local units of government 26.3 per cent. The preceding table furnishes

FEDERAL AND ESTIMATED STATE AND MUNICIPAL (397 CITIES)
EXPENDITURES, INCLUDING CAPITAL OUTLAYS, 1948
(In thousands of dollars)

Function	Total		Federal	State	397 Cities
	Amount	Per Cent			
Total	\$47,294,388	100.75	\$33,781,300	\$10,155,028	\$3,078,060
General government	2,294,480	4.88	1,808,412	257,161	228,907
National defense	10,923,657	23.23	10,923,657	—	—
Police and other protec- tion	964,716	2.05	83,479	199,790	681,447
Agriculture and natural resources	1,489,824	3.16	1,175,274	314,550	—
Public works:					
Highways	2,564,865	5.45	—	1,989,023	219,663
Sanitation	232,038	0.49	356,179	—	232,038
Waterways and other . .	613,265	1.30	606,048	7,217	—
Health and hospitals	1,003,422	2.13	146,618	598,245	258,559
Correction	157,541	0.33	(a)	129,886	27,655
Welfare	4,826,529	10.26	1,789,721	2,716,140	320,668
Schools and libraries	2,884,053	6.13	58,729	2,146,294	679,137
Recreations (museums and parks)	168,351	0.35	20,189	19,025	129,137
Contribution to credit cor- porations and public- service enterprises	259,531	0.55	(b)	147,036	112,495 (c)
Interest	5,371,120	11.42	5,187,850	71,359	111,911
Veterans' services and benefits	7,268,214	15.45	6,567,338	700,876	—
International affairs and finance	4,781,712	10.16	4,781,712	—	—
Atomic energy and general research	488,257	1.03	488,257	—	—
Adjustment to daily treas- ury statement (—)	—388,010		—300,010	—	—
Miscellaneous total	1,120,823	2.38	185,847	858,426	76,550
Finance, commerce and industry			88,368	—	—
Labor			97,479	65,893	—
Per cent of total expendi- ture	100.0		71.9	21.6	6.5

(a) Included under police

(b) Included under other functions

(c) Includes only net contributions from city governments to city-operated enterprises.

Tax Institute, Inc., *Tax Policy*, Vol. 16, No. 9, September, 1949, p. 4. For data on cities, United States Department of Commerce, Bureau of the Census, *Compendium of City Government Finances in 1948* (Washington, D. C., 1950), pp. 8, 12.

some of the details, including a classification of the principal functions for which the expenditures were made. Prior to the extraordinary outlays incurred by the federal government in fighting the great depression of the thirties, the expenses of local governments outranked all others, except in war years. They usually accounted for more than 50 per cent of the total. War and the great depression have shifted the allocation of fiscal burdens.

The year 1941 was not unusually difficult from an economic point of view. Twelve years had passed since the beginning of the depression. The country had had ample time in which to recover. Moreover, the outbreak of war in Europe in 1939 with its extraordinary demand upon the economy of the United States, and the preparedness program of this country itself, brought about a marked increase in employment and income. But the expenditures of the federal government in 1941 continued to outrun its revenues, as they had every year since 1931, and still do. Total government expenditures in 1941 amounted to \$25,797,740,000 and total revenues to \$18,641,000,000. Only the state governments had revenues in excess of expenditures, and this was at least partly attributable to the fact that the federal government financed certain functions which would otherwise have been the exclusive tax burden of the states.

What has happened to governmental expenditures at all levels, largely as a result of the Second World War, is strikingly shown by the table (page 749) on "Federal and Estimated State and Municipal (397 cities) Expenditures, Including Capital Outlays, in 1948."

FUNCTIONAL CLASSIFICATION OF PUBLIC EXPENDITURES

Public expenditures may be classified in various ways. Doubtless the most informative of these from the standpoint of the ordinary citizen is the functional classification. This aims to classify public expenditures according to the activities of government, or the types of service which it renders. Providing for the national defense, safeguarding person and property, supporting public education, promoting public health and welfare, and maintaining highways and streets, stand high on the list of functional activities, but there are many others.

Providing for the national defense. Chief among the functions of the state from historic antiquity to the present day has been provision for the national defense. Protection against the aggression of foreign foes has always been a condition of survival. When there was real danger from without, all the resources of the threatened state had to be mobilized, and that always meant relatively large expenditures. In the United States, as in other states, it is the national government which almost exclusively assumes the burdens of national defense.

The previous tables on governmental expenditures show that 25.9 per cent of all governmental expenditures were made on account of national defense in 1941, and 23.2 per cent in 1948. What war does to the expenditures of government the following table of the expenditures, for selected years, of the War and Navy Departments of the United States strikingly shows. The effects of the Civil War (1861-1865), the Spanish-American War (1898), the First World War (the United States entering in 1917), and the Second World War (the United States entering in 1941) are unmistakably evident.

EXPENDITURES OF THE UNITED STATES WAR AND NAVY DEPARTMENTS,
SELECTED YEARS
(In thousands of dollars)

<i>Yearly Average or Year Ended June 30</i>	<i>War Department</i>	<i>Navy Department</i>
1851-1860	\$ 15,784	\$ 11,997
1861-1865	547,753	65,330
1866-1870	127,816	28,383
1891-1895	50,326	29,185
1896-1900	111,278	48,086
1916	183,176	153,854
1917	377,941	239,633
1918	4,869,955	1,278,840
1919	9,009,076	2,002,311
1920	1,621,953	736,021
1940	907,160	891,485
1941	3,938,943	2,313,058
1942	14,325,508	8,579,589
1943	42,525,563	20,888,349
1944	49,438,330	26,537,634
1945	50,490,102	30,047,152
1946	27,986,769	15,160,754
1947	9,043,196	5,575,240
1948	6,825,059	4,259,189

Statistical Abstract of the United States, 1949, p. 328. Some expenditures of these Departments were for civilian purposes, such as those for rivers and harbors. On the other hand, payments made to the veterans of the First World War are not included, although it would be quite proper to include them in any national defense accounting.

National defense involves a steady and growing drain on the national treasury. There are not only the costs of actual war; there are also the costs of constant preparedness for war; and there are the so-called "aftermath of war" expenditures, represented by the costs of war-liquidation, and the long "hangover" of pensions and interest on war debts. The Second World War raised war expenditures to such fantastic levels that the prevention of future wars is now at once a financial, moral, and physical necessity.

Safeguarding person and property. "To insure domestic tranquillity" as well as "to provide for the common defense," is among the objectives of our government set forth in the preamble to the federal Constitution. To furnish security against attacks from within, as well as attacks from without, has always been one of the main obligations of a government to its citizens. Indeed, the maintenance of domestic peace, and the safeguarding of person and property against attack and other forms of anti-social aggression, are the *sine qua non* of strong government. The time was when a man had to be almost the sole protector of his person and possessions. But the bearing of arms is today restricted to those who are given the legal right to carry them. Consequently, government has had to assume the responsibility of maintaining domestic tranquillity and security.

In order effectively to discharge their obligations, the federal government and the states together support the state militia or national guard, which may be called upon to quell local disorders and which also serves as the nucleus of a reserve army. The federal government maintains marshals under the Department of Justice who operate in the territories of the United States District Courts. It also maintains the Federal Bureau of Investigation, which has the power to arrest under certain circumstances. Many states have established police systems of their own, the "mounted police" whom every motorist knows and has learned to respect. Usually, however, it is the local units of government which provide the bulk of the police protection—the patrolling policeman on his "beat" who symbolizes the law for every city youngster, the sheriffs of our counties, and the constables of our towns and villages.

In addition to these law-enforcement agencies, government has established courts of law for the trial of both criminal and civil cases, jails and prisons for convicted law-breakers, and hospitals for the criminal insane. To protect property it has created highly efficient fire departments, forest-fire fighting personnel and equipment, flood-control agencies, and many other safety devices.

All of these agencies of government for the safeguarding of person and property—and the list is not exhaustive—involve heavy expenditures. But when the functions are efficiently performed it is much cheaper to provide them through public rather than through private effort. While providing for the common defense is almost wholly the financial concern of the federal government, the protection of person and property is predominantly the business of the state and local governments. The tables on general-government expenditures on pages 748 and 749 show that the expenditures for police, other protection, and correction, absorbed 3.6 per cent of the total expenditures in 1941 and 2.38 per cent in 1948. This is not a true picture, however, because some of the expenditures, such as

those for the courts, are included under other functions, notably "general control."

Supporting public education. Public education represents by far the heaviest expenditure of local governments in the United States, and it is they who provide the main support. But basic and important as education is, public expenditures for schools and libraries in 1941 represented only 13.5 per cent of all government expenditures. Since most of the expenditures for public education are at the local level of government, and because the table for 1948 as far as local government is concerned is based on the reports of only 397 cities, no comparison with 1941 is possible. But over the years the trend in the absolute amounts spent for education has been upward. Two principal causes have been responsible for this upward trend: the growth in population, now over 150,000,000 persons, which has meant more children to educate, and new and additional services demanded from the schools.

During the past century not only has the number of children to be educated grown, but the school year has been lengthened, and children have remained in school more years. In recent decades the growth in enrolment has been particularly rapid at the high-school, collegiate and university levels, and education at these levels involves the highest per capita cost.

To larger numbers have been added larger responsibilities. Education for the masses is no longer confined to "readin', 'ritin', and 'rithmetic." To the tool subjects the fields of liberal, vocational, and professional education have been added. Adult education opportunities have been developed. Responsibilities for physical education have been assumed. Health examinations and health supervision by physicians and nurses have been instituted. All of these activities of the schools are fundamental and indispensable. Naturally, the schools cost much more money than they did when less was expected from them. But even so, these services, when competently managed and performed, can be more economically rendered through schools than they could possibly be supplied through private efforts and agencies.

Expenditures for public education are essential to the cultural and economic advancement of every people. They are indispensable to a people living under a democratic form of government, for the success of political democracy rests upon the intelligence and education of the people. So it can reasonably be expected that expenditures for this functional activity of government will increase rather than decline. The public interest demands more education than most people would either be able or willing to pay for themselves. We have traveled a long road from the time (1671) that Governor Berkeley, speaking of Colonial Virginia, could say: "I thank God, there are no free schools nor printing, and I hope we shall not have

these hundred years; for learning has brought disobedience, and heresy, and sects into this world, and printing has divulged them, and libels against the best government. God keep us from both!"¹

Promoting public health and welfare. Promotion of the health and welfare of the public is a functional activity of government that has grown in importance as society has become more complex. Urban congestion, the millions that "jam" our transportation systems every day, the thousands that assemble for work in industrial plants and commercial houses, the crowds that gather daily for one reason or another, all make the protection of health and the control of disease more imperative than they were when people worked and lived under simpler arrangements. Examination of the table of governmental expenditures for 1941 (cf. p. 748) shows that 3.8 per cent of all expenditures were made for health, hospitals, and sanitation, 22.4 per cent for activities classified as "welfare," and 0.8 per cent for recreation—27.0 per cent of the total expenditures of all branches of government. Data for 1948 are not strictly comparable for the reason mentioned on the preceding page.

It was the local units of government that first undertook to protect the public health, but their efforts had to be supplemented by the state and federal governments because of the complexity and magnitude of the problems involved. Certain problems of public health were pressing, and the local governments most immediately concerned were called upon to solve them. Water supplies had to be pure, sewage and garbage had to be disposed of, and communicable diseases had to be quarantined. Later, the necessary laws were passed by the state or federal governments, and the required administrative agencies created by them, to control and if possible prevent communicable diseases, to regulate and inspect meat and milk supplies, to provide for the manufacture of pure drugs, and to license the practitioners of certain professions. In addition, public health nursing was provided, laboratories of hygiene established, public health education aided, and bureaus of vital statistics set up.

In the field of recreation, the federal government set aside great reservations and created natural parks. Most of the states also established parks. Cities developed parks, playgrounds, and recreation centers. The underlying theory in all these public expenditures for health, sanitation, and recreation is that good health is essential to the public welfare, and that loss of it is apt to lead to dependency and great social loss and costs.

Expenditures to promote the public welfare may cover a very wide range. The term is here used to include, as usual, expenditures for society's dependents and defectives, whether through institutional care or direct relief. The latter may take the form of money assistance (usually as a pen-

¹ William Waller Henning, *Laws and Statutes of Virginia* (Richmond: 1819-1823), II, p. 517.

sion) or of work relief, the work being provided by the government and adjusted to the capacities and needs of the recipients. The Civil Works Administration (C.W.A.) and the Works Progress Administration (W.P.A.) of the great depression period of the thirties are notable examples of work relief agencies.

The depression of the thirties, perhaps more than anything else that has happened in our history, stimulated expenditures to promote the public welfare. It was widely realized that unemployment and much destitution were due to conditions quite beyond the control of the individual, and that society had a major responsibility in the matter. The Social Security Act of 1935² was an outgrowth of this situation. It provided pensions for the needy, including the blind and certain of the aged, compensation for the unemployed, and old-age insurance payments to begin at the age of sixty-five.

Maintaining highways and streets.³ A functional activity of government at every level, involving large and constant appropriations, is the building and maintenance of highways and streets. Highways and other avenues of transportation have always been a limiting factor in the movement both of troops and of commerce. Consequently, they have been the concern of government from earliest times. In the United States, the construction of modern highways did not really get under way until about the beginning of the present century. Dirt roads constituted most of the country's highway mileage, although a small percentage did consist of hard-surfaced roads. In a small but highly important way it was the bicycle, and in a large way it was the automobile, which pulled American vehicles out of the dirt and started them rolling on improved highways. The automobile not only created the over-powering demand for the modern hard-surfaced road but financed it as well. License fees, motor vehicle taxes, and gasoline taxes have poured hundreds of millions of dollars into public treasuries every year, and out of these funds America's network of improved roads has been built and maintained.

As long as the development of highways rested very largely on the initiative and resources of local government, no well-coördinated and sustained program of road-building was possible. But gradually, beginning with an appropriation by New Jersey in 1891, a system of state aids to local governments in the construction and maintenance of highways grew up. Still later (1916), the federal government began extending aid as well, and has never stopped since. Year in and year out in times of peace, the building and improvement of roads "tops" the construction activities of government in the United States. So important and extensive are these

² Cf. discussion of its provisions on pp. 721-726.

³ On the development and financing of modern highways, cf. H. R. Trumbower, "Roads," *Encyclopedia of the Social Sciences*, Vol. XIII (1934), pp. 403-411.

construction activities that the building of roads is looked to as an important factor in making employment more stable throughout the business cycle.

The improvement and maintenance of streets, together with their adequate illumination, is the primary concern of municipal governments. But grants-in-aid, both state and federal, are also made, since the highway systems that are aided by state and federal funds usually run through rather than around our cities.

The foregoing functional activities of government, and expenditures thereon, are representative, not exhaustive. There are also legislative bodies and executive departments to be maintained; public-service enterprises to be developed; public building construction to be financed; natural resources to be developed for use and conserved from exploitation and waste. Even this brief description of some of the more important activities of government must help to leave the impression that the financing of a modern government is a formidable task. And now that task has been dwarfed by the fiscal demands of the greatest war in history and its inescapable economic aftermath!

GROWTH OF PUBLIC EXPENDITURES AND LIMITS ON SUCH GROWTH

The most amazing fiscal phenomenon of our time is the tremendous growth of public expenditures. Part of this growth denotes progress and is highly commendable; but much of it represents a social loss and is deeply regrettable. Inefficiency on the part of some governmental agencies, and waste on the part of most at one time or another, cannot possibly account for more than a minor percentage of the total funds spent by government. Not even the natural desire of bureaucracies to spread, and the extravagant commitments that often follow, can furnish the real answer to the question of why the trend of public expenditures has been so decisively upward. Nor are the discovery and elimination of corrupt expenditures a major solution of the problem. Inefficiency, waste, extravagance, and corruption are the enemies of good government. To eliminate them calls for ceaseless vigilance and the constant improvement of the government. But again it must be said that government expenditures are on too vast a scale to be accounted for by these enemies of good government, voracious though they have often been.

It is war, preparation for war, and the economic consequences of war that have been largely responsible for the growth of the expenditures of the federal government. The government cannot escape obligations growing out of past wars. There is hope, however, that through the co-operative agency, now called the United Nations, wars can be averted. It

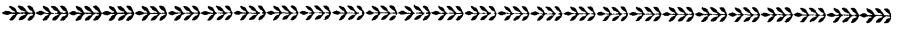
would be hard to exaggerate what could be done for the welfare of mankind if the world could now enjoy one hundred years of peace! And as far as the growing expenditures of state and local governments are concerned, it is the demand for new and additional services that is largely responsible. Men are more inclined than they were in nineteenth-century America to look to the public coöperation, which government represents, for the efficient and economical gratification of some of their wants. This means more government spending; it may also mean less private spending.

Attempts to set limits on public expenditures have failed. Great emergencies will always cause them to break down. What part of the national income (the income of all the people) shall be spent by the government for the common good, and what part shall be privately spent, is a question that time and circumstance must decide. But a government can have no more to spend than the people are able and willing to provide either out of current or future income. The provision of revenues to meet public expenditures is the theme of the immediately following chapters.

(For Suggestions for Further Reading see close of Chapter XXXVI.)

CHAPTER XXXIV

Non-Tax Revenues



TO PROVIDE THE public revenues needed to finance contemplated public expenditures has challenged the ingenuity of government. A bewildering array of taxes and of other forms of governmental income has been developed. Often, too, the quest for adequate current revenue has proved unsuccessful, and government has borrowed in the expectation of having more adequate revenue at some time in the future. While taxes are the mainstay of public revenues, there are important non-tax revenues as well. Chief among these are public prices, charged by the government in its administration of the public domain or in its capacity as entrepreneur in commercial enterprises; fees, charged for special services rendered by the government; and special assessments, charged landed-property owners for specific services rendered them.

REVENUE FROM GOVERNMENT OWNERSHIP

It is frequently assumed that the easiest and most profitable source of public revenue is furnished by the public ownership of certain enterprises, which are operated as governmental monopolies, either local or national. There is both truth and error in the statement, with a preponderance of the latter. The reason for this is that there is a variety of purposes in the socialization of industries, some of which are in conflict with the revenue principle. Accordingly it is not surprising that most governments have cause for congratulation if their business enterprises do not show a deficit. Given both efficient and honest government, there is no inherent reason why necessary public enterprises should not be operated at a profit, provided the consumer is willing to pay the necessary charges. There are conspicuously profitable enterprises of this sort, such as certain governmental monopolies of tobacco and salt. But the fact remains that as a source of surplus revenue, available for other governmental purposes, most public enterprises are a disappointment. If a particular public industry shows large profits, there is apt to develop a strong public clamor to reduce the rates or prices to the consuming public. What revenues federal, state, or local governments in the United States have

derived from government ownership have come from the public domain and from government monopolies.

Revenue from the public domain. In the days of feudalism the king owned vast landed estates, the income from which furnished a substantial part of the support of the government he maintained. With the emergence of the modern state, however, the functions of the king, where he survived at all, were radically changed. The "Crown" became symbolic of the people as a whole. Crown lands, once looked upon as the king's private estate, became the public domain. With the advent of democratic government in particular, the functions of government were greatly enlarged. Revenues from the public lands were hopelessly inadequate to maintain the new scale of government expenditures. Other sources of revenue had to be found. Chief among these was taxation, so familiar today as the principal source of public revenue. When autocratic governments sought to collect taxes, there were often public protests, such as the rallying cry of the American Colonies in the contest with Great Britain: "No taxation without representation." But as the people came into the control of government and themselves held the purse-strings, taxes were imposed by the people and for the people. Consequently there was less need for the maintenance of a great public domain as a source of revenue. If it served the public purpose better to allow public lands to pass into private hands, the land could still be made revenue-yielding by means of taxation.

In the United States our federal government at one time held title to about 1,500,000,000 acres of land, which is approximately three fourths of the area of the country. This land had been acquired by cession from the thirteen original states and by purchase. The claims of the original states rested upon grants from the British kings, which in turn rested upon discovery, settlement, and conquest. The largest and most notable of the land purchases by our government was the purchase from France in 1803 of the Louisiana territory for \$15,000,000. It is conceivable that the federal government might have retained title to all this land and merely leased it to settlers. If this had been done, and if the development of the country had progressed in much the way that it actually did, the government would now be fabulously rich. But our government chose a different policy. It preferred to endow individuals with land, to help them create wealth, and then to tax them for the support of the government.

A variety of methods was adopted in disposing of the public domain. Millions of acres were given away as rewards for military and naval service. Millions more were given to the railroads as subsidies for the development of systems of transportation. Still other millions were given to the states as aids in the development of education. For a time the government adopted a policy of selling the land. During the early part

of this sales-policy period vast tracts of land were sold to land colonization or settlement companies. After 1841 preference was given to actual settlers, who were willing to live on the land and to cultivate part of their holdings. Much land was sold for \$1.25 per acre. Beginning in 1862 with the enactment of the Homestead Law, the government definitely adopted the policy of giving the land to the landless in the expectation that their efforts would develop and ultimately enrich the country.¹

It is obvious that the United States Government has not functioned as a large landed proprietor, who was bent upon making the public domain yield all the revenue that it possibly could. Government records show that from 1785 through 1948 the total cash receipts from public lands amounted to \$617,344,507.² Against these receipts must be charged the expenses of administering our lands for purposes of sale. The gain, if any, is a mere bagatelle when the magnitude of the operations, which involved hundreds of millions of acres and extended over 150 years, is considered. It is not the fiscal aspects of our public land policy that commend it. It must be judged in the light of all the social gains and losses which transfer of the land to private owners involved. On the one side of the account we must enter the rapid settlement of the country and the development of its resources; on the other, greedy exploitation and wasteful use of the richest natural heritage ever bequeathed to any people. Taxation of private owners, rather than revenue from public ownership, now yields the principal income which the government derives from resources that once belonged to it. The enormous waste and uneconomical use of natural resources represent a dead loss that can never be offset.

For more than a hundred years the federal government pursued the same policy with reference to forest lands and mineral lands that it has followed in connection with agricultural land, but with much less reason. Our magnificent forests and untold mineral riches could have been developed much more wisely in the public interest, as far as both revenue and conservation are concerned. But instead we allowed these also to pass into private hands. During the past fifty years the need of a change in policy has become apparent. A national forest reserve was established in 1891. In 1949 the national forest reserve covered 229,178,789 acres and included all the best timberland the federal government still owned. Within these forest reserves scientific forestry is practised; trees are cut

¹ *The Report of the Commissioner of the General Land Office to the Secretary of the Interior* (1932), pp. 41, 44-45, 50, states that the United States Government has given 142,284,633 acres of the public domain to the states and to corporations for railroad purposes, 203,085,625 acres to the states for educational and related purposes, and 236,193,008 acres to settlers for homestead purposes.

² *Report of the Commissioner of the General Land Office to the Secretary of the Interior* (1932), p. 58. The exact period is from May 20, 1785, to June 30, 1932; cf. *Statistical Abstract of the United States, 1949*, p. 327 for data for the years, 1933-1948.

as they mature, and in a way so as not to interfere with the growth of others. In time such management of our forests can be made a source of substantial income to the government, either through the granting of leases that permit the cutting of timber under government direction or through direct government operation. For the present the government is more concerned with the development of our national forests and the extension of scientific forestry on private lands than it is in revenue from forestry operations.

It is estimated that the annual consumption of timber in the United States is more than four times as great as the annual increase in supply. It is easy to see that a timber famine is ahead unless heroic measures are taken to avert it. Not merely for possible future revenue but to ensure the very existence of a timber supply available for use, the government is bound to play an increasingly important part in forestry operations. It takes a long time to grow trees that are suitable for timber—thirty years at least and sometimes two or three times as long. Private enterprise is not best fitted for operations that are so long drawn out. If private timber companies had begun to practise scientific forestry before our virgin forests had shown such marked signs of depletion instead of exploiting them for the greatest possible immediate gain, the situation might have been different. As it is, probably only the government can now reasonably be expected to undertake the extensive long-time operations necessary to ensure future generations an adequate timber supply.

In the United States the rights to sub-surface deposits passed into private hands with the surface property rights. In consequence our minerals and metals, our oil and gas, have been developed and exploited by private interests. Incredible waste has resulted. To meet the pressure of intense competition, production at the lowest possible unit cost was necessary. In consequence only the richest seams of bituminous coal have been mined, but in the process at least as much coal has been permanently wasted as has been taken from the earth. In tapping the pools of oil and gas beneath the earth's surface more gas has been allowed to escape into the air than has been captured for economic use. And with the escape of the gas the natural pressure was lost that could have brought the oil to the surface more economically. Geologists have estimated that the greater part of the available oil is usually not recovered. This is directly attributable to our system of private property rights in sub-surface wealth. When oil is discovered in any region, competitive exploitation on the part of adjoining property-holders leads to the sinking of many wells, the escape of the gas, and the recovery of only a minor percentage of the oil. If the government had retained title to our mineral wealth and had leased it to corporations for development under terms that would have ensured efficient production, we should have accomplished two important things: the

conservation of our mineral resources, and the procuring of revenue greater than that now obtained by the taxation of such property. Government ownership of valuable underground deposits with leaseholds that ensure the private investor a fair return on the capital invested, when viewed in retrospect at least, would have been a fairer and wiser public policy than the policy of handing our underground resources over to private interests for quick and wasteful exploitation.

In recent years a more economical plan of private production of oil, known as the unit system, has been developed. Under this plan landowners in a given oil area surrender their individual rights to extract oil for rights to share in the total oil extracted in the area under a centralized unitary system of operation. The unit system of oil production seeks to eliminate wastes, to reduce costs, and to offer some measure of control over production.

By acts of Congress in 1909 and 1914, together with subsequent amendments, it was finally provided that the government might in its discretion convey only the surface rights of lands opened to agricultural entry and could reserve title to coal, phosphate, nitrate, potash, oil, gas, or asphaltic minerals.³ As a result vast stores of underground wealth have been reserved by the government for the people. Drastic political upheavals in Mexico resulted in 1917 in a new constitution, which vests in the nation the direct ownership of all sub-surface wealth. Because the constitution further states that with reference to such property "the ownership of the Nation is inalienable," grave doubt was cast upon the legality of previously acquired holdings, in spite of an apparently saving clause in the preamble that "no law shall be given retroactive effect to the prejudice of any person whatsoever." Subsequently, the Supreme Court of Mexico held that properties which had been legally acquired and had been actually developed should not be disturbed in their ownership rights. Other sub-surface properties reverted to the state. In spite of this decision the expropriation of developed oil properties occurred. The Mexican government is trying to make the public domain yield greater revenue, in spite of whatever alienation of land to its own citizens, or concessions to foreigners has occurred in the past, but so far has met with indifferent success.

Revenue from the monopolies of government and other public enterprises. Can the government reasonably count on substantial revenues from the ownership and operation of government monopolies and other public industries? Many of the monopolistic enterprises of government, it must be admitted at the outset, are not operated for the purpose of securing the maximum possible revenue. Occasionally the purpose of the

³ 35 U.S. *Statutes at Large* (1909), 844, and 38 U.S. *Statutes at Large* (1914), 509.

government in establishing its own monopoly in a given business field is the restriction, if not suppression, of consumption, such as the monopoly of the Swiss government in the manufacture of alcoholic beverages. More frequently the purpose of the government is to render its citizens an indispensable economic service at cost, or substantially at cost, such as the postal system of the United States. In some countries, moreover, government monopolies have been established in certain enterprises because these were regarded as of strategic military importance. This consideration accounts for the government monopoly of railways, the telephone, and the telegraph in various European countries. But if the government of a country sees fit to operate either its natural or socially created monopolies for revenue, it has both the power and the opportunity to do so. Railways in Germany, tobacco in France, and salt in Italy are familiar examples. Whether any government will either acquire the ownership or undertake the operation of a given business enterprise depends upon a variety of social considerations, of which the possibility of procuring revenue is only one.

As an easy source of revenue, governmental commercial or industrial enterprise has little to commend it. This, it must be reiterated, is not necessarily to condemn it, for other social purposes served by government ownership and operation may be more important than either a surplus or deficit of revenue. In the United States, government ownership has not made much headway either for revenue or for any other purpose. The postal system is our largest business enterprise, and this, if we count expenditures on capital account, has always been operated at a loss. The more common forms of government ownership in the United States are municipal utilities, such as water-works, electric lighting systems, and to a much smaller extent gas plants and street transportation lines. Of these by far the most important are municipal water-works systems. After allowing not only for ordinary operating expenses but also for depreciation and interest on the investment, it is doubtful that the revenues derived from most municipal water-works systems show any profit that can be used for other municipal purposes. Next to water-works, electric light and power represents the favorite form of public utility that is municipally owned. The percentage is not nearly so large, however, and the average municipal plant is small in comparison with the privately owned plant. As a source of revenue for general public purposes it is of negligible importance. Among our large cities in 1950 Cleveland, Detroit, San Francisco, Tacoma and Seattle owned and operated street railway systems (or their successors). The transit systems of New York, Chicago and Philadelphia were mixed—in part private, in part public—in ownership and operation. According to the United States Census, out of 347 cities studied in 1948,

321 owned and operated their water supply systems and 276 owned and operated other enterprises, such as electric light and power and street transportation.

Operating revenue for these undertakings amounted to \$868 million in 1948, up 6.9 per cent from the 1947 amount of \$812 million. Net contributions to these enterprises by the city governments during 1948 exceeded in total the net contributions of the enterprises to city general revenue; however the reverse is true if the large amounts involving New York's transit (subway) system are omitted. Water supply and electric systems account for most of the net contributions of enterprises to cities, totaling \$50 million in 1948.⁴

What experience we have had with municipal ownership in the United States warrants at least this general conclusion: municipally owned utilities do not yield any substantial net revenue to the public treasury. The guiding principle in their operation seems to be service to the public, even though this often means that deficits must be met by the taxpayers. Whether we could do better, as far as fiscal results are concerned, if we really tried, is a matter of conjecture.

The experience of foreign countries is not very much more reassuring as far as surplus revenues from government monopolies are concerned. It is true the German states have been able to show a fair return on the capital invested in their railways, but in most countries the government operation of the railroads, when all proper charges are made against them, represents a drain upon rather than a contribution to the public treasury. The British operation of the telegraph has shown a fairly steady deficit. As far as foreign municipal utilities are concerned, it is hard to get at the whole truth because often expenditures are charged against the capital account which should be charged against operation, inadequate allowances are made for depreciation, and the municipal utilities are not made to carry their fair share of the governmental overhead expenses incurred on their account. As matters stand, the financial results are mixed and indecisive; in some places government operation shows a surplus, in others a deficit.

In government enterprises that are more strictly fiscal monopolies the government has been more successful in securing revenue. The manufacture and sale of certain commodities in general use are monopolized by the government for the avowed purpose of getting substantial revenue. Tobacco has been a prime favorite. Austria, France, Italy, Japan, Portugal, Rumania, Spain, and Sweden have all directly, or indirectly, maintained successful tobacco monopolies. In these countries the government has the exclusive right of engaging in the tobacco business, except as it has granted concessions to private companies in return for a favor-

⁴ U.S. Department of Commerce, Bureau of the Census, *Compendium of City Government Finances in 1948*, U.S. Government Printing Office, 1950, pp. 2-3.

able price. Matches in France, camphor in Japan, and salt in Italy are other well-known illustrations of government fiscal monopolies. Profitable as some of these have apparently been, Harley L. Lutz makes the following guarded statement concerning even such state monopolies:

The absolute advantage of the fiscal monopoly as a source of revenue is not easily determined. Some part of the profit may be due to governmental favoritism, concealed by slack inter-department accounting. On the other hand, the monopolized commodities would ordinarily be singled out, in any case, for substantial taxation if produced and sold by private enterprise. Against the monopoly profit must be set also the taxes that could be levied on the property, incomes and estates of private producers. When these elements are considered, it becomes evident that the monopoly profit is not all clear advantage. Some part of it, possibly a substantial part, could be secured from the same commodities and from the capital employed in their production, if private production and sale were permitted. No approximation is possible however, as to the relative fiscal advantage of the two methods.⁵

Government projects for the development of electric light and power, such as those of the Tennessee Valley Authority and of Boulder Dam, are not yet sufficiently established to give a fair demonstration of what they can do as net revenue producers for the United States Treasury.

REVENUE FROM FEES

Much more important than the commercial earnings of government, which experience has proved inconsiderable except under monopolistic conditions, are the revenues derived from fees, special assessments, and taxes, which constitute the principal sources of governmental revenues. While fees and special assessments bulk small in comparison with taxes, they are indispensable forms of revenue and are apt to grow rather than diminish in importance.

A fee is a payment required from a person to defray in part or whole the expense of a special service rendered him by the government, but the performance of which is necessitated by the general public interest. Fees resemble public prices, which are charged for the commodities produced or the services rendered by some public monopoly, but they are not identical. In both fees and public prices there is recognition of special benefits conferred. But fees are paid for services less strikingly commercial than in the case of public prices. The primary purpose of the government in rendering the service is not volume of business but the promotion and protection of the public interest. In rendering this general service, however, the government also confers special benefits upon certain individuals. The beneficiaries of such special service are required to pay fees

⁵ *Public Finance*, 4th ed. (New York, Appleton-Century-Crofts, Inc., 1947), p. 210.

to the government for rendering it. Illustrations of fees are afforded by the passport fees charged by our federal government, court fees charged litigants in judicial procedure, and student fees charged by state universities. The regulation of passports, the administration of justice, and university education are all provided by the government for the common benefit. At the same time part of the cost of rendering the service is properly charged to the recipient of a special benefit.

A fee system has certain definite advantages which will doubtless give it a permanent place in our revenue system. In the first place there is the obvious advantage of easily obtained revenue which can be made to grow in amount as the general burden of taxation becomes heavier. The time when persons have just received a direct service from the government is a peculiarly propitious time for collecting some revenue from them. And it all helps to meet the rising cost of government. Secondly, the compulsory payment of fees has a salutary effect upon the recipient of the special service. It is a well-known fact that most people need to feel the pain of parting with something of value in order properly to appreciate the value of a service rendered them. Thirdly, the payment of fees doubtless has a restraining influence upon persons in preventing the wasteful use of certain public services. The necessity of paying court fees often has a quieting effect upon the over-wrought nerves of contentious litigants.

The collection of fees by government officials, however, has not been without its abuses. These have arisen from the practice in some places of allowing public officials to keep the fees they collected in lieu of any other compensation. This system has sometimes made possible excessively large incomes, notably in such offices as that of county sheriff. One may reasonably suspect that the scramble for certain public offices is not wholly motivated by an irrepressible zeal for public service. What is more, a fee system which allows public officials to retain the fees they collect is apt to have an overstimulating effect upon the activities of some officials. If the arrest and conviction of persons violating traffic regulations are rewarded by the collection of fines, which include fees for officers controlling traffic, local police and court officers are under strong temptation to give most attention to that administration of justice which pays. This may result in the neglect of other important kinds of law enforcement.

The obvious remedy for these abuses of the fee system has long since been adopted in most states, namely, to require that fees be paid into the public treasury and that government officials collecting them be paid fixed salaries. Such an arrangement retains the advantage of the fee system from the public point of view and at the same time avoids the evils that arise from its abuse.

Closely related to fees and usually hard to distinguish from them in

practice are license charges. Charges that are called fees in some places are known as license charges in others. The most widely known license charge in the United States today is that made for automobile licenses. If any distinction is to be drawn between fees and license charges it lies principally in this: fees are charges for services performed, such as the recording of a deed conveying title to property; license charges are made as an aid in the public control of that which is licensed. An automobile license grants permission to operate the car on the highways; failure to obtain it renders such car-operation illegal. If a license charge is just large enough to carry its share of the cost of maintaining the necessary regulatory license department, the charge is essentially a fee. If the license charge is large enough to yield a surplus over the cost of rendering the service, it resembles a tax.

REVENUE FROM SPECIAL ASSESSMENTS

Local governments, particularly municipalities in the United States, derive substantial income from a distinctive form of revenue known as the special assessment. Special assessments are compulsory charges made against landowners to help bear the cost of property improvements, which are made in the public interest but confer special benefits upon the property-owners. The familiar example in this country is street improvements, such as the installation of a sewer system, the laying of sidewalks, or the paving of streets. It has become customary to assess part of the cost of such improvements against the abutting property-owners on the ground that the improvement brings them at least an equivalent increase in value. What part of the cost of the improvement shall be assessed against the private property-owners must be determined in each case; obviously the upper limit is the total value of the improvement.

As the term "fee" and "special assessment" have been defined in the foregoing discussion, it is clear that a special assessment is only a distinctive form of fee. In both fees and special assessments the principle of special benefit conferred is paramount. In the latter a conscious effort is made to adjust the assessment to the value of the service rendered, which is not so strikingly true of fees in general. What justification there is for distinguishing between fees and special assessments lies in the distinction between the general and the special: fees are charged for a great variety of public services conferring a special benefit upon the recipient; special assessments are only made against landowners for improvements made to their property.

The special assessment is a distinctive American device for defraying the cost of local improvements. Its great value as a fiscal expedient lies in the fact that it facilitates the extensive improvements demanded in a

new and rapidly growing country. If such improvements had to wait until they could all be met out of general taxes, there would be many long fiscal delays which would preclude the most rapid development of our cities. Furthermore, it is eminently just that they who derive a special benefit from the improvement made should also pay a special charge for having it made. Special assessments therefore combine in a unique way two principles not always united in a government charge: political expediency and economic justice. Altogether special assessments have proved an invaluable source of revenue in American municipal finance.

But special assessments have sometimes been ill advised. If the government, which has the power to order the local improvements, happens to be either extravagant or corrupt, the levy of special assessments may accentuate waste and corruption and loot the pockets of the property-owners. But this is an indictment of poor government rather than a fair criticism of the special assessment itself. The evils in unwarranted special assessments can be avoided by requiring the observance of principles such as the following: securing the consent of a majority of the property-owners affected by any proposed improvement; in lieu of this, securing authorization of the improvement by a heavy majority (say three fourths) of the city council or similar body; stipulating that no special assessment shall be more than a small percentage of the value of the property against which it is levied.

REVENUE FROM TAXES

The great bulk of the revenues of government is derived from taxes rather than from public enterprise earnings, fees, or special assessments. In 1948, for example, taxes (if unemployment compensation taxes be included) constituted 77.7 per cent of the revenue of state governments and 59.9 per cent of local governments in the United States.⁶ Similarly in 1948 taxes constituted 98 per cent of the revenues of the federal government. It is obvious from these figures that the real burden of supporting the government is felt when people pay their taxes.

In contrast to public prices, fees, and special assessments, a tax may be defined as a general compulsory contribution of wealth, exacted by public authority according to some general rule, and levied without reference to the special benefits which the contributors derive from the public purposes for which the revenue is required. It is the absence of a *quid pro quo* or distinct equivalent value which most sharply distinguishes taxes from other sources of public revenue. Taxes flow into the public treasury and are spent for the common good.

Numerous forms of taxation have been devised, some good and others

⁶ *Statistical Abstract of the United States, 1949, p. 394.*

bad. When may a tax fairly be described as a good tax? Is there any real justice in taxation or is taxation merely a matter of necessity and its particular form a matter of expediency? Is there any justification for varying rates of taxation when applied to the same taxable element, such as income or property? Can some taxes be shifted and must others be borne by those upon whom they are imposed? These and other questions constitute the theme of the next chapter.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. The public land policy of the United States in the past made the public domain an important source of immediate revenue to the government.
2. Governmental industries should always supply their services to the public at a price just covering their costs.
3. The costs of operating a municipally owned water system should be provided by the city treasury out of general funds.
4. Fees are an indefensible form of public revenue, since they are not based on the ability-to-pay principle.
5. Special assessments conform to the ability-to-pay principle in raising public revenue.
6. The use of fees and special assessments by governments should be abolished, since they serve no useful purpose.
7. Greater justice in the distribution of the increasing burden of governmental expenditures could be approximated by deriving a larger proportion of public revenue from fees, public prices, and special assessments than from taxes.
8. License charges and special assessments are essentially fees.

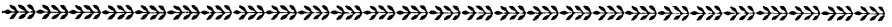
B

1. Keeping in mind the importance of attaining the maximum community satisfaction with the minimum of waste, show how you think public prices should be fixed or costs borne for each of the following:
 - a. State roads for interstate traffic
 - b. A new street in an undeveloped city area
 - c. Public parks
 - d. Postal service
 - e. Publications of governmental research bureaus
 - f. Water and gas furnished by municipally owned plants
 - g. Public instruction by state institutions
 - h. Inspection of food products by state experts
 - i. Luxuries manufactured under state monopoly
 - j. Probation of a will.

(For Suggestions for Further Reading see close of Chapter XXXVI.)

CHAPTER XXXV

Forms of Taxation



TAXATION systems often present a crazy-quilt appearance. The pattern is determined by political expediency rather than by economic justice. It has also not inaptly been said that most tax measures embody no more scientific principle than that expressed by the sophisticated tax cynic, who compared the imposition of taxes to plucking the feathers of a goose in such a way that it will squawk as little as possible. The operation is painful but necessary. No satisfactory general anesthetic has yet been discovered, though some local applications look promising. The amount of squawking heard on all sides, however, is an indication that present methods are not altogether successful. Indeed, there are those who insist that some squawking is the death-cry of the goose that lays the golden egg. Which geese of the flock shall be plucked first, and how severely, depends upon who is in power. The governments of communistic Russia and of capitalistic America may reasonably be expected to make very different decisions on this matter.

In spite of the fact that there always has been, and doubtless always will be, much arbitrariness in the imposition of taxes, much serious thought has been given to the matter of levying only good taxes and of constructing well-balanced systems of revenue. While perfection in tax matters is a visionary goal, it is well that legislative bodies imposing taxes should move in the direction of the ideal rather than away from it. Most tax systems give evidence of group contests and compromise. In his presidential address delivered at the fortieth annual meeting of the American Economic Association, Thomas S. Adams began by saying:

“In taxation,” says the cynic, “let me make the deals and I care not who makes the ideals.” . . . While taxation may not have started as a class struggle, and while the class element is modified in the United States by the operation of constitutional inhibitions, modern taxation or tax-making in its most characteristic aspect is a group contest in which powerful interests vigorously endeavor to rid themselves of present or proposed tax burdens. It is, first of all, a hard game in which he who trusts wholly to economics, reason, and justice, will in the end retire beaten and disillusioned. Class politics is of the essence of taxation.¹

¹ “Ideals and Idealism in Taxation,” *American Economic Review*, Vol. 18 (1928), p. 1.

CRITERIA OF GOOD TAXES

When may a people, in spite of such group contests, be said to have a good system of taxation? There are many different answers to this question depending upon the circumstances of time and place; but there are also certain easily recognized earmarks of good taxes that are very generally accepted. Nearly 175 years ago, Adam Smith formulated some canons of taxation which have provoked much discussion, because, unfortunately, practical tax procedure has not always been in accordance with them. Smith said that good taxes should be based upon principles of justice, certainty, convenience, and economy.² More recent writers have added other tests, among which productiveness and simplicity deserve special mention.

A good tax, all would agree, must be a just tax. But specifically when is any tax a just tax? To this question there is no unanimous answer. The reason for this is that it is extremely difficult to apply an abstract principle of equity to concrete situations. What one regards as fair may run counter to another's sense of justice. Implicit in the conception of justice, which most people entertain with reference to tax matters, is the idea that taxes shall neither be levied nor collected arbitrarily; that all who are liable to pay a given tax shall be required to pay it. But even if the tax is fairly levied and uniformly paid by all who ought to bear it, the question still remains: Are the particular form and degree of taxation themselves just? In this connection it is well to remember that the whole institution of private property rests upon the sanction of the state, and that the payment of taxes, to whatever extent deemed socially necessary, is both a logical condition and a result of the maintenance of private property rights. One may as well admit that perfect justice in taxation is unattainable; it is a mirage which all but tax visionaries recognize as such. We shall have to be satisfied with a uniformity and equality of taxes that fall short of the ideal. What practical standards of justice for distributing the burden of taxation have been devised will be shown later in this discussion.

A good tax, said Adam Smith, ought to be certain, not arbitrary. "The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person."³ If such matters are not certain, the taxpayers may be left at the mercy of the tax-collectors, who may be unenlightened and unscrupulous. Most taxes in countries having stable governments easily conform to this criterion of certainty. Taxes are as certain as death, and more certain as to time and accompanying conditions.

Convenience in the payment of taxes is an important criterion of a

² *Wealth of Nations*, Book V, Chap. II.

³ *Wealth of Nations*, Book V, Chap. II.

good system of taxation. Modern gasoline and other sales taxes are good examples of convenient taxes; they are paid at the time of purchase and in proportion to the amount of the purchase. In order that heavy taxes may be paid with the least inconvenience to the business of the tax contributor, some governments provide that taxes may be paid in instalments, such as the federal income tax in the United States.

That a good tax is a tax which can be economically administered and collected is a universally accepted maxim of taxation. Smith's statement of this maxim is: "Every tax ought to be so contrived as both to take and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state." Cheapness of collection is an excellent test of the operating efficiency of a tax-administrative body. If a considerable percentage of every dollar of a given kind of tax is absorbed by the cost of collecting it, there may well be reasonable doubt concerning the wisdom of continuing that form of taxation. Disproportionately large direct costs of collection condemn a tax. But there are indirect costs which may also condemn it, when measured by this criterion of economy. If a proposed tax actually discourages either the production or the accumulation of wealth, it is not an economical tax in the long run, for it tends to make people poorer and so diminishes their ability to pay. Any form of taxation (no matter how great the immediate revenue that it produces) which tends in the long run to dry up the sources of public revenue is an uneconomical tax.

Taxes are primarily imposed in order to raise necessary revenue for the government. Consequently, a very concrete test to apply to every form of taxation is this: Will the proposed tax yield substantial revenue? If the tax is not fiscally productive, it is not worth while unless some non-revenue purpose is to be served by imposing it. It makes no difference how just or certain or convenient or economical a given tax may be, if it fails to yield revenue it is not a good tax. In considering the fiscal productiveness of a tax, both its yield in the immediate present and its probable yield over a period of time are important. Some taxes are big revenue producers for a short time and then dwindle away. Others are steady sources of income year after year. Sometimes the fiscal adequacy of a tax is the only criterion that can be considered. National emergencies, such as war, may make it imperative to draft and mobilize sources of revenue that it would be unwise to tax in periods of peace. Consumption taxes, popularly known as "nuisance" taxes, are an illustration in point. While in times of national emergency the fiscal adequacy of a tax dwarfs all other considerations, in times of peace tax-payers are more critical, and good taxes must have other virtues as well.

Finally, a good system of taxation should be as simple as it is possible to make it. Simplicity is a distinguishing quality that it is not always easy

to achieve. The drafting of an income tax law, for instance, that measures up to the other quality tests that have just been discussed, will doubtless always involve some complexities of statement and procedure. Whenever possible, however, tax measures should be simple and readily intelligible. A tax that is not readily understood is hard both on the taxpayer's purse and on his morale. His disposition to pay is improved when he understands the equity of the tax. The excess profits tax has been a difficult tax to understand. Sales taxes, whatever may be their faults, have the undeniable merit of simplicity.

BEARING THE BURDEN OF TAXATION

The most perplexing problem in any system of taxation is the problem of devising a proper distribution of the burden of taxation. Two important principles have been advocated: the principle of benefits received and the principle of ability to pay.

According to benefits received. At first sight it may seem most equitable that taxes should be levied in accordance with the benefits received: the greater the benefits, the greater the tax. This is the principle underlying certain public prices, fees, and special assessments, even though these public charges do not pretend to be an accurate measurement of the benefits received. But is the benefits principle equally applicable in the field of taxation? In support of this principle it may be urged that the people of a given governmental unit, such as a rural township or city, should pay all the taxes required for the support of their governments, because they receive the immediate benefit of whatever the town or city government does. Some expenditures, such as those for roads and schools, may very properly be aided by larger governmental units without invalidating this principle. But while the benefits principle is of great importance in apportioning the tax burden among governmental units, this is not at all equivalent to saying that it serves equally well as a gauge of the tax payments of individuals.

If government still confined itself very largely to the protection of life and property, the benefits principle could be much more equitably applied than is possible at a time when government has assumed numerous other functions. In that event every adult might reasonably be expected to pay a poll-tax in return for the protection of life, and every property-owner to pay property taxes in return for the protection of his possessions. But modern government does so much more than merely to afford the necessary protection to life and property, and the benefits received by citizens are so general rather than special, that in practice it is impossible to apportion taxes among individuals in accordance with benefits received. To do so would be to impose unbearable burdens upon the poor and to

deprive the state of adequate revenues for doing things required by the common good. The poor, for example, cannot be expected to contribute to the support of our schools in proportion to the benefits which they receive. There are many more poor families than rich; they average a larger number of children, and these must all be educated. If it were necessary to make a strict allocation of the costs of the public schools in accordance with the benefits principle, it would be impossible to maintain schools of the present standard. The provision of parks and playgrounds and the care of dependents and defectives are other striking examples of the impracticability of apportioning taxes according to benefits received. But while the principle of benefits received cannot serve as a means of determining an individual's tax bill, it is very useful in showing the obligation of the citizen to contribute to the support of his government.

According to ability to pay. Much more practical as a guide to the distribution of the tax burden is the ability-to-pay principle. It is not hard to guess that the loudest and most ardent champions of this principle are not usually to be found among those having the greatest ability to pay. Even after the principle itself is accepted as a fair basis for the levying of taxes, its application is neither simple nor easy.

One immediate difficulty arises when we try to agree upon what is the best measure of the ability to pay taxes. Is it the possession of property? Is it the size of one's income? Is it the type of one's outgo? Whatever opinion anyone may hold with reference to the best yardstick of ability to pay, in practice it has been found necessary to employ all three—property, income, and consumption—as measures of ability to pay. Property does not necessarily yield income, but nevertheless its possession is presumptive evidence of the ability of the owner to pay taxes from some source. Wherever there is income there is ability to pay, but this ability is so small in the lowest income classes that the common income tax practice is to exempt all income below a designated amount. If people spend money for certain specified goods, such as gasoline or theater tickets, it is assumed that they have the ability to pay taxes, and gasoline taxes and so-called luxury taxes are the result. So great is the need of the government for revenue that in all probability all three of these measures of ability will continue to be used in the indefinite future and in many cases be applied to the same individual.

Another practical difficulty in the application of the ability-to-pay principle is raised by the question, Does ability to pay taxes vary directly or in some other way with whatever measure of ability is adopted? Does the man, for instance, who has an annual income of \$20,000 have only twice the ability to pay possessed by the man with an income of \$10,000? Does the ownership of \$100,000 worth of property imply double the tax-paying ability conveyed by the ownership of property worth \$50,000?

In practice, whether income or property be the measure of ability to pay, taxes are sometimes *proportional*, at other times *progressive*, sometimes *degressive*, at other times *regressive*.

A proportional tax applies a uniform rate of taxation against all income or property, regardless of its amount. An income tax, for example, is proportional if it levies the same rate, say 4 per cent, against the income of \$20,000 that it levies against the income of \$10,000. The former pays twice the income tax of the latter, but the rate is the same.

A progressive tax, on the other hand, levies an increasing rate of taxation against income or property, with increases in their amounts. Our federal surtax on individual incomes, under the Revenue Act of 1945 (later described in this chapter), is progressive within certain income levels. But it is not uniformly progressive; neither the rates nor the increments of income to which they apply are strictly progressive. Eighty-eight per cent on incomes in excess of \$200,000 constitutes the maximum rate under the Revenue Act of 1945.

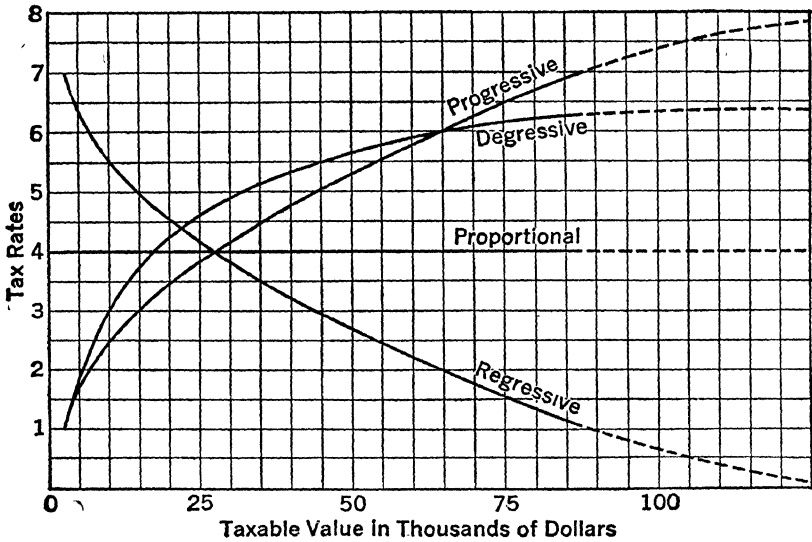
A degressive tax is in reality a form of progressive tax. A degressive tax is one the rate of which increases as income or property increases, but at a diminishing rate and approaching a limit. The progressiveness of the tax loses momentum as it reaches the upper levels of income or property, and finally its advance is checked completely. Most progressive income taxes become degressive as they reach the higher income altitude. They are like a weary mountain climber handicapped by the rarefied atmosphere, whose strides become shorter and whose movement grows slower until he stops altogether. Degressive taxes are progressive taxes that have departed from the strait and narrow way of strict orthodox progressiveness.

In contrast to progressive rates of taxation stand tax rates that are regressive. A regressive tax levies against income or property a rate of taxation which diminishes with increases in their amount. The rate of diminution may be constant, increasing, or decreasing as the amount of taxable income or property increases. In the United States until comparatively recently (and in some parts the situation is still unchanged), property taxes are decidedly regressive. This effect was produced not by applying diminishing rates of taxation to the more highly appraised properties, but by appraising the property of the larger holders at a smaller percentage of its true value than was done in the case of other properties.

How increasing amounts of income or property are taxed in accordance with proportional, progressive, degressive, and regressive rules is shown by the following mathematical and graphic illustrations.

How lightly or heavily the tax burden rests is more clearly seen when these data are reduced to the graphs shown on the following page.

So great is the need of the modern state for revenue that it is exceedingly unlikely that the burden of taxation will ever be adjusted in strict



GRAPHS SHOWING VARYING RATES OF TAXATION

accordance with a single principle. In an economic system that respects private property rights, the sources of revenue must be diversified to produce the necessary income. Property, income, and outgo will doubtless all continue to be taxed. Taxes will be imposed according to both the benefits-received and the ability-to-pay principles. Some taxes will be proportional, others progressive, and some no doubt will continue to be degressive. What to tax, how to tax it, and how heavy or light a tax burden to impose are issues constantly fought over by the economic groups represented in legislative bodies.

AMOUNT OF INCOME OR PROPERTY		IF TAXED AT ASSUMED			
		<i>Proportional Rates</i>	<i>Progressive Rates</i>	<i>Degressive Rates</i>	<i>Regressive Rates</i>
<i>Over</i>	<i>Not Over</i>				
\$ 1,000	\$ 5,000	4	1	1	7
5,000	10,000	4	2	2½	6
10,000	20,000	4	3	3¾	5
20,000	35,000	4	4	4¾	4
35,000	55,000	4	5	5½	3
55,000	75,000	4	6	6	2
75,000	100,000	4	7	6¼	1

The specific forms of taxation are numerous. In general it may be said that the chief forms of taxation include taxes upon property, the right to do business, consumption, sales, income, and the right to transmit property from generation to generation.

PROPERTY TAXES

The most important form of local taxation in the United States today, whether judged by the total revenue produced or the number of persons who pay it, is the general property tax. It is a state and local tax, not a federal tax. The federal Constitution makes its use by the federal government impractical when it declares that "no capitation, or other direct tax, shall be laid, unless in proportion to the census." The general property tax is levied against both real and personal property. Characteristically it began as a land tax, but later came to include many kinds of personal property.

As far as levying the tax is concerned, while the procedure differs somewhat in different tax districts, essentially it consists in annually making a list of all the taxable property in a given district together with its appraised value. The appraisements (or assessments, as they are commonly called) in practice may represent the full value of the property, but more generally they represent only a major fraction of its true value. Legislative bodies, local and state,¹ determine the amount of the public expenditures. Administrative officers estimate the amount of income to be derived from the various sources of public revenue. What cannot be raised from other revenue sources must be borne by general property. Given the amount of money that must be raised from taxes against property and the appraised valuation of the property itself, public officials can easily determine the rate of taxation to be levied against such property. This rate must be uniform within each taxing district.

A uniform rate of taxing property, however, does not in itself ensure fair treatment of all property-holders; this is a question of complete listing and fair appraisal of all taxable real and personal property. In practice realty has on the whole been appraised far below its true value. Personal property on the other hand, has often failed to find its way on to the tax roll at all. The holders of intangible personal property, such as stocks, bonds, and notes, have often found it comparatively easy to evade a large part or all of their tax burden. Such a situation has worked great injustice to those owners of property, real and personal, whose holdings were

¹ Town boards, village boards, city councils, county boards, and state legislatures are the chief taxing bodies in the United States.

actually listed by the assessor and has helped to discredit the general property tax.

Justification. The general property tax is justified by its advocates on the grounds of both benefits received and ability to pay. The holding of property is only possible on account of the guarantees of the state; consequently it is entirely fair that property-owners should contribute to the support of the state to which they owe the security of their property rights. Property, it is further argued, is a gauge of the ability to pay taxes. That it is some measure of the ability to pay must usually be admitted. That it has sometimes been a fair index must also be granted. That it is universally a reliable gauge of the ability to pay taxes, however, must be denied.

Defects and remedies. Indeed, the assumption that the possession of like amounts of property, however dissimilar they may be in kind, necessarily implies equality of tax-paying ability is one of the basic defects of the general property tax. To treat production goods and consumption goods, realty and personalty, tangibles and intangibles, all alike for purposes of taxation is to mistake the sources from which taxes are paid. The mere possession of property is not an adequate measure of the ability to pay taxes. The reason for this lies in the distinction between wealth and capital. Property in some forms of wealth is non-productive of money income. The possession of such property does not ipso facto confer any ability to pay taxes upon its owner. It is only when the property possessed is income-yielding capital that it furnishes assurance of the ability to pay taxes. As a rule, however, the general property tax fallaciously assumes that justice in taxation has been done when people pay taxes in direct proportion to the value of their property. The exemption of certain forms of property, such as most household goods, is recognition of the shortcomings of the underlying theory of the general property tax and is a partial attempt to correct the same.

Another defect of the general property tax is its inequitable duplication of taxes. It taxes both tangible property, such as land and buildings, and intangible property rights, such as stocks, bonds, and notes which merely represent the tangible property. A corporation, for example, may have physical assets appraised at \$200,000 which are taxed at situs. Against these it may have issued \$200,000 of securities, which, under the general property tax if rigorously applied, are taxed at the domicile of their owners.⁵ The same \$200,000 of assets are taxed twice; once in their tangible form,

⁵ All states exempt from taxation the stock of their own corporations held by their own citizens. The theory is that the tangible property of the corporation has already been taxed by the state. They nonchalantly tax the stocks of out-of-the-state corporations, however, when they are held by their own citizens. The obvious reason is that this is the only way the state can hope to get any revenue at all, since the physical property is taxed by the state in which it is situated.

and again in their intangible form of evidences of ownership. Even so, the objection to such duplication of assessments would not be so serious provided 100 per cent of both tangibles and intangibles were assessed and the owners lived in the same tax-paying district. If double taxation were general, the rates of taxation would be lower. The owners of tangible property, represented by intangible property rights, would however, still be discriminated against when compared with the owners of tangible property not so represented. The property of the former would be counted twice; the property of the latter only once. But of course the main point is that in assessment practice it is impossible to reach all forms of taxable wealth. The administration of the general property tax has been notoriously deficient in finding all the intangible forms of wealth. Consequently there has been much injustice in the burdens imposed by the general property tax.

Still another defect of the general property tax, closely related to the two basic faults just described, is the difficulty of procuring complete and fair assessments. Making the assessment is the work of local assessors, who can only appraise what they can see and find. Seeing real estate is comparatively easy; finding intangible personal property is often beyond their ability and power. As the tax burden grows heavier, intangible property seems more elusive. Assessors, moreover, often have exceedingly great difficulty in correctly appraising property that they do find. What real chance is there that a local assessor on a part-time basis, untutored in the affairs of the business, will be able to make a fair appraisal of the true value of the buildings, equipment, raw materials, goods in process, and finished products of a large manufacturing establishment located in his district? To obtain both a complete listing and a fair appraisement of property requires effective coöperation between the assessor and the taxpayer. But taxpayers are usually reluctant to bestir themselves, especially when their own activity is apt to cost them money. They may prefer to pursue a policy of passive resistance to the assessor, letting him find what he can. The evasion of general property taxes is sometimes motivated by the mere desire to escape an unwelcome burden. At other times it is prompted by the conviction, which develops easily in some minds, that much of the taxation of general property is unjust, since it is double taxation and allows nothing for offsetting debts, such as mortgage notes. Deception of the assessor is warranted, some people believe, if it means the prevention of what they regard as an even greater evil: injustice in taxation. Some states have frankly recognized the fugitive tendencies of intangibles, the ownership of which can only be determined with the aid of the taxpayer himself, and have found it expedient to permit the classification of property for tax purposes. They allow lower rates of taxation on intangibles than on other kinds of property. The result has been a marked increase in the willingness and active coöperation of taxpayers to list their intangible prop-

erty, with a consequent increase in the revenue derived from this kind of property.

The general property tax has also been defective in the apportionments made by the states for state purposes. If a state tax is to be raised by levies against property, the amount of this tax is apportioned among the counties in proportion to their respective property assessments. If any county can succeed in keeping its undervaluation of its own property below that of the average for the state, that county carries less than its fair share of the state tax. The obvious remedy for this inequality of assessment is trained and experienced assessors appointed by the state. Such appointees are less susceptible to local influence. State boards of equalization were also established to adjust differences in the ratios of appraised values to true values in the several counties. Usually composed of state officials elected for other duties, such boards had neither the time nor resources to function effectively. Gradually in more than forty states their duties have been absorbed by the more recently created state tax commissions, which have functioned much more adequately.

The breakdown of the general property tax as a satisfactory source of public revenue is attributable to the successful evasion of taxes by many personal property owners and to the undervaluation of listed property. Both of these defects in turn grow out of faults inherent in the theory of the general property tax that the possession of property of whatever kind implies the ability to pay taxes. But the shortcomings of the general property tax do not indicate its complete disappearance. We shall doubtless retain the tax on real estate, both because it can be fairly levied and because we cannot easily dispense with the revenue it yields. Some forms of personal property, that are easily listed and appraised, can also be effectively and equitably taxed—automobiles, for instance, but not intangibles. The need for diversified sources of revenue will dictate the retention of some forms of personal property taxation. For the taxation of intangible and other forms of elusive personal property, however, more effective forms of taxation are being substituted in various tax jurisdictions, notably business taxes and taxes on income.

BUSINESS TAXES

Corporation and other business units, like all other property-holders, have been subject to the general property tax. With the deterioration in this form of taxation, more effective ways of taxing business enterprise were sought. In contrast to the general property tax, which bases taxation upon the mere ownership of property, business taxes are based upon the additional right or opportunity of doing business. The deficiencies of the general property tax are nowhere more evident than in the attempt to

apply it to the taxation of large corporations. Much of the capital value of corporations consists in their value as going concerns, their good-will and other intangibles. Such value it is exceedingly difficult to appraise. The mere size of some corporations, such as railroads, and the widely scattered character of their properties, put them beyond the reach of the ordinary local assessor. He can appraise after a fashion the physical property within his tax jurisdiction—the miles of railroad running through his district, for example. But the aggregate of all such local appraisements is hardly an adequate valuation of the road as a whole. The necessity of treating some corporations as units for taxation purposes led to state assessments, and ultimately in some states to different forms of taxation.

How to tax corporations most advantageously has puzzled legislatures and tax commissions. No single uniform type of taxation has been evolved. We are still experimenting. Consequently, it is not surprising that corporations must pay a great variety of business taxes in the different tax jurisdictions of this country. For the most part the newer business or special property taxes have been applied to railroads and other public utilities. Banks and insurance companies have also come under their sway. Industrial and mercantile corporations, though presenting many of the same problems, have in the main been kept under the older forms of taxation. The chief types of business taxes include ad valorem taxes, taxes on either gross or net earnings, taxes on capital stock, and franchise or business license taxes.

An ad valorem tax, as applied to corporations, is a tax imposed upon the value of the corporation property as a unit rather than according to the piecemeal assessments made by local assessors. The success of such a tax largely depends upon the competency with which the valuation is made. In general the valuation work is undertaken by a state board clothed with adequate powers. An attempt is made to ascertain the value of the property of a given corporation as a going concern. In arriving at a fair value it is indispensable that there be thoroughgoing physical valuation, supplemented by the appraisal of such intangibles as help to create going concern value. If the corporation concerned falls within the tax jurisdiction of a number of states, its tax liability can be distributed in accordance with some accepted standard of comparison. The ad valorem method of taxing the property of corporations as units has been particularly applied to the railroads and some other public utilities. Having arrived at what is considered a fair valuation, some states, such as Wisconsin, apply the average rate of property taxation in the state to such valuation in determining the taxes of the railroads and other public utilities. While there are great difficulties in the use of this ad valorem method of taxation, they are not insuperable. As long as most tangible property is taxed on what purports to be an ad valorem basis, it is equitable that corporations, too, should be

appraised in such a way as to determine their fair value. This the unit assessment ad valorem method of taxation seeks to do.

Corporations are sometimes taxed on a gross earnings rather than on an ad valorem base. This is true of telephone and insurance companies in some states. While net earnings would offer a fairer base (this is the principle of the income tax), they are not measured so easily. Gross earnings can easily be ascertained from the books of the company. There is not so much room for the exercise of discretionary judgment as there is in the calculation of net earnings. Gross earnings are also much more easily determined than the taxable property value of a corporation. The gross earnings tax has the acknowledged merits of simplicity, certainty, ease, and economy of administration. It fluctuates with the volume of earnings. Its chief limitation lies in the determination of a fair rate of taxation to be levied against the gross earnings of corporations. In practice it has been found extremely difficult so to adjust the rates on gross earnings as to effect a reasonable equality of tax burden between corporations subject to the gross earnings tax and those which pay taxes on the basis of property valuations. It was this difficulty of apportioning tax burdens among public service corporations and other holders of property which led Wisconsin in 1903, after almost half a century of experience with gross earnings taxation, to abandon this type of corporate taxation as applied to railroads.

Both the federal government and the states have at times taxed the capital stock of corporations. The federal Revenue Act of 1916, as amended inclusive of 1924, provided for a capital stock tax levied against corporations for the privilege of "carrying on or doing business." From 1918 to 1926, the tax imposed was \$1 for each \$1,000 of the fair average value of capital stock in excess of an exemption of \$5,000. It is evident that a fair governmental appraisal of the value of the capital stock of approximately 500,000 domestic corporations is a problem of such staggering magnitude that not even the United States Government has had the men and means to attack it. What taxes have been collected have largely been based on appraisements of capital stock by the corporations themselves. A capital stock tax coupled with a "declared value excess profits" tax was reinstated by the revenue acts of 1934-1936 but repealed by the Revenue Act of 1945.

Prior to 1928 many states taxed the capital stock of banks. The federal government permitted the states to tax the national banks under certain conditions, one of which was that any tax imposed upon a national bank must not be at a rate higher than that levied against any form of competing capital. Decisions of the United States Supreme Court in the Merchants National Bank of Richmond⁶ and the First National Bank of Hart-

⁶ Merchants National Bank of Richmond v. City of Richmond, 256 U.S. 635 (1921).

ford⁷ cases invalidated much bank stock taxation by the states on the ground that it was discriminatory. It was held to be prejudicial to the owners of bank stock when compared with the owners of other forms of moneyed capital, who either were taxed at a different rate or not taxed at all.

Perhaps the most distinctive, though not the most remunerative, form of business taxation is the special tax sometimes levied upon business franchises. Franchise taxes are imposed for some special privilege which a corporation or other business unit has received, such as the use of city streets or rights of way. New York, for example, treats the use of public property by a corporation as a special privilege of great value, and taxes the franchises granted to corporations at the same rate as real estate. American local governments issue business licenses to taverns and tax them at substantial rates.

These various forms of business taxes—ad valorem, gross earnings, capital stock, franchise or license taxes—are attempts on the part of government to find more adequate sources of revenue and to compel business to pay its full share of taxes. Business, like most other taxpayers, often protests against what it regards as the iniquity rather than the equity of the tax burden it is obliged to carry. While some of these forms of business taxation will doubtless persist and others disappear, there is a growing tendency to tax corporations as well as individuals on a net earnings or income basis. The federal government has done so since 1913, and in 1945 about three fourths of the states were doing so as well.

The Social Security Act of 1935 imposed still another kind of levy upon business.⁸ It is described in the act as an "excise tax" upon the payroll. The employers' participation in the plan is financed by a tax based on his payroll; the employees' participation, by a tax on their wages. While designated as taxes in the law these payments are better called "contributions" or "premiums" for a special purpose, namely of providing some measure of financial security for old age or in the event of unemployment.

CONSUMPTION TAXES

Consumption taxes represent a form of taxation radically different from either property or business taxes. For the most part they are levied upon commodities that are widely used. Among the oldest forms of taxes, they have come to be an important source of income in a well-diversified revenue system. In the United States consumption taxes have been a main-

⁷ First National Bank of Hartford, Wisconsin v. City of Hartford, 273 U.S. 548 (1927).

⁸ Cf. discussion of the Social Security Act as an insurance and compensation system in Chap. XXXI "Providing Security Through Social Insurance," pp. 721-726.

stay of the federal government, which imposes certain internal taxes and at the frontiers collects the customs duties. Until the enactment of our federal income tax law in 1913 the revenues of the federal government were almost wholly derived from these two sources. Both our federal internal taxes and the customs duties are indirect taxes; that is, they are taxes imposed upon manufacturers and dealers in the expectation that they will be passed on to consumers in the form of higher prices. In recent years the states have supplemented the consumption taxes of the federal government with commodity taxes of their own. The best-known example is the gasoline tax imposed for the construction and maintenance of our highways.

Federal internal taxes upon commodities. The internal taxes of the federal government imposed upon commodities intended for consumption are sometimes called excise taxes or duties. They stand in contrast to customs duties levied at ports of entry upon imported merchandise. The term "excise taxes" is not very precise, however, and today, through legislative practice and court decisions, it includes a number of taxes that are not taxes upon the consumption of commodities at all.

Internal commodity taxes were originally introduced to produce revenue during emergency periods in our history. Soon after the establishment of our federal government, Alexander Hamilton, then Secretary of the Treasury, strongly recommended to Congress the desirability of developing an internal revenue system to supplement the federal income derived from the customs duties. Congress half-heartedly responded by placing an excise tax upon a few commodities, principally liquors and tobacco. The whole system of excise taxes proved exceptionally unpopular. The extreme form of popular discontent occurred in Pennsylvania in the so-called "Whisky Rebellion" which required the armed intervention of the United States. Naturally with so much opposition the new mode of taxation was not particularly productive of revenue. When the Federalists, who were responsible for the legislation, went out of office in 1801, the Republicans, under the leadership of Jefferson, who had described the internal taxes as an "infernal system," promptly repealed all of the obnoxious excise taxes.

Little more than a decade later, however, the Republicans themselves had to revive the system. Customs duties proved grossly inadequate during the disturbed conditions of the Napoleonic period, which included our War of 1812. Internal taxes were levied upon such commodities as liquors, sugar, and carriages. The system collapsed again, however, in 1817, for lack of popular support.

Once more it was revived during the Civil War, and at that time developed to much larger proportions. As usual in national emergencies, customs duties could furnish only a small percentage of the needed revenue.

Supplementary sources of income had to be found. These were in part furnished by taxes on consumption. When the war was over, most of these taxes were gradually reduced and removed, but this time the system as a whole was not abandoned. While all other consumption taxes were repealed by 1883, the taxes on liquor and tobacco remained, and they are still a part of our internal revenue system.

The extraordinary demands of the Spanish-American War and of the First World War again necessitated the rapid extension of commodity taxes. Among the commodities taxed during one or the other of these periods were automobiles, cameras, chewing-gum, jewelry, patent medicines, rugs, and toilet articles. The tax was paid by the dealer and added to the sale price. Revenue measures passed during the period of the Second World War greatly lengthened this list and imposed taxes of 20 per cent or more on such commodities as binoculars, cosmetics, furs, jewelry, light bulbs, luggage, perfume, cameras, watches, and clocks.

Another form of consumption tax, closely related to the commodity taxes just described, is the tax on admissions and dues. Tickets to amusement places and membership dues in social, athletic, or sporting clubs have paid toll to our Federal Internal Revenue Bureau.

Excise taxes on consumption goods are now an accepted part of our internal revenue system, not only in time of war but also in time of peace. There have been years since these taxes came into vogue when they yielded as much as 40 per cent of the ordinary expenditures of the federal government. The chief revenue producers have been the taxes on liquor and tobacco.

Much has been said in criticism of, and not infrequently vigorous action has been taken against, commodity taxes. Some of them have proved vexatious; they have been called "nuisance taxes." Evasion of tax payment has often occurred. The amount of actual revenue received has at times fallen far short of expectations. But nevertheless such taxes have much to commend them. They conform to most of the criteria of good taxes. They are certain as to amount, convenient as to time of payment, economical in collection, as productive as desired, and easy to understand. They are almost invariably shifted by manufacturer or dealer to the consumer, who pays them in the form of higher prices, often without distinct consciousness that he is paying a tax at all. It is true that they do not always square with the taxpayer's sense of justice. Certainly they are not graduated to the ability to pay taxes, for whoever buys the commodity must pay the tax, be he rich or poor. It is also often hard to see why certain commodities should be singled out for such taxation, while comparable commodities escape. Where indirect excise taxes have been most successful, the commodities chosen for such taxation have been consumers' goods that were extensively used, the demand for which was rather inelastic, and which

did not belong to the group of goods generally regarded as indispensable to living.

Federal customs duties.⁹ Throughout our history, except for the emergency periods just noted, the chief source of the revenues of the federal government has been the customs duties. Beginning with the First World War period the customs duties lost this position of leadership, and it is apparently lost for good. In every fiscal year beginning with 1917 both income taxes and other internal taxes have yielded greater revenue than the customs duties. The decline in the importance of customs duties, however, is relative, not absolute, for in the fiscal year 1927, the customs duties amounted to \$605,672,465, the largest in our history. What has happened is that our national expenditures are so much greater than ever before that it has been found necessary to develop other and more substantial sources of federal revenue.

Like the excise taxes just discussed, customs duties are essentially taxes on consumption. They are collected from importers at ports of entry, it is true, but ultimately, in the great majority of cases, are incorporated in the prices charged the consumer. They have some of the same merits possessed by excise taxes: certainty as to the tax, convenience of payment, fair economy in collection, and fiscal productiveness under normal trade conditions, if tariff rates are not excessive. What popular favor customs duties enjoy as fiscal measures is largely due to the indirect character of the tax they levy; the burden of such taxes escapes notice more than is the case with direct taxes.

The merits of customs duties as revenue producers have been obscured in the United States by the fact that the protection of home industries, not the raising of revenue, has been the primary consideration in making tariff schedules of duties. This accounts for one of the most serious drawbacks of the American tariff as a form of taxation: its perplexing complexity. The Hawley-Smoot Act of 1930, for instance, laid duties upon about 3,200 different commodities in a bewildering combination of ad valorem and specific rates.¹⁰ If revenue were the primary purpose of our tariff, a score or so of wisely selected commodities could be made to yield substantially as much net revenue as we now receive, with an enormous gain in simplicity and understanding. But the chief shortcoming of customs duties as a fiscal device is their unsteadiness. In some years there has been a huge surplus over the country's expenditures, in others, a distressing deficit. Violent fluctuations of income are as demoralizing in a public economy as they are in a private economy. They stimulate extravagance in times of

⁹ For a discussion of the use of customs duties as a means of regulating foreign trade and protecting home industries, see Chap. XII, "The Regulation of International Trade and Exchange."

¹⁰ For the distinction between ad valorem and specific duties cf. p. 334.

plenty, and they necessitate unexpected sacrifices in times of need. During war periods customs duties usually fall off from the normal return instead of increasing to help meet the national emergency.

State taxation of consumption goods. Indirect taxation, as represented by excise taxes and customs duties, has long been the province of the federal government in the United States. Custom duties are even prohibited to the states by the federal Constitution. In recent years, however, the states have also begun the taxation of commodities. The necessity of finding larger sources of revenue to meet the ever rising expenditures of government has been responsible for this change in policy. The best-known and most important tax levied by the states upon a commodity is the gasoline tax. Every state and the District of Columbia now levy a tax upon the sale of gasoline, ranging from two to nine cents per gallon.¹¹ More than a billion dollars are annually spent upon the construction and maintenance of our highways. It would be unfair to throw this entire heavy burden upon the landed property or income taxpayers of the states. The gasoline tax solves the problem. From every point of view it is a good tax. It is certain in amount, it is conveniently paid as one drives; the government can collect it economically from the gasoline distributors; it can be made as productive as desired, for people are hardly apt to give up driving on account of the tax, and it is simplicity itself. Moreover, it is a peculiarly just tax. The automobile user benefits from good roads, and if he has the ability to buy gasoline he also has the ability to pay the additional tax necessary to make his driving on good roads possible. The transient tourist, who could not be reached by a state through the ordinary means of taxation, helps pay for the roads he uses wherever he goes.

SALES TAXES

Closely related to both business taxes and consumption taxes, and indeed only a variation of them, are different forms of sales taxes. The sales tax was born of fiscal necessity. The severity and duration of the depression of the nineteen-thirties, with its sharp shrinkage of governmental revenues from the usual sources and its unprecedented demand upon government for relief expenditures, witnessed the rapid extension of various forms of sales taxes. In the United States by the close of 1948, more than one-half of the states had adopted one form or another of the sales tax, exclusive of the selective sales tax such as the tax on the sale of gasoline, which all had adopted. The rates commonly range from 0.5 per cent to 3 per cent of the amount of the sales.

What is most generally understood by sales taxes is a tax imposed on

¹¹ Figures are for 1950. In addition the federal government levies a tax of one and one-half cents per gallon (1950).

the sale of a good at retail or wholesale. The retail sales tax is primarily based upon retail sales of commodities to the final consumer—but public utility services and admissions to amusements are sometimes included; food products and other necessities are sometimes excluded. The general sales tax includes a tax not only on retail sales but also on sales at wholesale, such as the sales of manufacturers to dealers.

The sales tax is plainly a “money-raiser.” No one contends that it is wholly equitable and based upon any such principle as the ability to pay. It is fiscally productive and so an expedient tax to impose in times of great need. A number of states have clearly indicated the emergency character of such taxes by setting a time limit after which they expire. But they can be reënacted, and such taxes once established have a way of persisting as part of the tax system. The tax can be collected fairly easily and inexpensively. It can, if desired, be levied upon selected classes of goods, many of which are luxuries. And there is no doubt that the sales tax forces larger numbers of people to contribute to the support of the government than any other widely used tax.

The sales tax is mainly attacked because it fails to conform to the principle of ability to pay and because it is regressive in effect. There is no question that it bears more heavily upon the poor than upon the well-to-do and rich. Whether its admitted regressiveness should or should not condemn it depends very largely upon whether there are other sharply progressive taxes, such as the income tax, in use at the same time.

INCOME TAXES

As intelligent and intelligible a form of taxation as has yet been devised is furnished by the taxation of incomes. Systems of income taxation have now been adopted by more than fifty nations. Since most taxes must ultimately be paid out of income, regardless of whether the original basis of levy is some form of property or the right to do business or some kind of consumption good, there are advantages in taxing income directly. No nation, however, has yet devised an income tax law so sweeping in the income levels it includes and so progressive in the rates it imposes as to enable it to dispense with all other forms of taxation.

Nature and development of income taxation in the United States. An income tax is a tax upon the income of individuals or business units, which has accrued or actually been received during a specified period of time. At first blush the determination of taxable income may seem very simple. Only a little experience is needed, however, to show how difficult it is to frame a definition of income that is thoroughly satisfactory, both in its logic and for fiscal purposes. For one thing, it is impossible to identify income with cash receipts. To do so would be to obliterate the distinction

between capital receipts and income receipts. How hazy the line between capital and income is, the treatment of stock dividends shows. Are stock dividends income? Once our federal statute sought to tax them as such. Later the United States Supreme Court held that they were not income, and consequently they are no longer taxable as income.¹² But realized capital gains, such as arise through the profitable sale of securities, are income. In the second place, the equitable taxation of income has necessitated a distinction between gross income and net income. Failure to draw this distinction would mean to make no allowance for expenditures required to produce the income. Thirdly, some statutes distinguish between different kinds of income, either not taxing some income at all or taxing it at rates different from those applied to the bulk of the taxable income. Massachusetts taxes only selected sources of income. Some federal income tax laws have distinguished between earned and unearned income. Earned income was defined as arising from the personal efforts of the recipient; unearned income, as coming from capital owned by the recipient. A maximum of \$30,000 of earned income, prior to the revision of the income tax law in 1932, was taxed at a lower rate than the rest of the income. The distinction between earned and unearned income is arbitrary and often misleading. Incomes which appear to come wholly from property are often to a considerable extent due to personal effort. The government dropped the distinction in the fiscal revision of 1932 and then revived it in the Act of 1934. Under the latter act 10 per cent of the earned income up to a maximum earned income of \$14,000 could be entered as a credit on the return of the taxpayer and no tax paid on it at all. The distinction between earned and unearned income was again dropped in the fiscal revision of 1943, effective for the income tax returns of 1944. For practical purposes in the determination of taxable income, the United States Treasury Department has ruled that all income which has been received in the form of cash or its equivalent shall be included in the income tax returns made to the government.

The taxation of incomes has had a curious history in the United States. The successful taxation of incomes at rates high enough to produce substantial revenue is a distinctly recent matter. It was not until the Civil War period that the federal government sought to make any use of the income tax. The total inadequacy of the customs duties compelled the development of some substitute form of taxation. An income tax law was passed in 1861, and with many material amendments it remained on the statute books until 1872. It was an unpopular statute, and few regretted its repeal. Its constitutionality was attacked on the ground that it was a direct tax. The Constitution provides that "direct taxes shall be apportioned among the several states . . . according to their respective numbers." The Supreme

¹² *Eisner v. Macomber*, 252 U.S. 189 (1920).

Court, however, held that the Civil War income taxes were not direct taxes within the meaning of the Constitution. Consequently the total amount of money to be raised from this source did not have to be apportioned among the states in accordance with their population, which would have vitiated the principle upon which the income tax was based. The court held to a strict interpretation of the meaning of "direct taxes" and construed that only poll-taxes and real estate taxes need be so considered. The federal government collected more than \$370,000,000 under the Civil War income tax laws.

About twenty years after the repeal of the law, Congress again faced an emergency. A severe business depression began in 1893. The Democrats, who were in control of the national government, desired to lower the tariff, and they did so in the Wilson-Gorman Act of 1894. The United States Treasury needed new and additional sources of revenue. The result of this combination of circumstances was a second attempt to tax incomes—the income tax act of 1894. Naturally its constitutionality was at once challenged. This time the Supreme Court completely reversed the position which an earlier court had taken and declared the law unconstitutional on the ground that it provided for an unapportioned direct tax.¹³ Instead of adhering to the historical meaning of direct taxes, the court took the position, generally taken by economists, that the distinction between direct and indirect taxes turns on their incidence; that a direct tax is one that cannot normally be shifted, while an indirect tax is one that is customarily shifted; that the income tax is a direct tax, and consequently must be apportioned among the states on the basis of population. The income tax law of 1894 never went into operation, but public sentiment in favor of the income tax seemed to grow after this adverse decision.

After the lapse of another fifteen years, Congress in order to provide more revenue passed a corporation excise tax in 1909 which in effect was an income tax. On the face of it, it was a business tax; it was not levied directly upon the income of corporations; it was an excise tax levied upon corporations, but the amount of the tax was measured by the amount of income the corporations received. This was a subtle and elusive distinction. But the United States Supreme Court upheld the constitutionality of the law.

At the same time, however, public sentiment in favor of a direct income tax was growing rapidly. In 1913, the sixteenth amendment to the Constitution—the income tax amendment—was ratified by the necessary number of states. This provides that "The Congress shall have power to lay and collect taxes on incomes from whatever source derived, without apportionment among the several states, and without regard to any census

¹³ Pollock v. Farmers' Loan and Trust Company, 157 U.S. 429 (1894), 158 U.S. 601 (1895).

or enumeration." Congress promptly enacted the first general income tax law under the amendment in 1913. Since that time income tax legislation has been almost constantly before the Treasury, and every Congress has wrestled with it. The net effect has been a widening of the base and an increase in the rates. The income tax is today the main source of revenue of the federal government.

Important provisions of the present (1950) federal income tax law. Brief consideration of a few of the most important provisions of the current Federal Revenue Act, last amended in 1950, will serve to show how it affects the individual and corporate taxpayer.

Persons affected. Every citizen or resident of the United States including minors, having a gross income of \$600 or over for the taxable year, must file such return. Fiduciaries (i.e., trustees, executors, administrators) must similarly file returns for the trust or estate they are administering. Corporations must also make returns.

Reporting of gross income. The persons and business units affected by the law are obliged to report their gross income. What forms of income they must report is set forth in the following definition of gross income contained in the statute:

The term "gross income" includes gains, profits, and income derived from salaries, wages, or compensation for personal service, . . . of whatever kind and in whatever form paid, or from professions, vocations, trades, businesses, commerce, or sales, or dealings in property, whether real or personal, growing out of the ownership or use of or interest in such property; also from interest, rent, dividends, securities, or the transaction of any business carried on for gain or profit, or gains or profits and income derived from any source whatever.¹⁴

It may seem that it would be difficult to receive any income that need not be reported. And yet sweeping as is the definition, the proceeds of life insurance policies, gifts, inheritances, interest on the obligations of states or any other political subdivision of the United States are not considered income at all for taxation purposes.

Allowable deductions. From the gross income reported certain deductions are allowable before any kind of income tax need be computed. Some of these are business-, others non-business-deductions. These include "ordinary and necessary expenses paid or incurred" in connection with procuring the gross income, but not the personal or household expenses of the recipient; most interest paid; taxes paid or accrued, except the income tax itself and special assessments; property losses sustained and not covered by insurance; worthless debts charged off; reasonable allowance for depreciation; and contributions to public, religious, charitable, scien-

¹⁴ Federal Revenue Act of 1934. Section 22. Definition is unchanged by subsequent amendments.

tific, literary, or educational agencies, not to exceed 15 per cent of the adjusted gross income, which is gross income minus the business deductions.

Calculation of net income. The purpose in allowing the above deductions is to arrive at a fair statement of the taxable net income. Net income is simply the gross income less the allowable deductions. Net income is subject to two income tax payments: the normal tax and the surtax. In the computation of each, however, the taxable net income may be further reduced by certain specified credits.

Computation of normal tax. In the computation of the normal tax more credits are allowed against the net income than in the computation of the surtax. Net taxable income may be reduced by the amount included within gross income which has been received as interest on obligations of the United States, or interest on obligations of corporations created as instrumentalities of the United States, issued in both cases prior to March 1, 1941. In order to exempt the recipients of the smallest incomes, the net taxable income may be reduced by the personal exemption and credits for dependents, if any. This exemption is \$600 for each taxpayer and each dependent. A dependent is defined as a close relative with an annual income of less than \$500 who receives more than one-half of his support from the taxpayer. What is left of the taxpayer's income after these offsetting credits have been subtracted constitutes his net taxable income which is subject to the normal rate of taxation. Under the Revenue Act of 1950 all the net income minus credits is subject to a uniform normal tax of 3 per cent.

Computation of surtax. The only credits allowed against net income in the computation of the surtax are the personal exemption and credits for dependents. Both of these are the same as those allowed in the computation of the normal tax, and they may be subtracted from the net income before the surtax rates are applied. The surtax rates under the Revenue Act of 1950 are shown on the following page.

Collecting income taxes upon a current basis. To make the receipt of taxes more certain and the payment of taxes easier, the federal government began in 1943 to collect individual income taxes out of current income. Prior to this there had been a possible lag of almost twelve months between the receipt of the income and the payment of the final tax instalments on the income. The present method involves the withholding by the employer of a designated part of the wages or salaries paid and transmission of the same to the government to apply on the employee's income tax bill. It also involves an estimate by the taxpayer at the beginning of each year of what his probable income tax will be, and the payment during the year of any amount that his estimated tax exceeds the amount withheld from his wages or salary, if any. When a final income tax return is filed for a given year, final tax settlement is also made: either the taxpayer

SURTAXES UNDER REVENUE ACT OF 1950

<i>Surtax Net Income</i>		<i>Per Cent</i>	<i>Total Surtax on Highest Amount of Income</i>
<i>Over</i>	<i>Not Over</i>		
\$	\$ 2,000	17	\$ 340
2,000	4,000	19	720
4,000	6,000	23	1,180
6,000	8,000	27	1,720
8,000	10,000	31	2,340
10,000	12,000	35	3,040
12,000	14,000	40	3,840
14,000	16,000	44	4,720
16,000	18,000	47	5,660
18,000	20,000	50	6,660
20,000	22,000	53	7,720
22,000	26,000	56	9,960
26,000	32,000	59	13,500
32,000	38,000	62	17,220
38,000	44,000	66	21,180
44,000	50,000	69	25,320
50,000	60,000	72	32,520
60,000	70,000	75	40,020
70,000	80,000	78	47,820
80,000	90,000	81	55,920
90,000	100,000	84	64,320
100,000	150,000	86	107,320
150,000	200,000	87	150,820
200,000 and over		88	. . . . .

owes the government a balance, or the government owes him a sum, which he may have in cash or as a credit against the following year's tax.

Illustrative income tax case. To facilitate the computation of the total income tax due, the federal government has issued a table which combines the normal tax rate and the surtax rates into a single rate on each bracket of income. The table effective in 1950 is shown on page 794.

If the above net income includes any partially tax-exempt interest on government bonds issued prior to March 1, 1941, and some similar issues, the tax may be reduced by 3 per cent of the interest received, since such issues are exempt from the 3 per cent normal tax.

In 1950 the "tentative tax" was subject to a reduction, first authorized by the Revenue Act of 1948, of 17 per cent on the first \$400 of tax liability, 12 per cent on the next \$99,600, and 9.75 per cent on any tax liability over \$100,000. The Revenue Act of 1950 which became applicable to individual

COMBINED NORMAL TAX AND SURTAX UNDER REVENUE ACT OF 1950

If the Taxable Income Is		The Tentative Tax on the Taxable Net Income Is
Over	Not Over	
	\$ 2,000	20% of the taxable net income shown
\$ 2,000	4,000	\$400, plus 22% of excess over \$2,000
4,000	6,000	\$840, plus 26% of excess over \$4,000
6,000	8,000	\$1,360, plus 30% of excess over \$6,000
8,000	10,000	\$1,960, plus 34% of excess over \$8,000
10,000	12,000	\$2,640, plus 38% of excess over \$10,000
12,000	14,000	\$3,400, plus 43% of excess over \$12,000
14,000	16,000	\$4,260, plus 47% of excess over \$14,000
16,000	18,000	\$5,200, plus 50% of excess over \$16,000
18,000	20,000	\$6,200, plus 53% of excess over \$18,000
20,000	22,000	\$7,260, plus 56% of excess over \$20,000
22,000	26,000	\$8,380, plus 59% of excess over \$22,000
26,000	32,000	\$10,740, plus 62% of excess over \$26,000
32,000	38,000	\$14,460, plus 65% of excess over \$32,000
38,000	44,000	\$18,360, plus 69% of excess over \$38,000
44,000	50,000	\$22,500, plus 72% of excess over \$44,000
50,000	60,000	\$26,820, plus 75% of excess over \$50,000
60,000	70,000	\$34,320, plus 78% of excess over \$60,000
70,000	80,000	\$42,120, plus 81% of excess over \$70,000
80,000	90,000	\$50,220, plus 84% of excess over \$80,000
90,000	100,000	\$58,620, plus 87% of excess over \$90,000
100,000	150,000	\$67,320, plus 89% of excess over \$100,000
150,000	200,000	\$111,820, plus 90% of excess over \$150,000
200,000		\$156,820, plus 91% of excess over \$200,000

incomes on October 1, 1950, took away 25 per cent of this reduction for 1950 and all of it for 1951 and thereafter.

Let us suppose that a professional man in 1951 has a net income of \$24,400 over and above all deductions, that he is married and so with his wife may file a joint return, and that he has two dependent children. His taxable net income is \$24,400 minus ($\600×4, the personal exemption for himself, his wife, and two dependent children), or \$22,000. Since he elects to file a joint return he may divide the \$22,000 into two equal parts and pay the tax on each. The table shows that the tax on \$11,000 is "\$2,640 plus 38% of the excess over \$10,000," which means that it is \$2,640 plus \$380 or a total of \$3,020. Since the taxable net income was divided into two equal parts, the tentative tax of husband and wife together is twice \$3,020 or \$6,040.

Corporate income taxation. The income of corporations is also subject to taxation. They pay both a normal tax and a surtax on their net incomes. For 1951 and subsequent years they pay 25 per cent of the earnings under \$25,000 and 47 per cent on earnings over that figure.

On January 1, 1951, the outgoing Congress reestablished the special taxation of what the act calls "excess profits." These profits are subject to the regular corporate income tax rates plus a 30 per cent rate. The tax on excess profits, therefore, is at the rate of 77 per cent.

Corporations have the option of computing the excess profits tax, if any is payable, by either of two methods. Excess profits are defined as either any amount over 85 per cent of the average earnings in the best three of the four years, 1946-1949, or any amount over a specified return on invested ("equity") and borrowed capital. The base includes 100 per cent of the equity capital plus 75 per cent of the borrowed capital. The specified return, beyond which the profits are defined as excess profits for taxation purposes, are 12 per cent on the first \$5 million of capital, 10 per cent on the next \$5 million, and 8 per cent on any capital over \$10 million.

A number of limitations on the taxation of excess profits are set, however. The first \$25,000 of excess profits are exempt from the tax. And the "over-all take" of a corporation's income by the government, through the corporate income tax and the excess profits levy, can not exceed 62 per cent of the corporation's income.¹⁵

State income taxes. In the United States, not only the federal government but also the governments of certain states have incorporated the taxation of incomes into their revenue systems. In 1948, thirty-one states derived part of their revenues from the taxation of personal incomes.¹⁶

¹⁵ *Excess profits tax.* To guard against a possible new "crop" of war-millionaires and to furnish additional funds, the Second Revenue Act of 1940 had also provided a further tax on corporate incomes—a tax on excess profits. The Revenue Act of 1945 repealed the excess profits tax, effective January 1, 1946. Corporations had the option of computing the excess profits tax, if any was payable, according to either of two methods, known as the "average earnings" and "invested capital" methods. Excess profits for purpose of this tax could be figured as all profits in excess of 95 per cent of the average earnings for the four-year base period, 1936-1939. Or excess profits could be taken as all profits in excess of 8 per cent on the first \$5,000,000 of invested capital, plus 6 per cent on the second \$5,000,000 of invested capital, plus 5 per cent on all over \$10,000,000 of invested capital. Invested capital was defined as the sum of the computed equity capital and 50 per cent of the borrowed capital. In order to exempt some corporations entirely, all corporations were allowed an exemption of \$10,000 of excess profits. On the adjusted excess profits net income corporations paid an excess profits tax of 95 per cent. The payment of this tax, however, was subject to a number of limitations. The corporation was credited with 10 per cent of the excess profits tax as a post-war refund. This made the effective excess profits tax rate not 95 per cent but 85.5 per cent. Another limitation was that income which was subject to the excess profits tax was subject neither to the corporation normal tax nor to the surtax on corporate income. Moreover, the combined income tax paid by a corporation, including normal tax, surtax, and excess profits tax was limited to 80 per cent of the surtax net income (before deducting the excess profits tax net income). For many of our largest corporations the excess profits tax was by far the heaviest tax they paid during the war period.

¹⁶ Personal incomes were not taxed by Connecticut, Florida, Illinois, Indiana, Maine, Michigan, Nebraska, Nevada, New Jersey, Ohio, Pennsylvania, Rhode Island, South Dakota, Texas, Washington, West Virginia, and Wyoming.

Of these Wisconsin has had the longest successful experience with the operation of an income tax law, its taxation of income dating from 1911. The various state income tax laws differ among themselves with reference to the determination of the income to be taxed, and also in regard to the rates of taxation to be levied. Massachusetts, for example, taxes only certain forms of income. New York taxes its own residents on all their income from whatever source derived, and in addition taxes non-residents on that part of their income earned in New York. This practice principally affects Connecticut and New Jersey "suburbanites" working in New York. Wisconsin purports to tax only the income which originates in the state but in practice has defined this in such a way that it includes substantially all forms of income except income from out-of-the-state real estate. In general, state income tax laws are based on the same principles as the federal statute and support the same general conclusions. It is altogether probable that the principle of the state income tax will be retained rather than abandoned in the future, particularly as it becomes increasingly burdensome to increase taxes from other sources.

Is the income tax a good tax? By all the commonly recognized criteria of what constitutes a good tax, income taxation must be accepted as a sound and desirable element in a country's revenue system. The tax is usually certain; given the amount of taxable income (which is sometimes hard to determine) and the rates of taxation as fixed by the law, it is easy to compute the amount of one's income tax. It can be made as convenient a tax to pay as any other kind of tax. No tax, however convenient, is ever apt to cause taxpayers to jostle each other in their eagerness to pay taxes in the way in which theater or prize-fight patrons, for example, throng the box office. While a considerable organization is necessary to administer the income tax, the tax is economical because the cost of collection is small in comparison with the sums collected. From the point of view of productiveness, the tax is ideal, because it is levied upon a base that represents real ability to pay. Moreover its productiveness is flexible; rates can readily be advanced when the state of the public treasury requires it. The basic idea in an income tax is readily grasped; the intricacies of an income tax law often baffle the experts. On the counts of certainty, convenience, economy, productiveness, flexibility, and simplicity the income tax ranks high as a mode of taxation.

But the chief merit of the income tax is its essential justice. It is based squarely upon the principle of ability to pay. It is hard to conceive of a fairer tax, since ultimately almost all taxes must be paid out of income anyway. It gathers a large tax when the income is big, and a small tax or none at all when the income shrinks to small proportions. It lends itself perfectly to graduated taxation. Small incomes can be exempted entirely, and higher

rates can be imposed upon the larger incomes, where the ability to pay is greater. Care must be taken, however, that the surtax rates are not made so heavy as to stimulate evasion, which is demoralizing to all concerned.

It is all too true, however, that the popularity of an income tax depends very largely on the number of people who are exempt from it, or as Charles J. Bullock has put it, "An ideal tax is a tax paid by some other fellow." But while the equitable taxation of incomes presents many formidable difficulties, none of these is insurmountable.

At one time it was supposed that the tax was altogether too inquisitorial ever to win the support of the American people. But it is today an established tax. Much has been said about the repressive effect of an income tax upon industry, because of its alleged restriction upon the accumulation of capital. The plethora of capital funds seeking investment would seem to indicate that this objection is not very well founded. It has been described as a class tax, particularly on account of the progressive rates of taxation. True it is that, per dollar of income, the income tax bears more heavily on the rich than on the poor. But this is the essence of the ability-to-pay principle. What is more, some taxes, notably property, consumption and sales taxes, bear more heavily upon the poor than they do upon the well-to-do and rich. Intelligent care by experts in drawing an income tax law, together with honest and efficient administration of the law, should in time successfully meet every adverse criticism of income taxation.

ESTATE AND INHERITANCE TAXES

Difference between estate and inheritance taxes. In the United States today, both the federal government and the states, excepting only Nevada, tax the transmission of property from the dead to the living. Death is certain; its occurrence usually requires the transfer of some property; this is a propitious occasion for the collection of a tax either upon the property as a whole or upon the separate legacies. The United States Government imposes an estate tax; almost all the states levy inheritance taxes; a few states levy both estate and inheritance taxes. The difference between an estate and inheritance tax is this: an estate tax is imposed on the "right to transmit property" and the rates are applied to the net value of the estate as a whole; an inheritance tax is imposed on "the right to receive" property and the rates are applied to the separate legacies of the beneficiaries. Not only the United States but virtually every other country imposes either an estate tax or an inheritance tax, and some governments impose both.

How the federal government taxes estates. Under the United States Revenue Act in effect in 1950, the executor or administrator of an estate

is obliged to prepare an inventory of all the property of the deceased and to state its fair value. From the gross value of the estate certain deductions may be made in establishing the net value of the estate for taxation purposes. These deductions include expenses properly chargeable against the estate, such as claims and debts, funeral expenses, and expenses incidental to the administration of the estate; bequests made for public, religious, charitable, scientific, literary, or educational purposes; and a flat exemption of \$60,000, inclusive of insurance carried by the deceased. Upon the net estate the federal government imposes a progressive tax, ranging from 3 per cent on estates not in excess of \$5,000 to 77 per cent on that part of estates exceeding \$10,000,000. The estate tax rates in force in 1950 are stated in the following table.

FEDERAL ESTATE TAX RATES IN EFFECT, 1950

<i>Amount of Taxable Estate</i>		<i>Rate</i>	<i>Tax at Top of Bracket</i>
\$	0-\$ 5,000	3%	\$ 150
	5,000- 10,000	7	500
	10,000- 20,000	11	1,600
	20,000- 30,000	14	3,000
	30,000- 40,000	18	4,800
	40,000- 50,000	22	7,000
	50,000- 60,000	25	9,500
	60,000- 100,000	28	20,700
	100,000- 200,000	30	50,700
	200,000- 250,000	30	65,700
	250,000- 400,000	32	113,700
	400,000- 500,000	32	145,700
	500,000- 600,000	35	180,700
	600,000- 750,000	35	233,200
	750,000- 800,000	37	251,700
	800,000- 1,000,000	37	325,700
	1,000,000- 1,250,000	39	423,200
	1,250,000- 1,500,000	42	528,200
	1,500,000- 2,000,000	45	753,200
	2,000,000- 2,500,000	49	998,200
	2,500,000- 3,000,000	53	1,263,200
	3,000,000- 3,500,000	56	1,543,200
	3,500,000- 4,000,000	59	1,838,200
	4,000,000- 5,000,000	63	2,468,200
	5,000,000- 6,000,000	67	3,138,200
	6,000,000- 7,000,000	70	3,838,200
	7,000,000- 8,000,000	73	4,568,200
	8,000,000- 9,000,000	76	5,328,200
	9,000,000- 10,000,000	76	6,088,200
	over 10,000,000	77	

The tax so imposed, however, may be credited with the amount of any inheritance taxes paid to the states up to a maximum of 80 per cent of the tax due the federal government under the rates and deductions, including the \$100,000 exemption, of the Revenue Act of 1926. Computation of the estate tax due under the rates prescribed by the Revenue Act of 1926 is merely for the purpose of determining this possible 80 per cent offset. It may seem anomalous to subtract from estate taxes due under the rates of the current revenue act credits allowed under the Act of 1926. The reason is simple, however. Under recent revenue acts the rates of estate taxation were sharply advanced, the present maximum rate of 77 per cent being nearly four times as high as it had been in 1926. If the increased federal estate taxes could be offset 80 per cent by inheritance taxes paid the states, the states would find it to their interest to readjust their own rates so as to absorb this maximum amount of 80 per cent, and in consequence the federal government would receive relatively little additional revenue. By allowing the same offsetting credits as provided in the Revenue Act of 1926, Congress did not disturb the existing relation with the states, and at the same time it secured for the federal government the entire increase in revenue attributable to its own advance of the rates of estate taxation.

In order to prevent the avoidance of death taxes by making gifts, which represent substantial parts of a person's estate, the federal government taxes such gifts. The present gift law, which has been in effect since 1932, establishes rates which are three-fourths as high as those carried in the federal estate tax law. Exemptions are allowed but these are cumulative; successive gifts are added to determine whether the sum falls within the total statutory exemption. The present exemption is \$30,000 per donor in addition to an annual exemption from the gift tax of \$3000 per donee.

How the states tax inheritances. The practice of the forty-seven American states which tax inheritances has been very confusing. Not until recently were there any promising indications that the chaos would some day be less. The states have different policies with reference to the taxation of real and personal property, of tangibles and intangibles. Much of the confusion is due to the eagerness of the states, prompted by their own fiscal needs, to get all the revenue they can. Consequently they tax what they can find within their own tax jurisdictions.

It is the universal practice for the state of which the deceased has been a resident to tax his entire estate, although the tax is usually charged against the beneficiaries on the separate legacies they receive. The real property of the estate, however, is almost always taxed only at situs. The estate of a Wisconsin decedent owning real estate in Michigan, for example, is taxed only by Michigan on the Michigan real estate.

If the deceased owned the stocks and bonds of corporations chartered

by states other than the state of his domicile, his estate at one time had to pay inheritance taxes to the state or states of incorporation before the securities could be transferred to the new owners. As a result of an adverse decision by the United States Supreme Court in 1932, this practice has been dropped; at present the only such taxes which must be paid are the ordinary taxes payable to the state and federal governments upon the transfer of securities from one owner to another. In the case of coupon bonds, which are not registered and are payable to bearer, the attempt of a state to collect a tax from the estate of a non-resident decedent is usually futile, unless the bonds happen to be on deposit or in custody somewhere in the state.

Some states seek to tax intangibles, such as corporation securities, even though the deceased was not a resident of the state and the corporations involved are chartered in other states. The mere physical presence of the securities in the state, such as in some safe deposit box, is the basis of a claim for taxes.

Some states have even sought to tax the transfer of stocks of corporations not incorporated in the state when held by non-resident decedents merely because the corporation concerned held property or did business within the state. This practice, however, the United States Supreme Court has declared illegal on the ground that the state imposing such a tax lacks jurisdiction.¹⁷ Obviously, in the case of a non-resident decedent it had no tax jurisdiction over the person of the deceased. In this case the court held that the state was also without jurisdiction over property, since the property on which the tax was based belonged to a corporation chartered by some other state and not directly in part either to the deceased individual or to his estate.

State inheritance laws allow the same types of deductions that are recognized in the federal statute. The amount that is exempt is usually small and varies markedly not only from state to state, but also with the degree of relationship between decedent and beneficiaries. The rates vary from 1 to 40 per cent. They are characteristically progressive with reference both to the relationship between the deceased and the beneficiaries and to the amount of the legacy. The rates are typically low if the beneficiaries are close relatives, such as spouse, children, or parents. The rates rise sharply where there is remote relationship or no relationship at all; Wisconsin, for example, provides for a 40 per cent tax under certain conditions. For each class of beneficiaries the rates are progressive with the increasing size of legacies.

Are estate and inheritance taxes good taxes? Hardly any tax can be more easily or fully justified than a tax upon the transmission of property from the dead to the living. Whether it be a tax upon the net value of the

¹⁷ Rhode Island Hospital Trust Co. v. Doughton, 270 U.S. 69 (1926).

estate as a whole or upon the value of each legacy is a matter of detail. Inheritance taxes (popularly the term is used to cover estate as well as inheritance taxes) conform to both the benefits-received and the ability-to-pay principles of taxation. The right to direct what disposition shall be made of one's property after death is neither a natural right nor a right inherent in the institution of property. It is a right conferred by the state; in both Great Britain and the United States it is conferred by statute. The state which grants the right of inheritance, and thereby confers a benefit upon the recipient of a legacy, may very properly place any reasonable limitation that it sees fit upon the right of inheritance. Taxation of the inheritance is such a limitation. The service that the state renders the recipient of a legacy by maintaining the institution of inheritance is so valuable to him that he can well afford to pay a tax for the benefit received. This is looking at the justice of the tax from the point of view of the beneficiary. But the benefits principle is just as applicable from the point of view of the person who bequeaths his property. All accumulations of property are made as a result of the security furnished by the state. In a very substantial way the state is the partner of the individual in the accumulation of wealth. The collection of estate and inheritance taxes is a thoroughly justifiable way for the state to participate in the results of this copartnership.

Fully as effective an argument for inheritance taxes can be based upon the principle of ability to pay. The transfer of property to new owners usually conveys the requisite ability to pay taxes. The beneficiaries are normally anxious to get control of the property to which they are legally entitled and are willing to pay the necessary inheritance taxes, even if this means the liquidation of some of the assets of the estate. The dead are not present to protest. Inheritance taxes catch property "on the wing." They are imposed after the demise of the former owner and before the property can legally come into the possession of the new owners. Consequently such taxes, large as they sometimes are, are much more easily borne than most taxes.

In addition to the sheer justice of such taxes, inheritance taxes have the usual merits of good taxes. Under well-drawn laws, except for the possibility of conflicting tax jurisdictions, they are certain, convenient as to time of payment, and economical in collection. Their productivity, however, is apt to fluctuate, particularly in the less populous taxing districts.

Quite apart from their justification as desirable fiscal measures, inheritance taxes are defended as means for promoting the diffusion of wealth. It is a fact that in virtually every country wealth is very unequally distributed. Usually a very small percentage of the people own a very large part of the country's wealth. Excessive concentration of wealth is a menace to

a democracy. But unless there are evasions and subterfuges, all this wealth must change hands every generation. Here is the opportunity for the imposition of a severe inheritance tax that will aid in redistributing wealth, if the government is minded to enact such a law. The federal revenue act now in effect goes incomparably further in the direction of wealth redistribution than the early estate and inheritance tax laws enacted by Congress and the state legislatures. It remains to be seen what the effects will be.

The use of inheritance taxes, however, easily lends itself to abuse. Multiple taxation of the assets of an estate by governments claiming jurisdiction, which in some cases has resulted in piling up tax claims amounting to more than 100 per cent of the value of the estate, is a conspicuous example of such abuse. Inheritance taxes, moreover, can be so heavy as to handicap the accumulation of capital. It is doubtful that inheritance taxes actually discourage men in "making money." It is conceivable that they may discourage men in saving money. Men "make money" for the love of the game, and for the power, prestige, and life of leisure which the possession of money makes possible. Men save money in part because they wish to provide for their own security and the future of their children. If the inheritance tax rates, however, are neither confiscatory nor so high as to discourage effort, it is an open question whether they may not actually stimulate men to work and to save the more in order to provide what they regard as an adequate net estate for their children. Finally, there is the contention that very high rates of inheritance taxation may mean the use of capital for current expenditures. This is the favorite objection of those who oppose the taxation of inheritances. To use capital for current expenses, they say, is as improvident as to eat up the supply of seed corn. Inheritance taxes, they contend, tear down that which it has taken a life time to build up. They penalize the thrifty and allow the spend-thrift to go free. Is there any truth in this contention? It all depends. If inheritance taxes are used as substitutes for other taxes, and if in consequence some persons can save more than would otherwise be possible, there is at least an offset here to the dissipation of capital. It depends, furthermore, on what use the government makes of the inheritance taxes it collects. If these are used for productive purposes, there is no capital loss to society, even though individuals may have lost some of their assets. On the other hand, there is always a chance that inefficient or dishonest government may squander its inheritance taxes in riotous living. In the United States it cannot be seriously argued that inheritance taxation has resulted in the dissipation of capital; the value of our capital runs into hundreds of billions of dollars and hardly more than 500 millions of dollars has until recently been collected annually by the federal and state governments in the form of estate, inheritance, and gift taxes.

SOURCES OF PUBLIC REVENUE IN THE UNITED STATES

Some idea of the relative importance of these different forms of taxation in the revenues of the United States Government, the states, and larger cities may be gathered from the tables and diagrams, given on pages 804-808, for the most recent years available.

THE SHIFTING AND INCIDENCE OF TAXES

In all forms of taxation, such as the six principal types just considered—taxes on property, business, consumption, sales, income, and inheritance—a question of major importance is this: Can the tax be shifted, or must it be borne by the person against whom it is charged? Shifting means transferring the burden of the tax. The person who first pays the tax reimburses himself in subsequent price transactions. By the incidence of a tax is meant the final location of the burden of the tax. Some taxes are regularly shifted, and when levied it is expected that they will be shifted; the burden of others rests where it is imposed. Of the taxes that are shifted some are shifted in part, others in entirety, and still others by more than the amount of the tax. The shifting of taxes should not be confused with the evasion of taxes. When a tax is evaded, the government receives no revenue. The tax in question simply is not paid by anyone. When a tax is shifted, the government receives the revenue from the person against whom it is levied, but he passes the burden on to someone else. He acts as the government's collection agency.

There is no more perplexing question in the whole field of public finance than that of the shifting and incidence of taxes. It is important because the ultimate incidence of the tax determines where the real burden of the tax rests. Can a given tax be shifted? It can only be shifted if there is a transaction subsequent to the imposition of the tax in which the tax can be passed on. But even so, whether a tax can be shifted depends upon the answer to still another question, namely, What is the effect of the tax upon the future demand for and supply of that which is taxed? If the demand for a taxed good, such as tobacco, is relatively inelastic, the chances are that the tax will be completely shifted and the consumer will pay the tax rather than go without the good or reduce his consumption. On the side of supply, taxes can ordinarily be shifted only when they bring about an increase in the cost of operation for all producers affected. This usually results in decreased output because some of the producers, particularly those near the margin, cannot stand the financial strain of selling at a loss. Decrease in the output permits higher prices. Whenever it is possible to secure higher prices, it is possible, wholly or in part, to shift the tax. If the tax, however, is imposed upon something the supply of

ORDINARY RECEIPTS OF FEDERAL GOVERNMENT CLASSIFIED ACCORDING TO
MAJOR SOURCES FOR THE FISCAL YEAR 1949

	<i>Thousands of Dollars</i>	<i>Per Cent of Total</i>
Income tax		
Corporation	11,342,644	27.77
Individual	18,051,822	44.19
Excess profits tax	211,025	0.15
Capital stock tax	6,138	0.01
Estate tax	735,781	1.80
Gift tax	60,757	0.15
Liquor taxes	2,210,601	5.41
Tobacco taxes	1,321,875	3.24
Stamp taxes	72,828	0.18
Manufacturers' excise taxes	1,771,533	4.34
Retailers' excise taxes	449,211	1.10
Employment taxes	2,476,113	6.06
Miscellaneous taxes	1,752,792	4.29
Customs duties	384,139	0.94
Total	<u>\$40,847,459</u>	<u>99.99</u>

Annual Report of the Secretary of the Treasury for the Fiscal Year Ended June 30, 1949, pp. 389-94.

MAJOR SOURCES OF REVENUE RECEIPTS OF STATES, 1949

<i>Revenue Receipts</i>	<i>Millions of Dollars</i>	<i>Per Cent of Total</i>
Income tax		
Corporation	641	5.83
Individual	593	5.40
Death and gift taxes	176	1.60
General sales and gross receipts	1,609	14.64
Motor vehicle fuel taxes	1,361	12.39
Other sales and excise taxes	1,394	12.69
License fees and privilege taxes	1,089	9.91
Property taxes	276	2.51
Severance taxes	201	1.83
Unemployment compensation tax	973	8.85
Miscellaneous taxes	35	0.32
Aid received from other governments		
Federal	1,705	15.52
Other	55	0.50
Charges and miscellaneous	878	7.90
Total	<u>\$10,986</u>	<u>99.89</u>

Department of Commerce, Bureau of the Census, *State Tax Collections in 1950*, p. 3. Items rearranged and percentages computed.

MAJOR SOURCES OF REVENUE RECEIPTS FOR CITIES OF 25,000 POPULATION AND OVER, 1948 (397 cities)

<i>Revenue Receipts</i>	<i>Thousands of Dollars</i>	<i>Per Cent of Total</i>
Property taxes	2,058,183	51.19
Sales and gross receipts taxes	345,608	8.59
Licenses, permits and other fees	218,285	5.43
Aid received from other governments		
State grants	693,467	17.25
Other grants	46,121	1.14
Charges for current services	205,220	5.10
Contributions from enterprises	62,247	1.55
Charges and miscellaneous	391,804	9.74
Total	\$4,020,935	99.99

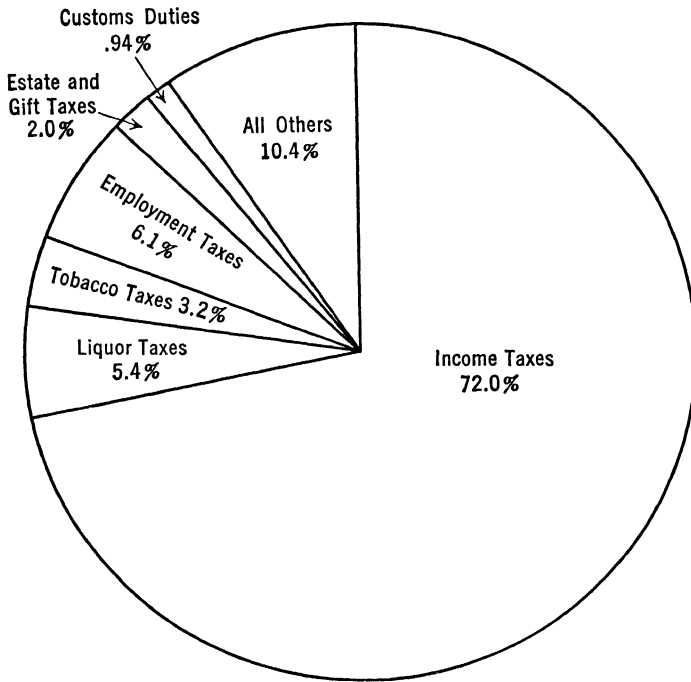
U. S. Department of Commerce, Bureau of the Census, *Compendium of City Government Finances in 1948*, pp 5-6.

which cannot readily be changed, it is difficult, if not impossible, to shift the tax. To shift taxes one must have power over the supply so as to be able to raise the price.

A few illustrations of common taxes will serve to show the application of this basic principle underlying shifting. A general poll-tax of \$2 for every person between the ages of twenty-one and sixty-five cannot be shifted. There is no one to whom the tax can be passed on in subsequent business transactions. It must rest where it is imposed.

A personal property tax on consumption goods in the possession of the final consumers—a tax on pianos or automobiles, for example—cannot be shifted. Here again there is no price transaction, subsequent to the imposition of the tax, which could be affected by the tax.

A tax on the income of land, known as its economic rent, or on the value of land obtained by the capitalization of its economic rent, cannot be shifted. When the government taxes the income of land and the land values based upon such income, it virtually takes for its own permanent use part of the value of the land. When the tax is imposed it must be borne by the owner of the land. It can not be shifted, for subsequent purchasers, if they are intelligent, will capitalize only the new net income of the land. If a 160-acre farm yields a net income of \$10 per acre, and if the current rate on farm investments is 5 per cent, the farm may be said to be worth \$32,000. But if a new tax of \$1 per acre is imposed, the net income is decreased correspondingly, and, other conditions remaining constant, the farm will now be worth only \$28,800. A new land tax must be borne by the owner at the time; an old land tax is capitalized and deducted from the price offered at the time of purchase. This is what is meant by saying,

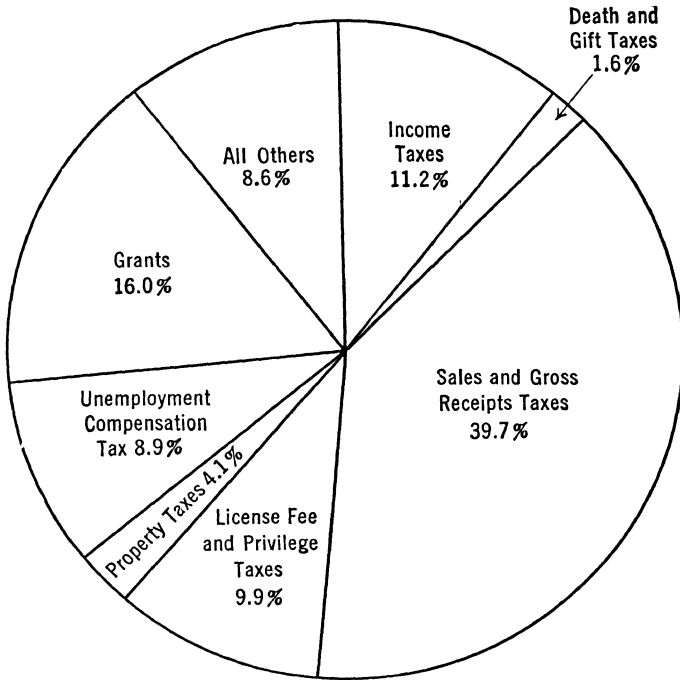


MAJOR SOURCES OF FEDERAL GOVERNMENT REVENUE COLLECTIONS, 1949

though the statement is not strictly true, that old land taxes are “burdenless taxes.” It is true, however, that a new tax on land income cannot be shifted by charging higher rent, for presumably the landowner is already getting the full economic rent; or by charging higher prices, for these are determined at the margin where there is no economic rent to be taxed.

In general, personal income taxes and inheritance taxes cannot be shifted. There is no one beyond the income recipient or the beneficiary to bear the tax. Similarly, taxes on monopoly profits cannot be passed on. These are taxes on surplus. In fixing the price of what it has to sell, the monopoly has already arrived at a figure which will yield the highest net returns. The imposition of a tax on monopoly profits will not change the price at which the most profitable business can be done.

The situation with reference to shifting, however, is very different in the cases of certain business taxes, sales taxes, excise taxes, and customs duties. In general, these are shifted, as a whole or in part. Under certain conditions they may not be shifted at all, but at other times they are pyramided as they are passed on, so that the ultimate increase in price is greater than the original tax. Such taxes are normally shifted, not because the tax stimulates demand for the good that is taxed, but because it tends



MAJOR SOURCES OF REVENUE RECEIPTS OF STATES, 1949

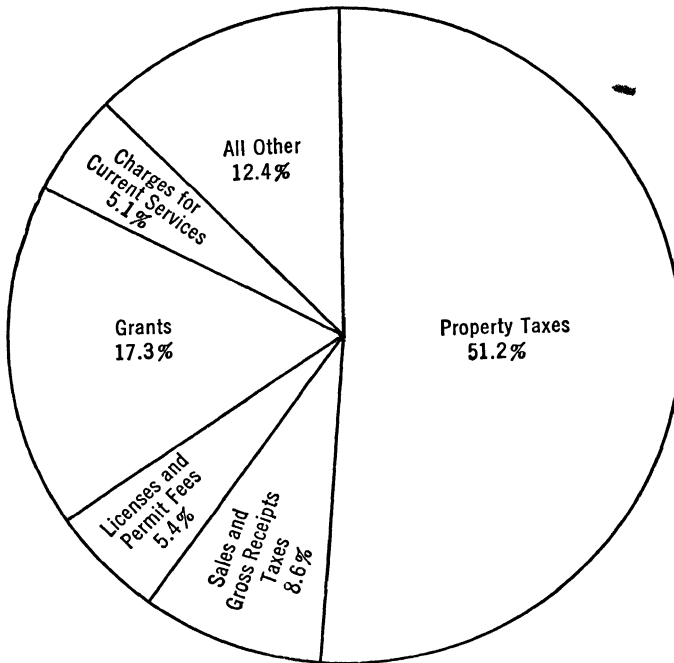
to restrict the supply. The imposition of the tax raises the cost of production for all producers directly affected by the tax. The demand is apt to decline with an increase in price. This causes loss to marginal producers, and such sub-marginal producers as have been "hanging on" in the desperate hope that conditions would improve. With the elimination of some producers and the resulting curtailment of supply, an increase in price becomes possible. This restores the usual rate of profits and amounts to a shifting of the tax. The shifting of taxes is not as general as is popularly supposed. If it were, taxes new and old would hardly meet with the vigorous opposition they usually encounter, but would be welcomed as an opportunity to "make a little extra money" through the shifting process.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. That tax is best which is productive of most revenue.
2. A man's ability to pay taxes is exactly doubled when his income is doubled.



MAJOR SOURCES OF REVENUE FOR CITIES OF 25,000
POPULATION AND OVER, 1948 (397 cities)

3. A tax may be proportional in form but non-proportional in effect.
4. In spite of certain injustices connected with it, our general property tax is probably our best tax, since it cannot be shifted.
5. Complete listing and fair appraisal are more important in administering the real property tax than is the rate of assessment.
6. Corporate taxation in the United States at present leaves no financial incentive to increase production.
7. The government has a better right to tax property than to tax income, because property rights are guaranteed by the government and income is not.
8. There is no essential difference between a sales tax and an income tax, since, in general, the larger an individual's income the greater his contribution to government under either method of taxation.
9. A good income tax collects from all persons the same percentage of their net incomes and makes the collection concurrent with the earning of the income.
10. There is no distinction between an estate and an inheritance tax, because both are levied at the time of death.
11. A tax on economic rent cannot be shifted.
12. It is more important to consider the final incidence of a tax than the point of initial imposition.
13. The shifting and evasion of taxes have the same results, since in neither case is the tax paid.

14. The ability to shift a tax is determined by conditions affecting both the demand for and supply of the good which is taxed.
15. Sales taxes are almost always shifted forward to the final consumer, and seldom shifted backward to the primary producers or manufacturers.
16. In order to simplify our tax system, it would be desirable to derive all public revenues from an income tax.

B

1. Analyze each of the following types of taxes with respect to (1) the extent to which it conforms to the criteria of good taxes, (2) the extent to which and the conditions under which it may be shifted, and (3) upon whom the burden of the tax finally rests.
 - a. A general property tax
 - b. A personal income tax
 - c. A corporate income tax
 - d. A general sales tax
 - e. A selective sales tax
 - f. Estate and inheritance taxes
2. A professional person, supporting his wife and two dependent children, had the following income and expenses this past year: fees, \$15,000; dividends and interest, \$5,000; interest on a \$10,000 mortgage on his house, \$500; taxes on his house, \$600; contributions to religious and charitable organizations, \$900; office and other expenses in making his income, \$3,000. Neither his wife nor children had any additional income. Compute his federal income tax.
3. Suppose that the market demand and supply for cigarettes is as follows:

<i>Price per Package</i>	<i>Demand in Millions of Packages</i>	<i>Supply in Millions of Packages</i>
\$0.10	2,800	600
.12	2,000	650
.14	1,600	700
.16	1,600	800
.18	1,600	1,000
.20	1,600	1,600
.22	1,600	2,200
.24	1,600	2,400
.26	1,600	2,600
.28	800	2,550
.30	400	2,600

- a. Graph the above schedules, and determine the selling price per package of cigarettes and the number of packages sold.
- b. Suppose that an additional tax amounting to 4¢ per package were imposed by the federal government upon the manufacturer, and that the demand schedule as stated above remained the same.
 - (1) Construct a new supply schedule after the imposition of the 4¢ per package tax.

- (2) Plot the new supply schedule, and determine the new selling price per package and the number of packages sold.
 - (3) How much of the additional tax has been shifted to the consumer? How much has been borne by the manufacturer?
- c. Suppose that, instead of adding a tax of 4¢ per package, the federal government added a tax amounting to 8¢ per package upon the manufacturer, and that the demand schedule as stated above remained the same.
- (1) Construct a new supply schedule after the imposition of the 8¢ per package tax.
 - (2) Plot the new supply schedule, and determine the new selling price per package and the number of packages sold.
 - (3) How much of the additional tax has been shifted to the consumer? How much has been borne by the manufacturer?

(For Suggestions for Further Reading see close of Chapter XXXVI.)

CHAPTER XXXVI

Public Loans and Debts

GOVERNMENTS, LIKE individuals, sometimes find it difficult to live within their incomes. Some are chronically in debt. It is hard to see how some will ever escape. Some have bowed to what they regarded the inevitable and have accepted the odium of defaulting on their obligations. Others, on the contrary, have borrowed when stern necessity gave them no choice, but have met their obligations as they matured and have permitted no blot on the escutcheon of their fiscal honor. Some few have been fortunate enough not to experience the difficulties of debt at all.

THE MAGNITUDE OF PUBLIC DEBTS

How staggering both the possibility and actuality of public debt burdens are is best understood when we remember that almost every unit of government has the constitutional or legal right to borrow money. Not only the nation and state, but counties, cities, villages, towns, boroughs, as well as schools, drainage, fire, road, and poor relief districts (and this list is not exhaustive) all may borrow money. Taxpayers the world over are groaning under an accumulation of public debts that in some places seems, and in others actually is, impossible to bear. The division of government that is free from debt is the exception rather than the rule.

Most conspicuous and best known among public debts are the large national debts. In order to have some standard of comparison it is well to note that prior to the First World War the national debt of the United States was about \$1,000,000,000. Until the World War period the peak of our national debt had stood at \$2,844,000,000, a sum reached in August, 1865, and for which the Civil War was almost wholly responsible. Present national debts, not only of the United States but of European countries, offer a striking contrast to these figures. They demonstrate in an inescapable way what colossal financial burdens war entails. What might have been done in a constructive way for the promotion of social welfare through the expenditure of an equal amount of money must be left to the imagination to contemplate. The following table shows the growth in the gross national debt of the United States. The effects upon the national debt of

the First World War, the great depression of the thirties, and the Second World War are written in figures so large that he who runs may read.

GROSS NATIONAL DEBT OF THE UNITED STATES

<i>Fiscal Year Ending June 30</i>	<i>Amount</i>	<i>Per Capita</i>
1800	\$ 82,976,000	\$15.87
1810	53,173,000	7.46
1820	91,016,000	9.58
1830	48,565,000	3.83
1840	3,573,000	.21
1850	63,453,000	2.77
1860	64,844,000	2.06
1865	2,677,929,000	77.07
1870	2,436,453,000	63.19
1880	2,090,909,000	41.69
1890	1,122,397,000	17.92
1900	1,263,417,000	16.56
1910	1,146,940,000	12.69
1915	1,191,264,000	11.83
1916	1,225,146,000	11.96
1917	2,975,619,000	28.57
1918	12,243,629,000	115.65
1920	24,297,918,000	228.32
1925	20,516,272,000	177.82
1930	16,185,308,000	131.49
1935	28,701,167,000	225.07
1940	42,971,044,000	325.66
1941	48,978,919,000	368.08
1942	72,495,183,000	540.68
1943	136,696,090,000	1,007.64
1944	201,003,000,000	1,455.67
1945	258,682,000,000	1,853.21
1946	269,422,000,000	1,907.62
1947	258,286,000,000	1,793.23
1948	252,292,000,000	1,721.29
1949	252,798,000,000	
1950	257,377,000,000	

Statistical Abstract of the United States, 1949, p. 379. Data for 1949 and 1950, Federal Reserve Bulletin, Vol. 36 (1950), p. 1221. If the population in 1950 is taken as 150,000,000, the per capita debt would be \$1,715.80.

Less conspicuous than the national debt, but by no means negligible, are the public debts of intra-national governmental units. A survey by the Bureau of the Census placed the public debt of American state and local governments on June 30, 1948 at \$17,772,000,000, distributed as follows: ¹

¹ *Statistical Abstract of the United States, 1949, p. 395.*

States	\$3,722,000,000
Counties	1,408,000,000
Cities	8,859,000,000
Townships	276,000,000
School districts	1,560,000,000
Special districts	2,877,000,000
Total	\$18,644,000,000

Total is less than the sum of the amounts shown because of exclusion of state debts incurred for loans to local governments, which duplicate local obligations held by state governments

JUSTIFICATION OF PUBLIC DEBTS

What justification, if any, is there for such large-scale public borrowing? Why should not the state live within its income? There are two obvious reasons. One is the necessity of borrowing to provide immediate funds for investment in public works. The other is the necessity of borrowing to meet the extraordinary expenditures of a great national emergency, like war. The former is the chief cause of all local public debts. The latter accounts for much the greater part of the national debts of the world.

Public debt due to investment in public works. Public indebtedness that is incurred in order to provide funds for public works is sometimes an investment on capital account, and at other times an investment in non-income-producing improvements. Whenever a government undertakes large-scale capital enterprises, such as the construction or acquisition of municipal utilities, the construction and operation of railroads or other communication systems, the development of electric power projects, it neither can nor ought to meet the entire cost of such enterprises out of current revenues. To try to do so would mean the imposition of an undue, and frequently unbearable, burden upon a given generation of taxpayers. The government is fully justified in borrowing for such purposes. Such government loans, together with the interest upon them, can gradually be repaid out of the earnings of the public enterprises. If this proves impossible or for some other reason socially undesirable, the operating deficit and loss on the capital investment must of course be met out of taxes.

There are also non-income-yielding public works which require the initial expenditure of large sums. The construction of governmental buildings and school-houses, of streets and highways, furnishes instances in point. Some governments find it impossible to defray such expenditures out of current revenues and consequently must borrow the required funds. Such cases of borrowing, however, present some elements of danger. It is important that the loans should be completely extinguished during the life of the improvements. Public works that have passed on are about as cheerfully paid for as dead horses. If the making of non-income-producing

improvements is regularly recurrent, it is wiser to anticipate such needs in the levying of taxes than to resort to the public credit.

If all, or most, of the public debt of the world represented investments in public improvements, it would not present a very serious problem. But most of it has been incurred to meet disasters that have confronted the nations of the world, rather than to build public works. Public debts are mainly due to the disaster of war.

Public debt due to war and other emergencies. War is like a great holocaust—it calls for emergency action. This is true not only in supplying men and materials, but also in providing money. In war money is needed at once. The problem is how to get it. The chief source of governmental revenue is taxation. To get all or even the greater part of the money needed through the regular channels of taxation is impossible for even the wealthiest nations. One reason is that the levying and collection of taxes require much time. And loss of time may spell defeat, if the enemy is more fortunately situated. Moreover, to try to collect all the needed war funds by immediate taxation would have a very disrupting influence upon the economic life of a nation, at the very time when the maximum efficiency is imperative. Taxes that are beyond the most heroic efforts of a people to bear would have so disturbing an effect upon their morale as to invite disaster. There are always some idle savings, however, or some capital that is not permanently invested, which can be borrowed by the government and mobilized for war. A policy of governmental borrowing is also apt to stimulate necessary saving in a way in which a policy of drastic taxation will not. For these reasons it is not surprising that, confronted by the fact of war, every nation in the past has seen fit to borrow. Some nations, moreover, wrongly guided by short-sighted leaders, have borrowed almost the whole of their war expenditures. Both France and Germany in the First World War counted heavily upon the receipt of reparations from the vanquished enemy with which to repay a large part of the amounts they had borrowed. The World War period witnessed the most extensive borrowing the world had known. Of the major powers only Great Britain and the United States raised any very substantial part of their war-time revenues through taxation. The direct money outlay of Great Britain on account of the war, inclusive of net loans to her allies, was about forty-four billions of dollars, of which about one fourth came from taxation.² The money cost of the war to the United States, in spite of our late entrance into the war, attained the same proportions as that of the leading European belligerents. Inclusive of the loans to our associated powers (the full recovery of which is now more doubtful than ever), our direct total

² E. L. Bogart, *Direct and Indirect Costs of the Great World War* (New York, Oxford University Press, 1919), pp. 39-42; also Harvey E. Fisk, *The Inter-Ally Debts* (New York, Bankers Trust Company, 1924), p. 325.

expenditures on account of the war through the fiscal year ending in 1920 amounted to over thirty-six billions of dollars.³ Of this amount about one third was raised by taxation. The total direct cost of the war to all the belligerent nations, when reduced to dollars at par of exchange, was over \$208,000,000,000. This total makes no allowance for changes in the purchasing power of the currencies of the warring nations, resulting from whatever degree of inflation existed. When corrected for such changes in purchasing power by reducing "current dollars" to "1913 dollars," the direct money cost of the war still approximates eighty billions of dollars in gold. Only about 3 per cent of the war-time receipts of the belligerent nations over and above their normal pre-war revenues were raised by taxation; all the rest was borrowed either at home or abroad.⁴

That in spite of drastic taxation it is necessary to resort to the use of the public credit in financing a war, the Second World War demonstrated anew. At the close of more than eleven years as Secretary of the Treasury, Henry Morgenthau, Jr. issued a report which placed the total expenditures of the United States Government from July 1, 1940, through July 9, 1945, at approximately \$325,000,000,000. To cover these expenditures the government collected \$134,000,000,000 in taxes and other revenues, which represented 41 per cent of the expenditures. All the rest had to be borrowed. In spite of heavy taxation we failed to raise even one-half of the war cost by taxation.

While the necessity of obtaining immediate war funds in such a way as to disturb economic life as little as possible justifies some borrowing, it does not excuse a nation for failure to raise any considerable part of the cost of war through taxation. The government that fails to tax its citizens heavily during the period of war literally misses a golden opportunity to impose heavier taxes at a time when patriotism runs high and taxes will be borne more cheerfully than at any other time. There are also war profits which can and ought to be "conscripted." If the government unhesitatingly conscripts men for military service, with the certainty that many will never return alive, why should it not "conscript" war profits, particularly when such taxation still leaves all the productive capital intact? In every war there is either previous extravagance which must be curbed, or extravagance which arises out of the war itself. In either case, why should not the government take advantage of the situation both to raise necessary revenue and to exercise what control it can over unnecessary consumption? The *physical cost* of every war must be met with lives and goods in being, no matter how the war is financed. The best time to meet as large a part as possible of the *money cost* is while the war is on.

³ Fisk, *op. cit.*, p. 325.

⁴ Fisk, *op. cit.*, p. 5. Cf. also E. R. A. Seligman, "The Cost of the War and How It Was Met," *American Economic Review*, Vol. 9 (1919), p. 770.

To meet all of the money cost of a war, as well as the costs of reconstruction, through taxation after the war is over, even though the system of taxation is equitable, is apt to prove intolerable. It is possible to wage a great war efficiently with funds almost wholly borrowed. Both France and Germany did it in the period of the First World War. But the post-war effects of such almost exclusive reliance upon the public credit are apt to prove disastrous. The whole German financial structure collapsed. France barely escaped a complete debacle of her financial system by resorting to the revalorization or devaluation of the franc at about one fifth of its former value.

War, however, is not the only national emergency that necessitates large-scale borrowing. Fighting the great depression of the nineteen-thirties resulted in a greater national deficit for the United States than fighting in the First World War. In the decade represented by the fiscal years 1931-1940 the national deficit amounted to over twenty-eight billion dollars. The gross national debt at the close of the fiscal year 1940, stood at the impressive figure of \$42,971,044,000 exclusive of the fully guaranteed obligations of governmental agencies. Expenditures by the federal government alone for "recovery and relief" in the decade under consideration approximated twenty-three billion dollars. And this sum did not include expenditures of such governmental agencies as the Agricultural Adjustment Administration, the Farm Credit Administration, and the Civilian Conservation Corps, which were not "earmarked" in the budget as for "recovery and relief," even though the promotion of recovery was their avowed purpose. Unlike periods of war, depression periods are characterized by a shrinking national income, which results in lower revenues for government in spite of mounting costs. In the artificial prosperity of war substantially increased revenues can be collected.

ECONOMIC EFFECTS OF PUBLIC DEBTS

What are the more important economic effects of the large-scale use of public credit? Since the public debts of the world, directly and indirectly, are very largely attributable to war, the discussion may be confined to the economic effects of war debts.

Increase in costs. One very obvious result of war financing through loans rather than taxes is an increase in money costs. Borrowing as a substitute for taxation increases the cost to the government, for the loans must ultimately be repaid with interest. When the proceeds of public loans are invested in public works, this is not usually a source of worry, because there is presumably an offsetting steady stream of income. But when the proceeds of public loans have been literally blown up in devastating war, the payment of both principal and interest must come out

of the pockets of the people who are taxed. The loans are not self-liquidating. European nations borrowed approximately eleven billions of dollars from the United States during the period of the First World War. If these debts are paid, even at the low interest rates stipulated in the funding agreements, ranging from an average rate of 0.4 per cent in the case of Italy to 3.3 per cent for Great Britain, our debtor nations will pay back over a period of sixty-two years a total of approximately twenty-two billions of dollars. The extra sum of eleven billions represents interest and is an additional money cost of the war.

The total interest-bearing debt of the United States Government at the close of the fiscal year ending June 30, 1950, amounted to \$255,229,000,000 (the total gross debt was \$2,148,000,000 higher). The annual interest on this debt calls for a payment of \$5,104,580,000 if the interest rate averages no more than 2 per cent. More than five billion dollars per year in interest (with the certainty of still higher payments doubtless reaching six billion dollars) is what it is costing the United States Treasury to maintain its national debt structure.

Inflation of prices. Extensive borrowing makes likely, if not inevitable a rise of prices; the borrowing may prove inflationary. When a man pays taxes, or buys bonds out of current savings, he transfers some of his purchasing power to the government and only the government can use the purchasing power so conveyed. This represents sound financing by the government. But when the government is forced to borrow from the commercial banks directly, it exchanges its bonds or other obligations for deposit credit at the banks. This brings new deposit-dollars into circulation without affecting the volume of those already in circulation, and helps to build up a bigger inflation potential.⁵ The same effect is produced when the commercial banks buy government obligations in the open market. They restore purchasing power to those from whom they buy the bonds, and thus indirectly add to the sum total of purchasing power let loose in the economy. Borrowing from the banks is the usual procedure at the outbreak of war. War, like death in the case of an individual, rarely finds a nation ready—at least financially ready. Emergency financing becomes necessary. The almost invariable procedure is for the government to offer its treasury bills or certificates of indebtedness (which are interest-bearing short-term notes) to the banks for discount, and to receive in exchange deposit credit.

Government borrowing always carries the risk of some inflation of prices. The recurrent expansion of bank credit may be just as effective in this respect as the forced injection into the circulation of government paper money. With the rise in prices that is likely to occur, everything that the government must buy in the prosecution of war costs more, just

⁵ Cf. Chap. XXVI, "Value of Money and General Price Changes," pp. 613-615.

as all private consumers find their bills higher. And the worst of it all is that the process of inflation usually gets out of hand. Inflation results in higher prices and higher prices lead to further inflation. When a nation once begins skidding on the treacherous highway of inflation it is almost impossible to apply the brakes without precipitating a wreck, and yet at the turn of the road a still greater crash awaits.

The shifting or reapportionment of war burdens. It is generally supposed that one important effect of financing a war through bonds rather than through taxes is the shifting of a large part of the cost of the war to future generations. To what extent, if any, is such shifting possible? The answer to this question turns on the distinction between the physical and the money cost of war. The physical cost of every war must be met by the generation that carries on the war. It cannot be shifted. Future generations will be poorer, to be sure, for the human and material resources that war has destroyed. A war is fought by the men of any generation who are able to bear arms, not by the unborn of future generations. It is fought with munitions and supplies already in existence or that are produced as they are needed. It is in this physical sense that every generation must pay the total cost of its own wars—that every war is fully paid for when it is over. But this is not equally true of the money cost of war. If a war is predominantly financed through the issue of bonds, the accumulated savings and credit of some of the people are used at once, but the payment of the money cost of the war by the people as a whole is deferred until such time in the future as the bonds are retired through the collection of taxes. The money cost of every war is borne whenever taxes are raised either to meet its direct outlays or to retire the bonds with which the war was temporarily financed. If all of the taxpayers of a country are also bondholders, their payments are like transferring money from one pocket to another. They pay out as taxpayers and take in as bondholders. There the analogy stops, however. It does not follow that the amount of taxes paid in any individual case equals what is received in the payment of principal and interest on the bonds. Taxation effects a reapportionment of the money burden of the war. It repays the bondholder for funds supplied during the war with funds collected from all the taxpayers both during and after the war. It is of course true that the people as a whole are neither richer nor poorer than they were before the payment of the bonds. What the taxpayers have lost the bondholders have gained. But the essential point to keep in mind with reference to war bonds and war taxes is this: bonds are a device for obtaining immediate funds; taxes are a means of distributing among the individuals and groups composing a people the money costs of the war in accordance with whatever principles of taxation are embodied in the fiscal system of a country. Taxes reapportion the money

burden of the war over whatever period of time is taken to retire the public debt created by war.

If important changes occur in the general level of prices, between the time that the debt was incurred and the bonds are paid, there is a further reapportionment of the money burden of war. This may weigh either more or less heavily upon future generations, depending upon whether the price level has moved up or down.

MEANS OF PAYING PUBLIC DEBTS

Public debts must be paid out of the revenues of government. If the debt has been incurred for a capital investment, the earnings from capital will help amortize the debt. But if the debt has been incurred to meet current deficits, ordinary or extraordinary, it must ultimately be paid out of taxes and other governmental revenues.

The payment of domestic debts. The payment of domestic debts presents an easier problem than the payment of foreign debts. If the debt is self-liquidating, it represents no drain upon the taxpayer. If the debt must be met out of taxes, at most it means the collection of taxes from all those liable for such payments in order to pay to some citizens the money that was borrowed from them. The payment of domestic debts effects a redistribution of income within a country. Provision for the payment of domestic debts is usually made either through the establishment of sinking funds or the issue of serial bonds. A sinking fund is a money fund into which stipulated revenues are paid by the government each year for the purpose of retiring or "sinking" the debt when it matures. It is the method adopted by Congress for the retirement of our debt growing out of the First World War. Our gross national debt had reached its war-time peak during the fiscal year 1919, when it stood at \$25,482,034,000. In the ensuing eleven years it was reduced by \$9,296,726,000, bringing it down to \$16,185,308,000 on June 30, 1930, after which it rose again on account of the large sums spent by the federal government for relief and recovery during the depression of the thirties, and for military purposes during the forties. It should be noted, however, that this amazing reduction in about the first decade after the war, when governmental expenses continued high, was possible only because the normal sinking fund receipts were augmented from other sources. During these eleven years \$1,488,720,450 of the amounts paid us by our foreign debtors in principal and interest were used in retiring our public debt. Surpluses in the treasury, due to an annual excess of receipts over expenditures, fortunately were also large, and these were applied to the retirement of the debt. Sinking funds are effective means of retiring indebtedness provided the necessary liqui-

dating funds are regularly collected. There is always the temptation to neglect this indispensable matter, however, in order temporarily to lighten the tax burden.

A more effective way to retire debts is through the issue of serial bonds. Under this plan the maturities of the bonds issued are arranged in a time series, a portion of the total issue being retired each year. If twenty-year serial bonds are issued, the entire debt is extinguished in twenty years by paying a designated amount, perhaps one twentieth, each year. This method of paying a debt has the undoubted advantage of compelling the government to begin raising revenue at once to meet the necessary redemption requirements. It avoids the risk of failure to provide an adequate sinking fund or of tampering with it if it actually is in process of accumulation. Serial bonds have become the favorite means of arranging for the settlement of the debts of local governmental units. They are the best possible device for settling debts incurred for public works, since there is no reason why the government cannot at once prepare for the gradual amortization of the debt. They are not well adapted, however, to the extinction of war debts created under the stress of an emergency; consequently our federal government has made no use of serial bond issues in connection with our national debt.

The payment of foreign debts. The payment of foreign debts is somewhat more difficult than the payment of domestic debts because it involves the actual transfer of commodities or services from the debtor country to other countries of the world. In meeting its foreign obligations a debtor country must first of all tax its citizens sufficiently to secure revenues in excess of its normal domestic expenditures by an amount equal to the payments to be made abroad. This in itself is a huge task, if the foreign debts are large, and may necessitate the curtailment of the expenses of the debtor government in addition to taxes so drastic as to reduce the standard of living of the people. But even after the taxes are collected, the task of the debtor government is usually not over. The pounds sterling or francs collected, for example, must be converted into American dollars if Great Britain and France are to pay their debts to the United States. How can this be done? By the governmental purchase of dollar exchange, which represents purchasing power in the United States. Normally, dollar exchange becomes available when Americans have bought commodities and services from the rest of the world. The goods, "visible or invisible," bought by Americans represent purchasing power in the United States to the sellers. These goods create the dollar exchange which any foreign debtor, private or public, must buy in order to discharge an obligation in or to the United States. In the long run the only effective way in which a nation can pay its foreign debts is, directly or indirectly, to build up an export balance over imports with the rest of the world. Such export bal-

ance is realized when the total value of the commodities exported plus services performed, such as carrying freight and passengers across the seas, insuring risks, and feeding, housing, and entertaining the citizens of other countries, is in excess of the value of the commodities and services imported. Conversely, the creditor nation must in the long run be willing to accept an excess of imports of commodities and services over exports. It does not follow that any particular debtor nation must create such an export balance in its trade with any particular creditor—France with the United States, for example. It does follow, however, that the debtor nation must achieve such an export balance in the totality of its trade with all the rest of the world if it is to make any progress in the liquidation of its debt.

The experiences of European countries and the United States in the attempted settlement of debts growing out of the First World War unmistakably demonstrated the economic difficulties involved for both debtor and creditor countries in the payment of huge foreign debts. As far as the inter-Allied debts of the time were concerned, Great Britain and the United States were the principal creditor nations, though France lent heavily to Belgium and Russia. Great Britain and the United States each lent in excess of eleven billions of dollars; Great Britain herself, however, borrowed nearly six and one-half billions, of which about two-thirds came from the United States.⁶ As far as debts to the United States were concerned, all were funded with payments spread over a period of sixty-two years beginning in 1923—1926.⁷ To the ordinary layman, not versed in the intricacies of public finance, these public debts still look like any other money obligation—debts that were fairly incurred and that ought in honor, and for safeguarding the future national credit, to be repaid. There is no question that the debts are fully recognized as legal obligations; the funding agreements give ample evidence of this. But there were economic considerations which have so far proved insurmountable in the discharge of these obligations and now make their payment only the remotest possibility. These economic considerations involved both the debtor countries' ability to pay and our own real willingness to receive. Because of our debtors' inability to pay in the midst of a world crisis, President Hoover declared a moratorium in 1931 which has not been lifted since. With the overwhelming financial burdens entailed by the waging of an even more

⁶ H. E. Fisk, *The Inter-Ally Debts* (New York, Bankers Trust Company, 1924), pp. 348-349.

⁷ For details concerning the present status of these debts, cf. *Combined Annual Reports of the World War Foreign Debt Commission of the United States* (1927). Of our leading debtors Great Britain agrees to pay annually from a minimum of 160 millions of dollars to a maximum of 180 millions; France begins with 30 millions of dollars per year and pays a maximum of 125 millions; Italy starts with 5 millions of dollars per year and eventually is to pay a maximum of 50 millions.

desperate war, our debtors' capacity to pay looks negligible for a long time to come.

If it be granted that through severe taxation and a stupendous increase in their export trade, our debtors would be able to repay us, the question would still remain: would we be willing to receive? Our willingness to receive is almost as questionable as our debtors' ability to pay. There is only one effective way in which we can receive payments on the debts: that is if our debtors, directly or indirectly, sell us more commodities and services than we sell them. They must be able to build up a huge surplus of exports over imports, including commodities and services. We must be willing to accept a corresponding excess of imports over exports. Temporarily, a debtor nation may delay the application of this principle by securing new foreign loans. In the years prior to the moratorium of 1931, our debtor nations paid us approximately \$2,627,580,000 in principal and interest on their indebtedness to the United States Government. During about the same period foreign securities were bought by private American investors to the amount of over \$10,000,000,000. As long as any debtor nation, through private or public borrowing, can secure a fresh extension of credit, it need have no worry concerning how it will secure the foreign exchange with which to discharge its old obligations. It is even conceivable that it may liquidate its public indebtedness entirely in this way; but in doing so it has merely shifted its creditors. Private individuals or banks have taken the creditor position of the foreign government. Payments based upon new loans do not really represent liquidation of debts at all. They merely transfer the creditor and postpone the day of reckoning. Ultimately, too, these private obligations must be met through a balance of exports, and the creditor nation must be willing to receive.

So-called "triangular trade" may obscure but does not deny the basic principle of surplus exports as the only effective means of paying international debts. France, for instance, may obtain dollar exchange with which to make payments on her obligations to the United States by selling manufactured goods to Brazil, who, in turn, may sell coffee to the United States. The coffee transaction creates the dollar exchange with which Brazil may pay France and which France can use in making a payment on her indebtedness to the United States. If trade is arranged in this way, however, the United States loses a corresponding opportunity to send exports to Brazil in exchange for the coffee.

Lessons in international finance learned in the hard school of experience of the First World War resulted in a more realistic international lending policy during the Second World War. In the United States it was made possible by the "Lend-Lease Act," passed early in 1941 and not terminated until the summer of 1945 after the fighting had ended. The distinctive thing about our lend-lease policy was its emphasis not upon

the lending and repayment of money, but upon the lending or leasing of goods, and upon payment in kind or in other ways acceptable to the lender. When President Roosevelt asked for the passage of the Lend-Lease bill in January, 1941, he said: "I do not recommend that we make them (the Allied Nations) a loan of dollars with which to pay for these weapons—a loan to be repaid in dollars." His recommendation was that we be "repaid in similar materials, or at our option in other goods of many kinds which they (the Allies) can produce and which we need." When a few months later the bill was written into law, it authorized the President to lend and to lease war supplies to those countries "whose defense he deems vital to the defense of the United States." On the matter of repayment the act provided "The terms and conditions upon which any foreign government receives any aid authorized shall be those 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."

The lend-lease legislation was a sort of mutual-aid pact, for after the United States entered the war there was a reverse flow of lend-lease goods as well, although of course the flow did not compare in volume with that from the United States. In the summer of 1945 after both Germany and Japan had collapsed, President Truman reported that lend-lease aid amounting to \$42 billion had been made available to our allies during the war. (Twenty-nine billion dollars went to the British Commonwealth of Nations and \$10 billion to Russia.) He made clear that lend-lease aid had brought us victory, and that the benefits to the United States could not be measured by an accounting in dollars. It seems highly probable that most of the help given under the lend-lease act will ultimately be written off the financial books as part of our contribution to the winning of the war. In any event whatever repayments are finally made are not to be such as to burden commerce between the United States and the country concerned. Among the offsetting credits already entered are the assistance that came to us in the form of "reverse lend-lease" aid, such as supplies for our armed forces quartered abroad. It has been reported that such aid exceeded six billion dollars (June 30, 1945), mainly received from countries belonging to the British Commonwealth of Nations.

The payment of debts, it must be remembered, differs from ordinary trade in this respect: it calls for no offsetting movement of exports at the time of debt repayment, because the compensating exports were made when the debt was first incurred. The natural thing for a creditor nation to do is to increase its imports of merchandise sufficiently to permit the gradual liquidation of the debt. But in the case of the United States this would most certainly mean a revision of our traditional protective tariff policy in the direction of materially lower duties. If a creditor nation is

unwilling to increase its imports, the debtor nations may be forced to decrease their own imports from the creditor nation in order to develop the exportable surplus with which to pay their debts. This may seriously affect the foreign export business of the creditor nation and consequently is not welcomed.

Much confidence is being placed in the so-called "invisible items" of the international balance of accounts—principally the rendition of such services to the creditor nation as providing for the comfort of its tourists, transporting its freight and passengers, and insuring a variety of its risks. Such services do indeed play a large part in international accounting. It is doubtless true that the easiest and simplest way for us to collect our debts in time of peace would be further to stimulate American travel and expenditures abroad. Prior to the First World War, it is estimated that American tourists and residents abroad spent from 100 to 200 millions of dollars annually; in the peak year, it is similarly estimated that they spent nearly 800 millions of dollars. The service payments in the international balance of accounts are most important items, but they are not equal to the task of offsetting both the private and the public claims of the United States against European countries. What a great creditor nation should be willing to do is to accept an excess of imports of merchandise over its own exports. But while we enjoy the status of a creditor nation, we still cling to the psychology and economics of a debtor nation, preferring a surplus of exports over imports. As a nation we are like an individual, who has reached a state of affluence that would permit him to enjoy returns from his investments, but whose old habits of trade are so deeply rooted as to make a change almost impossible.

THE PAYMENT OR REPUDIATION OF PUBLIC DEBTS

Because of the difficulty of securing and transferring the means of payment, public bonds are not always collectible by their owners. While it is both good morals and good business for a government to pay its debts, repudiation has not been uncommon.

The payment of public debts. What security does a government offer the purchasers of its bonds? Usually none, other than its written word. If the finances of a government are notoriously weak and its need for a foreign loan is desperate, public property may be offered as security. In extreme cases the foreign creditor may take charge of the customs administration of the debtor country in order to guarantee payment of interest and principal of the loan. Salvador refunded its national debt in 1923 by selling \$18,500,000 of its bonds in the United States on the security of 70 per cent of its customs receipts. Bolivia pledged its entire customs receipts to New York bankers to secure a loan of about \$29,000,000 in 1922. China

for years submitted to an international customs control to satisfy her creditors. Such cases are decidedly exceptional, however. What assurance does the holder of a public bond have that the government will redeem its promise to pay? Unless specific security has been given, which is rare, his main reliance must be upon the desire of every government to maintain its credit standing. Failure to do so at any given time may be fraught with peril for the future; it may mean the inability of the government to borrow in the open market on some future occasion when war or some other emergency makes borrowing imperative. Consequently most governments are meticulously scrupulous in meeting their obligations, and as a result government bonds are given premier standing in the securities markets of the world.

What failure to meet its obligations may do to a country's credit is evidenced by the inability of certain European countries to borrow in the United States. The Johnson Act prohibited private loans to governments or their nationals that defaulted on the payment of their obligations to the United States. All of the countries borrowing from the United States to help finance their participation in the First World War defaulted with the single exception of Finland. The Johnson Act, however, did not prevent the United States Government from making the loans which it outlawed for others. Indeed, "lend-lease" legislation was just such a step, taken when defaulting governments became our allies in the Second World War.

The repudiation of public debts. There are all too many instances, however, of the repudiation of public debts. Repudiation has often accompanied a change in government; the new régime has repudiated the obligations of the old. The Russian Soviet government, for example, failed to assume the public debt obligations of the Czarist régime. If the government of a sovereign state defaults in the payment of principal and interest on its bonded indebtedness, the bondholder has no redress except to bring suit in the courts of the country. This is a remedy of no very great importance, if the debtor government chooses not to meet its obligations. What is more, a sovereign state cannot be sued by an individual without its consent. What the individual bondholder may do is to seek the aid of his own government in bringing political pressure to bear upon the defaulting government through regular diplomatic channels. War has sometimes been threatened in order to force the payment of debts. In the case of minor political units, such as counties and cities, failure to pay debts may result in orders from the courts of the state requiring the officers of the local government unit to include the amount of its indebtedness in its tax levy. To reduce the probability of such contingencies, laws have been enacted limiting the amount of the indebtedness of local units of government to a small percentage of the appraised value of the taxable property.

Repudiation by sovereign governments may be indirect as well as

direct; the effect upon the bondholder is the same, though the form of the repudiation act differs. Public debts are payable in the currency of the country. If this currency has greater purchasing power at the time of the payment of the loan than it had when the loan was first made, the debtor government is the loser. But if the currency has declined in purchasing power, the debtor government finds it easier to pay its obligations, and it gains correspondingly. If a government inflates its currency or other circulating medium, so that the purchasing power of any unit of it depreciates to almost nothing, all debts, public and private, can be paid off with negligible effort. This is what happened in Germany and Russia, for example, after the First World War. German pre-war debts, contracted when the mark was measured by about twenty-four cents in gold, were paid off in worthless paper marks. The number of marks paid was the number "nominated in the bond," but it took millions, billions, and even a trillion of paper marks to equal in value one pre-war gold mark. Repudiation of debts need not be formal and direct. The same effect can be accomplished through inflation of the currency. By means of it the debtor country nominally pays its obligations, but in reality it repudiates them.

No less a government than that of the United States has seen fit to change the terms of contracts to which it was itself a party. It had been a common practice during the first quarter of the present century to insert a clause into most long-term private and public bonds that the sums borrowed should be payable in "gold coin of the present weight and fineness." The Congress on June 5, 1933, abrogated this gold clause with reference not only to future contracts but to existing contracts as well. The legislation was retroactive. The Supreme Court in 1935 by a five-to-four decision upheld the right of Congress to abrogate the gold clause in private obligations and in all government obligations except those to which the United States Government was itself a party. It thereafter, however, became necessary for the holder of a United States Government bond containing the gold clause to show that he had been injured by the substitution of payments in currency for payments in gold as specified in the bond. Test suits were filed. Later in the year Congress closed the controversy by withdrawing the consent of the United States to be sued upon its currency or securities. Now the bond-holder has no redress if he is dissatisfied with the means of payment substituted for those originally named in the bond that he bought. The abrogation of the gold clause in its own contracts was a species of repudiation by the United States Government and did not redound to its credit.

THE SIGNIFICANCE OF PUBLIC DEFICITS

Persistent federal deficits in time of peace were a new experience for this country; ten years of unbalanced budgets prior to our entry into the Second World War profoundly stirred American thinking on the finances of government. The war made public finance the household finance problem of almost all the people. There are those who view the debt situation complacently; to them continuing deficits and mounting debts are nothing to worry about, particularly if they help to restore more normal economic life and expand the income of the people. Is it not good business, they ask, to go into debt if by so doing a people can rehabilitate its economic life and out of increased income ultimately retire the debt? Governmental deficits are necessary to halt the "downward spiral of deflation" and to "prime the pump" of private enterprise. Besides, is it not the duty of government to provide jobs for men who are able and willing to work but through no fault of their own are unable to find them? Budgets, they say, do not need to be balanced annually; only balance over the entire period of a business cycle is important.

The reasoning is plausible and has something to commend it. Unquestionably, the government has both opportunities and responsibilities in aiding the economic system to function in health and with vigor. Temporary deficits in the depression phase of the business cycle are not alarming. But grave dangers also lurk in the complacent acceptance of long-continued governmental deficits. Business cycles, within which according to the preceding view budgets are to be balanced, follow no set pattern. The length of a cycle varies considerably, since there may be minor cycles within major business movements. Spending one's way out of a depression may grow into a habit that is hard to break. Debts are more easily accumulated than liquidated. Heavy debt burdens preempt a large part of future income for debt charges and amortization. They do not leave governments as great freedom of action as they might otherwise have in meeting new emergencies. The strain upon the fiscal system of the United States, for example, is much greater now that it has to carry a national debt approaching 260 billion dollars, as compared with a little over one billion dollars before we entered the First World War.

Mounting public debts are a constant menace to the price structure of a country, and a source of weakness to its currency. If the suspicion grows that a nation may not be able to meet its obligations as they mature, the public credit becomes impaired with probable disastrous consequences. Public debts must be serviced and retired with scrupulous care and honesty if financial chaos is not to result. The best guarantee of such payment lies in the building up of the national income that comes with the enhanced prosperity of the people.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Governments, local, state, and national, are sometimes amply justified in going into debt.
2. The borrowing done by nations in time of war is comparable to the borrowing of consumers, rather than to the borrowing of entrepreneurs.
3. By selling large bond issues to its own citizens, as the United States did during both world wars, a country can shift most of the financial burden of a war to its future generations.
4. Taxes collected by the United States Government and used to pay off its bonds held by American citizens will not reduce the amount of funds available for investment.
5. Heavy government borrowings withdraw money from the economic system and are, therefore, deflationary in effect.
6. Large and rapid increases in the national debt are likely to produce inflation.
7. Borrowing to pay the costs of war, whether from commercial banks or from individuals, may prove to be inflationary.
8. The inflationary or deflationary effect of governmental borrowing depends both on the sources of the borrowed funds and the use to which they are put by the government.
9. Serial bonds are usually preferable to sinking funds in the amortization of the debts of local governments incurred for public works or other public improvements.
10. The growing practice of municipal governments of financing long-term improvements by the sale of "income bonds" is justifiable only for projects such as new hospitals or utilities, and not for new schools or streets.
11. Repudiation of national debts need not take the form of outright refusal to pay.
12. The payment of international public debts involves merely the raising of the necessary taxes, and so does not differ essentially from the payment of domestic debts.
13. The payment of a domestic debt by a government has precisely the same effects upon the nation's economy as the payment of an external debt of the same amount.
14. If a creditor nation such as the United States expects debtor nations to discharge their obligations to this country, it must increase its imports of commodities and services in comparison with its exports.
15. There are no limits to the national debt which the United States Government can safely assume.

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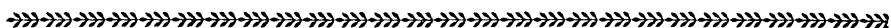
PART VII



ECONOMIC SYSTEMS

CHAPTER XXXVII

The Economic Policies of Government



CHANGING ECONOMIC POLICIES OF GOVERNMENT

GOVERNMENT HAS for centuries actively participated in our economic life, sometimes more and sometimes less. For three hundred years, namely, throughout the sixteenth, seventeenth, and eighteenth centuries, the prevailing economic policies of European governments were highly restrictive. The mercantilistic policies of this period, as they came to be known, were primarily designed to promote the interests of the state in its trade relations. To that end all other economic interests were subordinated. General acceptance of the view that it was altogether desirable for government to regulate the economic life of the people persisted far into the eighteenth century. But contemporaneously with the technological changes of the industrial revolution in the eighteenth century there came also a marked change in the world of economic and political ideas. A conception of the economic functions of government radically different from that of mercantilism arose and a new policy was developed. This was the policy of *laissez faire*, the policy of non-interference by government in economic life. According to *laissez faire* conceptions, government was expected to confine itself exclusively to political functions, allowing men very largely to do as they pleased economically. In striking contrast to the restrictive policies of mercantilism, *laissez faire* aimed at exemption from restriction. In the main, this policy dominated the economic thinking of Europe and the United States for one hundred and fifty years. During the past fifty years, or thereabouts, a third economic policy of government has developed, gradually supplanting the *laissez faire* policy in some parts of the economic field. This is the present policy of government regulation, carried out for the purpose of regulating competition and protecting the interests of the public. An understanding of the significance of these economic policies of government—mercantilism, *laissez faire*, and regulation—is helpful in determining what at any given time the policy of government toward our economic life ought to be.

IMPORTANT MERCANTILISTIC DOCTRINES

Mercantilism may be described as a group of governmental regulations of commerce and industry designed to procure for the country in its trade with other countries a profit in the form of the precious metals. Cromwell in England, Colbert in France, and Frederick II in Prussia were leading political exponents of mercantilism.

Emphasis upon nationalism. What were the leading doctrines and policies of mercantilism? The central idea in mercantilism was nationalism. Statesmen of the mercantilistic period thought of the nation as the great entrepreneur and championed policies that were designed to strengthen the nation, even if this had to be done at the expense of individuals. The interests of the nation as a whole were considered superior to the interests of the individuals composing the whole. The Navigation Acts of England, for instance, prohibited foreign ships from carrying goods to England from America, Asia, and Africa. It was admitted, of course, that such a prohibition might work to the economic disadvantage of the English merchant or consumer, but this was considered unimportant. The economic gain or loss of an individual was negligible when compared with the interests of the nation as a whole. If it is hard for the present generation to understand the purpose of the complex regulations of mercantilism, the governmental restrictionism of our own day, particularly in European nations, shows how completely the state may dominate the economic life of its people. Government in the mercantilistic era was deeply concerned with what merchants bought or sold, whether they exported raw materials or finished goods, whether they employed home or foreign ships, and whether they paid for their purchases in other goods or in gold and silver. The government held that some trade was good and other trade was bad, the test being whether any particular kind of trade tended to strengthen the nation as a whole through the accumulation of wealth within it.

Importance of the precious metals. The clue to an understanding of mercantilism is to be found in the importance attached to the possession of the precious metals. In the furtherance of national interests gold and silver were considered a most desirable form of wealth. The mercantilistic emphasis upon a nation's possession of the precious metals was a natural result of conditions prevailing at the time; more than most other forms of wealth, gold and silver were durable, were readily and generally exchangeable, and imparted financial strength to the nation having them in the ever present contingency of war.

Encouragement of foreign trade. How was a nation to obtain gold and silver? Some nations, notably Spain, had been fortunate in the discovery and development of mines of the precious metals. But this was a rather uncertain source. Much more constant, according to mercantilistic states-

men, was the treasure that might be obtained through foreign trade. Accordingly, they sought by all possible means to encourage and to develop foreign trade. Among the policies adopted for this purpose were the levying of certain import duties and the payment of some export bounties. Especially high duties were laid on goods the consumption of which was to be discouraged because the country concerned could not produce them—the English duty on the importation of wine, for example. Raw materials, such as silk, on the other hand, were admitted free into England because they could be manufactured into even more valuable products and then sold to foreign customers. Bounties were sometimes paid on the manufacture and exportation of goods, such as silk, the sale of which was particularly advantageous in developing foreign trade.

To develop foreign trade, mercantilists favored the establishment of colonies, which were looked upon by the mother country as possible sources of raw materials and as markets for her finished products. This is a key to the understanding of some of the strained relations between Great Britain and her American Colonies.

The establishment of great trading companies, such as the East India Company, was another means for encouraging foreign trade. By conferring special privileges upon certain groups of merchants the government was enabled to regulate trade in a way that seemed most advantageous to the country.

Doctrine of a favorable balance of trade. In the furtherance of the national interests of a country by the accumulation of the precious metals through foreign trade, it was necessary, said the mercantilists, for that country to have a favorable balance of trade. If English exports, for instance, exceeded imports in value, and this favorable balance was paid in gold and silver, English trade was considered healthy. The mercantilists' barometer of a country's economic condition was the relation of exports to imports.

Encouragement of manufactures. But if a country like England was to have a constantly favorable balance of trade, her best opportunity, the mercantilists argued, lay in the encouragement of manufactures. Accordingly, they emphasized the desirability of cheap raw materials, cheap foodstuffs, and a large population. Cheap raw materials and cheap foodstuffs enabled a nation to produce cheaply and increased its chances of marketing its goods to advantage abroad in competition with other nations. Similarly, a large population seemed desirable, for that meant keener competition for jobs, lower wages, and lower unit costs of production.

Encouragement of the shipping industry. Finally, to ensure a favorable balance of trade it was thought altogether desirable for a nation to carry the bulk of its exports and imports in its own ships. To do so was to retain the earnings of the carrying country within the country, instead of paying

carrying charges to a foreign nation. Mercantilists, accordingly, sponsored the development of a merchant marine, including the building of ships, the improvement of harbors, and the procuring of seamen.

REACTION AGAINST MERCANTILISM

Mercantilism was neither a consistent body of economic doctrines nor a policy universally applicable. As a policy adapted to a particular nation and period, however, it worked very well. Although mercantilistic policies were highly restrictive, they served a useful purpose. Schmoller¹ has pointed out that mercantilism effected the transformation of local economies into real national economies, stimulated national loyalty, and developed international rivalry, all of which, he thought, were necessary and desirable in the world's economic progress.

With the development of the capitalistic system and the spread of political democracy during the latter part of the eighteenth and the early part of the nineteenth centuries, the restrictions of mercantilism came more and more to be felt as onerous. The superior productive methods of the new industrialism had to be established all over the world. There were opportunities for the investment of capital everywhere. Competition was keen. Individualism was rampant. Men clamored for the abolition of restrictions on wages and hours, on free access to desired employments, occupations, or markets. Gradually the old mercantilistic restrictions were repealed or became dead letters. *Laissez faire, laissez passer*, became the slogan of the new economic order.

LEADING PRINCIPLES IN THE LAISSEZ FAIRE POLICY

Natural rights. The *laissez faire* attitude toward economic life was a reflection of the prevailing natural rights philosophy of the eighteenth century. The essence of the belief in natural rights lay in the conviction that the individual has some rights which are outside the province and greater than the power of the state. Our Declaration of Independence asserted: "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness. That, to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed." The natural rights philosophy proclaimed an ideal order, the arrangements of which were perfect and the laws of which were an expression of the will of God. It breathed the spirit of optimism, the spirit that "God's in His heaven,

¹ Cf. Gustav Schmoller, *The Mercantile System and Its Historical Significance*, Ashley edition (New York, 1914).

all's right with the world." It was felt that the evils existing in society were due to the mistakes of man, that there was too much artificial restraint, too much interference with natural development, and that, if men could only get back to a state of nature and start again, all would be better.

Individual liberty. Among the most cherished of man's natural rights was individual liberty. While liberty meant different things to different persons, to all it included exemption from restraint, disinclination to be controlled any more than absolutely necessary, the desire to be free to do as they chose, so long as such freedom did not interfere with the freedom of others. Advocates of the *laissez faire* policy insisted, and still do, that the employer should be free to hire men at whatever wages he could, and to discharge them whenever he pleased; they believed that the laborer should be allowed to work where and when he pleased and at any wage he chose to accept. Any restriction of action in employing men and in seeking employment was interference with man's natural liberty. Governmental regulation, they insisted, should be reduced to that minimum which is indispensable to the security of all. Let government confine itself to the protection of life, liberty, and property, and let each individual follow unhampered his own best interests. It was the philosophy and policy of the economically strong, not of the economically weak.

Self-interest. Advocates of the *laissez faire* policy believed that in a world of natural rights, foremost among which is individual liberty, the individual could be trusted to seek his own highest self-interest. What is more, they believed that the individual in pursuing his own highest self-interest inevitably promoted the welfare of all. Adam Smith, for instance, said: "Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of society which he has in view. But the study of his own advantage naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to society."² The self-interest, to be sure, which would lead individuals to choose employments advantageous to society as well as to themselves, it was believed, must be a highly enlightened self-interest. Accordingly, *laissez faire* advocates favored education. Adam Smith, indeed, thought that man's self-interest must be guided by Providence.

Free competition. Finally, it must be understood that the advocates of *laissez faire* were ardent champions of free competition. In a world of natural rights where men had liberty to seek their own highest self-interest, it was argued that free competition could be depended upon to create the best possible economic system. If men are free to buy or sell commodities and services at such prices as they can agree upon, so ran the argument, the interests of all will be adequately safeguarded. Under the universal

² *Wealth of Nations* (1776), Book IV, Chap. II.

sway of free competition, the quality of goods will be kept up to the highest possible standards, and the prices of goods will be kept down to the lowest possible levels. The theory was that government should let men alone, allowing each individual to seek his own highest economic interest; in doing so, government was promoting the greatest social welfare, for the good of the individual is inevitably the good of society.

STRONG HOLD OF THE LAISSEZ FAIRE POLICY IN THE UNITED STATES

Nowhere in the world did this philosophy and policy of governmental non-interference in our economic life gain a stronger hold than in the United States. The reaction against mercantilism and the ascendancy of *laissez faire* were contemporaneous with the adoption of our federal Constitution and with the adoption of many of our state constitutions. Early American settlers, coming from European countries in which the people had been oppressed by autocratic governments and repressed by meddling economic interference, made up their minds that in this new country they would protect themselves against such unwelcome restrictions. Little wonder is it, then, that *laissez faire* principles are deeply imbedded in our constitutional and statute law.

Not only the environment from which our settlers came, but the character of those that came, accounted to no little extent for the popularity of the *laissez faire* policy in the United States. It is not the weaklings that migrate to a frontier country, but rather the venturesome and aggressive. The pronounced individualism of the American predisposed him to *laissez faire* conceptions.

What is more, conditions here tended to accentuate that individualism and aversion to restraint. America was preëminently a land of opportunity. Men wanted to be let alone in order to make the most of the opportunity. The American frontier bred a spirit of intense individualism, which, emphasized by the *laissez faire* philosophy, led to flagrant waste and blind optimism. We Americans boasted of our country as a land of inexhaustible resources and looked upon waste with incredible complacency. What if we did waste our mineral resources? The earth was known to be full of others. What if we did permit hundreds of millions of cubic feet of gas to escape into the air? There was plenty more where that came from. What if we did permit our forests to be burned? God would, we believed, in His own good time and pleasure let other forests grow. Why worry about a crop failure in one part of the country? The country was large, and a failure in one place was bound to be balanced by a crop surplus elsewhere. Why bother about economic depressions? They were trying, to be sure, but everybody knew that they were followed sooner or later

by periods of even greater prosperity. Evils must be expected, but after all the country was large, migration was easy, and what could not be endured in one place might be escaped in another. This happy-go-lucky spirit, this complacent attitude of every man for himself and the Devil take the hindmost, was characteristic of an age and country in which man and circumstance combined to give the *laissez faire* philosophy and policy its strongest hold.

THE REACTION AGAINST LAISSEZ FAIRE

For more than a hundred years the dominant attitude of government toward our economic life was that of non-interference. But increasingly during the twentieth century, in many important fields this attitude has been partly or completely abandoned. A number of compelling reasons accounted for the reaction against *laissez faire*. Prominent among these was the appearance of much social injustice in our economic life. Advocates of *laissez faire*, chafing under the restrictions of mercantilism, had cried out for liberty and had insisted that enlightened self-interest and free competition could be relied upon to safeguard the interests of all. But the liberty of individuals was often more negative than positive, more nominal than real. It was often the liberty of the strong to oppress the weak. Freedom of contract was often a snare and a delusion for those who were weak in their bargaining power. The interest of each, even when it was properly understood, did not always, by any means, coincide with the interest of all. Witness the private advantage of monopoly. Many of the evils of the industrial period could not be eradicated by individual action. To remedy them required collective action, either on the part of an organized group or on the part of the government. A growing social consciousness concerning the evils that appeared helped to bring about a partial abandonment of the *laissez faire* policy and the substitution of government regulation. Men came to see that it is a mistake to suppose that, as the functions of government increase, individual liberty is necessarily curtailed. They came to understand that intervention by the government might actually increase the individual's liberty of action by curbing those whose selfishness and greed lowered the entire level of competition, and that government is not only an agency of restraint, but also of liberation. Men came to appreciate that government in many fields, such as disease and danger, is often a better judge of what is the individual's highest self-interest than the individual himself can possibly be.

A second reason for the waning faith in *laissez faire* was the decline of effective competition. We Americans particularly had a superb faith in the effectiveness of competition to control the quality of the goods we purchased and the prices we paid for them. It was a rude awakening to

realize that for many goods unrestrained competition did not exist. Competition failed to regulate adequately both the quality and the price of goods.

An article could be called pure fruit jelly and have no fruit in it; it could be called corn whisky and not a grain of corn be used in its manufacture; it could be named strained honey and a bee never have had anything to do with its making; it could be called maple sirup and never a drop of maple sap have entered it; it could be called butter and have no relation with milk or cream; it could be called boneless chicken and consist of immature veal.³

The injured individual might seek redress in the courts, but this usually proved impracticable because his loss was relatively small. There were many businesses in which competition failed to control prices adequately. There was a time when, in the field of the public utilities, the construction of competing lines was encouraged in the hope that they would compete against each other, thus ensuring the consuming public both excellent service and reasonable prices. The theory proved a hopeless failure. In some parts of the economic field the break down of competition was inevitable.

In the third place, the growing mutualism and economic interdependence of our time emphasized the shortcomings of the *laissez faire* policy. Specialization in our modern industrial society, which implies constant dependence upon the facilities of exchange, has brought about very great sensitiveness on the part of everyone to improper functioning of any part of our economic system. With so much at stake in the smooth and uninterrupted functioning of our economic system, and with so many chances that the selfishness or short-sightedness of men might "stall" it, *laissez faire* could not continue to be our economic policy in all particulars. Indeed, the *laissez faire* policy has proved to be better adapted to a period of small businesses and local markets than to our modern society of economically interdependent parts, in which employer and employee have lost contact, in which producer and consumer usually do not meet, and in which industry has characteristically become corporate in organization and impersonal in character.

THE POLICY OF GOVERNMENT REGULATION

It used to be much more common in this country than it is now to say that the ideal government was one which allowed every man to do as he pleased except when he interfered with someone else. We declared that government to be best which governed least. We insisted that the

³ C. R. Van Hise, *Concentration and Control* (New York, The Macmillan Company, 1912), p. 76

functions of government were essentially political, finding wisdom in the statement of Adam Smith that the three primary functions of government were to provide protection against external aggression, to promote security of person and property within a country, and to establish certain public works and institutions essential to the public welfare, but which cannot be provided through individual effort.⁴ How absolutely fundamental these political functions of government are, wars between nations and strife within countries are constantly reminding us. But to these distinctively political functions much has been added. The democratization of government during the past one hundred and fifty years has led people to look upon it more as an agency for promotion of the general welfare than for oppression of individuals. For this reason and for the reason cited in discussing the reaction against the *laissez faire* policy, government has come to take an increasingly important part in our economic life. While the intervention of government was at first chiefly for the purpose of curbing monopoly and of regulating the plane of competition, as under the "Square Deal" policy of Theodore Roosevelt, the regulatory functions of government have now been greatly extended, particularly under the "New Deal" policies of Franklin Roosevelt.

With the increasing importance of the government in our economic life has come increasing activity in politics on the part of economic groups designed to secure for themselves favorable political action or to prevent hostile legislation and administration. Conservative groups are struggling to preserve the fundamentals of the existing economic system and to restrict the policy of government to the minimum necessary regulation. Radical groups are eager so greatly to extend government control as to effect a complete economic reconstruction of society. Economic liberals are determined that whether our economic society remain essentially unchanged or undergo important transformations, all the powers of government shall be used to make it serve the common welfare.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. A mercantilistic system could not be generally and permanently applicable.
2. Under a policy of *laissez faire*, competition provides a sufficient safeguard of the public interest.
3. *Laissez faire* as a governmental policy is not well adapted to a highly developed society composed of economically interdependent parts.
4. Abandonment of *laissez faire* policies in favor of governmental regula-

⁴ *Wealth of Nations* (1776), Book IV, Chap. IX.

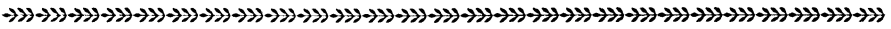
- tion of industrial combinations has been an error because of the great service of large-scale production in reducing unit costs of production.
5. "That government is best which governs least" is a statement applying equally to all fields of industry and business.
 6. Modification of the *laissez faire* policy was rendered necessary by the changed economic conditions of the 20th century.
 7. The policy of government control is little different from the policy of mercantilism, since in both instances the government regulates the economic activities of its citizens.
 8. Since the policy of mercantilism, which implied almost complete governmental control, has been tried and found wanting, it is evident that a return to a policy of government control of industry is undesirable.
 9. Government regulation of industry is necessary only when there is danger of monopoly; so long as free competition prevails, the policy of *laissez faire* serves the best interests of all.
 10. *The laissez faire* policy remained unmodified in the United States until the "New Deal-Fair Deal" period.

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CHAPTER XXXVIII

The Capitalistic System



FOUNDATIONS OF CAPITALISM

The institution of private property. The foundation of the capitalistic structure of society is found in the institution of private property. The right of property is a socially sanctioned relation between men and goods which has not always existed and which many people hope will not always continue to exist. It is quite possible to imagine a propertyless world, or at least an economic world in which the private right to hold property is very much more restricted than it is today—restricted perhaps to the goods we actually consume in the direct satisfaction of our wants. But the great fact remains that the economic world most of us know is a world of private property rights. Not only consumers' goods, but also producers' goods, including both natural resources and the capital goods produced by man, have predominantly become the objects of private property rights. And if there are those who are eager to destroy this institution as the source of all economic evil, there are others just as zealous to maintain it as the source of untold economic good.

Nature of property. Property has been defined as "an exclusive right to control an economic good."¹ Such control may be either private or public; we have both private and public property. The exclusive right of control conferred by property includes such rights as the rights to use, to hold, and to sell. While, strictly defined, the term "property" means a legally recognized right of control, in popular parlance the term is also used to designate that which is owned or controlled. Property is more than possession. Whoever has possession of a good has the opportunity to use it, but he has no lawful title that he can defend against the legal owner. Property, however, confers an exclusive right of control, recognized and guaranteed by a third party, the state. While property rights are exclusive, they are not absolute. Society, for instance, does not long permit individuals to use their property in such a way as to make of it a public nuisance or menace.

¹ R. T. Ely, *Property and Contract in Their Relations to the Distribution of Wealth* (New York, The Macmillan Company, 1914), Vol. 1, p. 101.

Origin of private property. Private property is such a common-place of everyday life that most people complaisantly take it for granted. From earliest childhood they have been taught the distinction between "mine and thine," and thus they have come to recognize exclusive rights of control. It is therefore not surprising that many people fail to appreciate that private property is only maintained by ceaseless vigilance on the part of the state and that like all other human institutions, it is constantly being modified by social control.

The humble beginnings in primitive society of the institution of private property are doubtless to be found in articles of personal use. These were looked upon as belonging to the personality of him that used them, and upon his death they were often buried with him for possible use in the great beyond. Primitive society sanctioned private property in such goods as weapons, trophies of the chase or war, personal adornments, utensils, and sometimes the family hut or cave, all of which were largely the products of the owner's effort.

In the beginning there was no private property in land. Historical evidence seems to show that clans or tribes took possession of lands they desired, and then asserted their claims against rival groups, by force if necessary. Simple appropriation by those strong enough both to take and to hold was apparently the origin of much tribal ownership of land. Throughout the direct appropriation and pastoral stages, as well as the early part of the agricultural stage, there was no private property in land of individual members of the tribe. It was not until people settled down to a more fixed abode that we find the beginnings of the institution of private property in land. But even in the agricultural stage land was for a long time a free good. As population grew, however, and as land could no longer be abandoned as soon as its fertility was exhausted, a system of periodic allotments to families developed; this encouraged the more productive use of the land. The land itself, however, was still owned by the tribe as a whole and periodically redistributed. As families improved the lands they occupied, they were naturally loath to part with these improved lands, even for the common good. Gradually a system of family, and ultimately of individual, ownership developed. Thus, possession claims, at first vague, gradually ripened into definite property rights.

While priority of possession, however that may have come about, doubtless explains the origin of private property in land, the origin of private property in produced capital is unquestionably to be found in man's labor. Unless men have contracted otherwise, it is natural to assume today that what they have made with their own hands they have a right to own. So it doubtless was in primitive society. The fact of production gave the producer a strong sense of ownership which he was quick to assert and which the group came to recognize.

The social utility of private property. Whatever the origin of private property may have been, and however venerable it may have grown through age, its historical origin and its present justification as the foundation of the capitalistic system are two entirely different matters.

Some interesting theories have been advanced to explain and defend the institution of private property. As the preceding discussion of the origin of property has at least suggested, two of the earliest of these have been the *occupancy theory* and the *labor theory*. According to the former, property is based upon priority of appropriation, an explanation obviously restricted to unoccupied land or other forms of unutilized wealth. The appropriation, however, upon which the title to many natural resources rests historically has been forcible conquest rather than peaceful occupation.

According to the labor theory the explanation and justification of private property are to be found in the fact of production. Whatever is the product of man's effort he has a right to call his own. While this theory strongly appeals to the sense of justice of people, it fails either to account for or to justify property in natural resources, the particular object of the earlier occupancy theory. If there were no stronger justification for private property than the principles of occupancy and labor, it would at least require a combination of the two to give us a sufficiently inclusive theory.

Attempts have also been made to explain and defend private property on more subtle and intangible grounds. Some have clung to a *natural rights theory of property*, claiming that man's holding of property is as natural and inalienable a right as "life, liberty, and the pursuit of happiness." Such a theory of property is subject to all the limitations of the now discredited natural rights philosophy. Rights must be defined, which makes them social rather than natural. What some of the proponents of this theory mean, however, as Charles Gide has pointed out, is "that property is an indispensable condition of personal independence, since he who possesses nothing is compelled to put himself at another's service in order to live." As he goes on to say, "There is no more revolutionary theory than this, for if property is a natural right, what are we to say to all those who have been deprived of it and who demand it?"² The partial truth in this theory will be emphasized in the social utility theory to be considered later.

Realizing the difficulties in the theories just considered, some protagonists of private property have set forth a *legal theory* of property. They contend that property is a matter of legal definition. This is true, but the more searching question is, Why are property rights recognized at all? This the legal theory does not explain.

An explanation is found, however, in the so-called *social utility theory*

² *Principles of Political Economy*, tr. from the 23d French edition by E. F. Row (Boston, D. C. Heath and Company, 1921), p. 338.

of property, the most comprehensive of them all. According to this theory private property rights exist and may be justified because private property is socially the most useful mode of utilizing wealth. The theory does not deny that public property is preferable to private property in some goods. It does not assume that the institution of private property is perfect; or that it should prevail universally; or that private property rights should be absolute. The criterion that it sets up is the promotion of the social welfare, and it justifies private property on the ground of its social usefulness as a powerful incentive to the production, conservation, and utilization of wealth. From this point of view private property is maintained as a social trust, and the owner is a trustee pledged to use his property in the social interest. Should the institution fail, society has control agencies at its disposal and correctives that it can apply. Because on the whole it has served to promote both private and social interests, the institution of private property has in most countries withstood attacks upon it as the foundation of the existing economic order.

In modern economic society private property is the principal base of private credit. The ability to command large-scale credit, whether in obtaining goods or borrowed capital, depends in large part upon the net worth of the person or business enterprise concerned—and net worth is a form of private property. At the core of modern commercial, industrial, and financial capitalism is credit based on property rights.

The institution of inheritance. While it is rather generally supposed that the right of private property implies the right of directing the disposition of property upon the death of its owner, this is not strictly true. The right to hold property and the right to make a testamentary bequest of the same effective upon the death of the owner are two distinct rights. Both are fundamental to the existing economic order, but they are separately maintained by the state. "Succession by bequest" is the phrase used to describe the transmission of property if the deceased owner has left a will; "succession by inheritance," if he has died intestate, that is without making a will. In common speech, however, the term "inheritance" is used to designate any succession of property rights from the dead to the living, whether by will or by intestate law.

While some look upon inheritance as the proper culmination of property rights and regard it as an institution to be zealously guarded, others consider it as the chief cause of the uneven start which people get in the race of life. How basic it is to the present economic system is evidenced by the fact that the simplest way of changing the system would be to change the laws governing the inheritance of property. By imposing heavy inheritance taxes, amounting to capital levies, society could in a comparatively short time become the owner of much property that is now in private hands. The chief reason why this has not been done is the same as that

generally advanced in justification of private property, namely, the social utility of allowing private individuals not only to hold property, but also to determine its succession after their demise. Inheritance rights, however, are no more absolute than are private property rights generally; the state imposes various limitations upon both of them in the interest of the social welfare. In the main, rights of inheritance have been maintained, in spite of rapidly changing family relations, because it has been recognized that the right to transmit property to members of one's family or to other supposedly worthy beneficiaries or purposes stimulates the productiveness of men and on the whole effects the best utilization of wealth. Those who do not share this conviction direct their severest criticism against this prop of the existing economic order—and there are countless instances of the mismanagement of inherited wealth by ne'er-do-well heirs.

The rights of free enterprise and free contract. Capitalism, based on private property in production goods, further implies that capitalists shall have freedom to engage in any enterprise they choose, and that men shall be free to enter into the necessary contractual relations for the production and acquisition of wealth. Although there are limitations upon such freedom of enterprise, in the main modern economic society permits individuals to organize production and by contracts among themselves to determine what they shall get in return for their commodities and services. A very different form of economic organization in which the state might organize production is entirely possible; it is a question of whether people prefer to retain freedom of private initiative and freedom of contract. Private initiative is based upon the profit-seeking motive, which capitalistic society counts upon to stimulate men to put forth their greatest productive efforts.

As economic society is organized today most men depend not upon status, as did the slave and the serf, but upon contract for the definition of their duties to and claims upon the economic system. The buying and selling of goods involve contracts. We contract for the services of others or to render our own, specifying wages and other conditions of employment. The borrowing of money, the leasing of land or other durable economic goods, the purchase of an insurance policy, and the consignment of goods for transportation are all economic transactions involving contractual rights and obligations. Our modern division-of-labor economy would be impossible except upon the basis of legally binding and enforceable contracts.

A contract is an agreement between two or more persons, enforceable by public authority, to do or not to do a given thing. What is true of property is true of contract: just as there is no property until the control of a good is guaranteed by a third party, the state, so there is no contract until public authority stands ready to enforce the agreement. But if the

subject of the offer and acceptance is proper and not contrary to public policy, if the contracting parties are capable, and if valuable consideration is given, the contract is binding and enforceable by public authority. Breach of such contracts renders the offending party liable for the payment of damages.

Private property and inheritance, free enterprise and contract are the foundations of modern capitalism. Remove them, and the whole superstructure will crumble. Remove any one of them, and the whole capitalistic system will be profoundly changed.

THE CONTROL OF THE CAPITALISTIC SYSTEM

Capitalism as an economic system for the satisfaction of human wants is subject to control from both within and without. Competition is supposed to be the internal self-regulator; public authority is the external governor.

Competition. Capitalism depends upon the all-pervasive force of competition to regulate production and to determine the distribution of income. It encourages the free initiative of individuals and then relies upon their competition to protect the interests of society. Competition among sellers, who are anxious to procure markets for their goods, is the chief reliance of the system to give the consumer "a square deal." Pressure to meet the selling prices of one's competitors, and if possible to sell at a still lower price, tends to hold prices down and thus to give the consumer the lowest possible price. Competition among buyers, who are eager to obtain goods either for further production or for consumption, tends to raise prices and to assure the producer a return that will enable him to operate.

At its best the system is supposed to work automatically. If prices and profits in a given industry are relatively high, competition of new producers will be invited, which will tend to lower the price to the advantage of the consumer. On the other hand, if producers are getting returns that are low in comparison to profits elsewhere, some of them will tend to seek more remunerative fields, which will prove of advantage to the remaining producers. The effectiveness of competition, as an automatic control device working to protect both consumers and producers, depends upon the readiness with which productive agents can be shifted from one field to another.

Freedom of entry into any field of business enterprise, however, may be sharply restricted by circumstances. Supplies of necessary raw materials may be in the control of others. The technological "know-how" may be lacking. An adequate supply of labor may not be available. Perhaps capital requirements cannot be met. Legal restrictions, such as patent rights, and other institutional controls may further limit or bar the entries.

Competitive capitalism leaves to profit-seeking individuals the decision as to how their natural resources shall be used and their labor and capital be invested. It assumes that they will base their decisions upon market conditions, noting particularly both prevailing prices and their future trend. If the price for a commodity steadily rises (except through general changes in the level of prices), it is a signal to producers that more of this commodity is wanted, either because of some increase in the demand or because of a shortage in the supply. Conversely, steadily falling prices for a given good in relation to other commodities indicate to producers that there is an over-supply and that production should be curtailed. This automatic signal system often fails to procure results that are satisfactory to either consumers or producers, and consequently, as will be shown later in this chapter, it has become the target of a spirited attack by those who would reconstruct the existing economic system.

Public authority. While capitalistic society relies upon competition as its internal control agency, there is also need for regulation by government. Capitalism presupposes effective government. Government is needed to guarantee property rights and to enforce contracts. It provides the entire legal system upon which the successful functioning of capitalistic society depends. For the most part, public authority has been exercised as a control agency to supplement competition—to preserve it against the encroachments of monopoly and to regulate the level of competition by forbidding unfair practices. Government acts as referee in the game of business, and in so doing it has improved the game for both contestants and the interested public. Such control from without the capitalistic system, however, is supplementary to control from within. Under the system of private capitalistic enterprise it is not the function of government to supplant competition in the production of commodities and services but to help make competition effective.

But the authority and intervention of the government in the economic life of the people are steadily growing. Devastating wars and depressions have transformed economic society both at home and abroad. In the United States there has been a continual extension of government regulation of our economic life for over fifty years, reaching a climax in the sweeping control measures of the New Deal. *Laissez faire* capitalism is dead without any prospect of resurrection. The capitalism of today, and the only capitalism worth talking about for tomorrow, is regulated capitalism. The minimum of control to which capitalism must submit is effective competition. Wherever competition is impossible, there social control is inevitable. Government regulation, however, may actually increase the individual's freedom of action because it curbs the activities of those producers who lower the level of competition and protects consumers against unfair prices, adulterated products, and inadequate service.

THE ACHIEVEMENTS OF CAPITALISM

Whether private enterprise or capitalism is worth saving against the challenging encroachments of its rival systems depends upon its past record and future promise of superiority. While the term capitalism itself suggests the predominant use of capital, and while capitalism is constantly associated with the machine technology of production, it is not the use of capital but the private ownership and investment control of capital which today differentiate capitalism from rival systems of economic organization. Communism in Russia, for example, has spent a quarter-century in rapidly introducing the machine technology, mass production, the division of labor, and other capitalistic methods of production. Communism and capitalism are kin in these externals of the productive process but not in the internals of ownership and control. Capitalism is an economic system in which as a general rule men are free to invest their privately owned wealth in the instruments of production and the hiring of labor, subject to the competition of others and to such control by government as may be necessary to ensure fair competitive practices, all in the expectation of producing want-satisfying goods and thereby making a profit.

Productiveness of the capitalistic system. What are the distinctive achievements of this capitalistic system whose development has been practically contemporaneous with our history as an independent nation? Perhaps greatest among its achievements is that it has brought about a previously undreamed-of wealth production, which, while it has made a few individuals fabulously rich, has principally accrued to the advantage of many hundreds of millions of people throughout the world. The savings of capitalists, large and small, converted into marvelously efficient means of production, have brought forth an ever increasing supply of goods. The savings of yesterday have made possible a more abundant life today. Without the accumulated and invested funds of capitalists every day would have to witness an absolutely new beginning in man's production of want-satisfying goods. To claim the productiveness of machine technology for the capitalistic system may seem illogical to some. But it is idle to speculate whether this amazing productiveness could just as well have been achieved by some form of collectivism; the indisputable fact is that it was not, and there is no way of proving that it might have been. As far as the production of unprecedented wealth is concerned the capitalistic system delivered the goods. From the close of the Civil War to the outbreak of the First World War, in the United States, where capitalism has had its most striking development, the production of goods increased about eleven times in the aggregate and almost four times per capita. During the period of the Second World War the productiveness of the American capitalistic system amazed the world. The President's Council of Economic Advisers in Jan-

uary, 1950, reported that the national output measured in constant dollars had increased nearly eight-fold since 1890. While population had grown by $2\frac{1}{2}$ times, production per capita had more than tripled. It is entirely safe to say that not only in America but wherever capitalistic industrialism developed, both the variety and volume of goods produced were not even remotely approached in any other period of history. To be sure wealth is neither the *summum bonum* of life nor the principal criterion of a great civilization, but it undeniably greatly contributes to the comfort and happiness of peoples, and releases energies for the development of superior cultural civilizations. While it is hazardous to prophesy in such matters it seems altogether probable that the ultimate victory in the contest of these rival economic systems will go to the system that can show the largest production of wealth essential to the maximum gratification of human wants, and that can afford to pay its workers the largest returns per unit of effort.

Higher standards of living made possible for all. Closely related to the superior productiveness of capitalistic industrialism is the further achievement that capitalism has brought more diversified standards of living and larger comforts to more people than has any preceding economic system. Costs per unit of output have been materially reduced. Lower costs to the producer made possible lower prices to the consumer. Never has the world's demand either for basic necessities or comforts and luxuries been more largely gratified than during the capitalistic era. The Austrian economist, Ludwig Von Mises, in a book entitled *Die Gemeinwirtschaft*, says: "Capitalism has raised the standard of life among the masses to a level which our ancestors could not have imagined."

The table of an average American family is annually supplied from regions all over the earth, both near and remote. The advent of refrigeration and rapid transportation has made it possible for the consumer to select fresh fruits and vegetables the year round. In clothing there is an alluring array of fine raiment from which to choose. Housing units, ready-made and custom-built, are available in all sizes and degrees of comfort and elegance. In the United States more than 30 million passenger automobiles travel the highways—one for every five persons. Nearly 40 million telephones enable our people to talk to anyone anywhere anytime. The distribution of radios is now so wide that nearly all of our people can simultaneously listen to speech or music without leaving the comfort of their homes. The television audience is also rapidly growing. If capitalism has brought much woe to many people, it must in fairness also be admitted that it has brought more diversified standards of living and larger comforts to all the people than has any preceding economic system.

And quite as noteworthy is the fact that there has been a substantial increase in voluntary leisure which is enabling people to enjoy the fruits

of their toil. Increases in the annual volume of production in the United States have been achieved in spite of the fact that the length of the average work-week has been reduced 33 per cent in the past seventy-five years.

Provision of strong incentives for dynamic productive efforts. Still another distinctive achievement of the capitalistic system is that it has brought stronger incentives, larger rewards, and firmer stakes in existing economic enterprise to larger numbers of people than any other system ever known. In capitalistic society men are free, within the limits of their ability and means and the common interest, to invest their time, energy, and accumulated capital as they see fit. Freedom of action and wide range for individual initiative, courage to take risks and to strike out in new directions, ceaseless vigilance and quick shifts under rapidly changing economic conditions, absence of bureaucratic control which may easily stifle originality and repress individuality—these have made capitalistic society intensely dynamic and opened opportunities and careers for larger numbers than ever before.

The hope and expectation of rewards galvanizes men into action. For those who develop initiative and enterprise in producing goods that society wants there are substantial rewards. From a strictly economic point of view it is hard to imagine a productive system more stimulating than one in which there is a direct proportioning of rewards to services rendered. Indeed, one of the chief claims that can be made for capitalism is that it possesses such a distinct calculus: in general it aims to allocate rewards in proportion to the productive contributions of the factors concerned. Under capitalism rewards are ultimately calculated by the money prices both consumers' and producers' goods will bring in the open competitive market. Since there are no markets for production goods in collectivistic societies (the state owning all the means of production) it is difficult to see how such societies can very readily or equitably determine the economic value of the productive contribution of the worker or of any other factor. The open markets of capitalism, on the other hand, do furnish a necessary practical guide.

COUNTS IN THE INDICTMENT OF CAPITALISM

Great as have been the achievements of the capitalistic system in wealth production, in raising and diversifying standards of living, and in providing greater economic opportunities, incentives and rewards to larger numbers of people than ever before, capitalistic industrialism is now very much under fire. What its future will be no one can predict with any degree of certainty. One thing, however, should be remembered: the system is still young, only a few centuries having passed since its beginnings. In many respects capitalism has not yet had a fair trial to demon-

strate how effectively it can promote the well-being of the masses and how unnecessary to its fullest success is the exploitation of either natural resources or human beings.

Toward the capitalistic system there are three distinct and perfectly intelligible attitudes that men may take. They correspond to basic types of temperament, and in economic, political, and social matters are bound to exist. The first is the attitude of the economic conservative,—sometimes known as a reactionary due to his exaltation of things as they are or have been. The conservative beholds our economic world and declares it good. To him the present economic system is, in its basic essentials, if not the best conceivable, at any rate the best possible. He extols the “sacred rights” of private property, of which no man should be deprived without due process of law. He has a peculiar tenderness for vested interests. He believes in the more or less unrestricted transmission of property rights from generation to generation. He exalts freedom of contract. He wants free competition, although sometimes he is apparently quite content to get along with monopoly, particularly if it is a monopoly in which he participates. Public authority in private economic matters is to him largely unwarrantable interference with rights proclaimed in the Declaration of Independence and immutably established by the Constitution. *Laissez faire* is his creed; let well enough alone, his motto; more business in government and less government in business, his slogan. Whatever the party label that he bore, the economic conservative dominated the political thought of nineteenth-century America.

Diametrically opposed to the economic conservative stands the economic radical. If the former belongs to the party of the right, the latter belongs to the party of the left. The radical, too, looks upon our economic world, but unlike the conservative, sees chiefly its shortcomings and consequently pronounces it ready for the scrap heap. Private property to him is exploitation; inheritance is largely a means for continuing this exploitation of the propertyless by the propertied classes; freedom of contract is a snare and a delusion; free enterprise is a masquerade for monopoly; competition is frequently ruthless and usually wasteful; and *laissez faire* is only the cult of the economically strong, never the cry of the underprivileged masses. The economic radical hopes his day will come tomorrow.

In contrast to both the economic conservative and the economic radical, stands the economic liberal. He too observes our economic world, but pronounces it neither wholly good nor wholly bad. He believes in the maintenance of the institution of private property, because he regards it socially more useful than a system of collective ownership. He supports the institution of contract, but insists that the bargaining powers of the contracting parties shall be equalized as much as possible. He defends a system of free enterprise as long as it contributes to greater economic

opportunities for all. He upholds a system of free competition, but contends that public authority must be used to supplement competition—to make it effective against the encroachments of monopoly and to regulate the level of competition by forbidding unfair practices. Illustrative of varying degrees of economic liberalism in American politics are the “Square Deal” of Theodore Roosevelt, the “New Freedom” of Woodrow Wilson, the Progressive Movement led by Robert La Follette, and the “New Deal” of Franklin Roosevelt—all of them essentially aimed at curbing or destroying monopoly, chastising the “malefactors of great wealth,” lifting the plane of competition, giving the “little fellow” his economic chance, and protecting both worker and the consuming public, without however supplanting the basic institutions of the prevailing capitalistic system. While there are many shades of economic liberalism, right-wing and left-wing, it is obvious that the day of the economic liberal is today.

Wastefulness of present system. What are the principal counts in the indictment of capitalism? Perhaps most prominent among them is the charge that competitive capitalism has proved exceedingly wasteful. There is admittedly much truth in this criticism. He would have to be a blind partisan, indeed, who would not readily grant that the present system has failed to achieve maximum possible efficiency. There is waste in the production of goods, for production is never geared to consumption perfectly. It is often planless. Much duplication of effort occurs. Any economic system that leaves to scattered individual producers the decision as to how much of a good shall be produced and when it shall be brought on to the market is bound to reveal much misdirected effort and great wastefulness. There is waste in the market distribution of goods. Witness the antagonistic effort, for example, of much competitive advertising and salesmanship designed to induce consumers to buy one good rather than another. There is waste in the utilization of goods. The most striking example is furnished by the ruthless waste in the development and exploitation of our natural resources. Our forests have been slaughtered rather than scientifically cut. Mineral resources have often been exploited so as to enrich individual owners, rather than conserved so as to yield the largest social benefit. Millions of tons of coal have been crushed and abandoned in the competitive struggle of putting coal on the market at the cheapest possible price. Indeed, critics of the capitalistic system contend that such exploitation and waste are inevitable under a system of private property-holding; that only the state, for example, can be expected to grow trees to be used fifty years later or to mine our resources so that they will last as long as possible.

But as far as waste in the production, distribution, and utilization of goods is concerned, it should be noted that some waste is inevitable under any economic system whether dominated by individual initiative or collec-

tive action. It is a price that society must pay whenever there are rapid shifts in demand or in the methods of production. The vaunted superiority of central planning systems in the elimination of waste and the achievement of greater efficiency is as yet purely hypothetical. What experience we have had with government or collective ownership and operation of economic enterprise has in the aggregate not been convincing on this point. But there is no reason why much existing waste cannot be eliminated under capitalism as well as under collectivism. The movement for the conservation of natural resources is an illustration in point.

Inadequacy of competition as a regulator, resulting in the development of monopolies. A second count in the indictment of the capitalistic system centers on the breakdown of competition and the development of monopoly. Competition, which is the internal self-regulator of the capitalistic system, has often proved ineffective in controlling prices and has yielded to monopoly. While the competition of producers to secure markets for their goods is supposed to ensure high quality and the lowest possible price for the consumer, actually producers often combine to control the supply in order to advance the price to the disadvantage of the ultimate consumer. Such a development of competitive capitalism, the critic of the system holds, is to be expected; it marks both the logical culmination and the inevitable breakdown of capitalism.

In reply it is admitted that unregulated private monopoly is intolerable in a free country. But it is also wholly unnecessary. Strict enforcement of existing laws, such as our Sherman Anti-trust law (strengthened if need be), would drive monopolies from our land. It is not necessary to tear down the capitalistic structure to rid ourselves of ugly monopolies any more than it is necessary to burn a house in order to exterminate undesirable pests.

Inequitable distribution of wealth. One of the most frequently heard arraignments of the capitalistic system is that it has brought about a most inequitable distribution of income and of wealth. It is admitted by the critics that wealth production has been on a vast scale, but it is contended that the propertied classes have been the chief beneficiaries. It has merely served to strengthen their hold upon our economic system. Ramsay MacDonald, Prime Minister in Great Britain's first socialist cabinet, after asserting that the capitalist system has "certainly solved the problem of production," goes on to show that "this wonderful system of production was quite unable to devise any mechanism of distribution which could relate rewards to deserts. . . . The result was that national wealth was heaped up at one end over a comparatively small number of people and lay thinned out at the other end over great masses of the population. At one end people had too much and could not spend it profitably, at the other end they had too little and never gained that mastery of things

which is preliminary to well-ordered life.”³ More vehement critics are fond of asserting that the capitalistic system pours untold millions into the coffers of the privileged few, while millions of propertyless workers have nothing but their daily wage, which is often pitifully inadequate to meet the contingencies of life.

Crude though the statistics may be, they unmistakably support the statement that in the great capitalistic countries a small percentage of the population owns a disproportionate part of the wealth. Such inequalities in the ownership of income-producing wealth result in sharp inequalities of income, and in the past at least have perpetuated themselves through the institution of inheritance. In 1929, a year in which the peace-time national income of the American people was the highest so far attained, the median family income was \$1,700; that is to say, one half of our 27 million families had incomes of less than \$1,700 per year and the other half had incomes in excess of that amount. Twenty years later, in 1949, the median family income had risen to \$3,100, a gain that was partly offset by higher taxes and a forty per cent increase in the cost of living. Since an income of \$1,700, or even of \$3,100, at the prevailing price level meant only a minimum of comfort, it is evident that millions of American families at the lower half of the income scale lived in poverty,—“ill fed, ill clothed, and ill housed”—and that capitalism has not solved the problem of income distribution with the same efficiency that it has shown in wealth production. Because of its shortcomings in this respect, it has failed to provide that equalization of opportunity, which is the essence of democracy, and which is essential to the discovery and development of talent in all economic classes. Because of its alleged failure as a distributive system capitalism is vulnerable to the attack of the disgruntled masses who through the might of numbers have the power to destroy the system.

While it is admitted that there is unequal distribution of income and wealth in capitalistic countries, some of which is also inequitable, it is urged that graduated income and inheritance taxes can effect any redistribution that society wants. Under existing American law (1950), for example, the recipient of an annual net income of \$500,000 pays a federal income tax of about \$429,820, leaving him \$70,180 out of his half-million dollars with which to pay his state income, property, and consumption taxes before providing for his living expenses and a possible margin of savings. Should he die having net assets of 50 million dollars, the federal government would collect an estate tax of more than 35 millions and the states, varying sums in accordance with the shares received by the beneficiaries. Surely, the governments of capitalistic nations know how to effect redistribution of both income and wealth. In all human probability this country will never again see either the lavish net disposable incomes or

³ *The Socialist Movement* (New York, 1911), p. 96.

the great fortunes of our economic yesterdays. Taxes promise to liquidate our ultra-rich.

Insecurity in status of workers. Still another criticism of competitive capitalism is that it is largely responsible for the economic insecurity of the worker. The individual as worker has no status in industry other than that afforded by the contracts to which he is a party. Since most of these are short-term contracts he has no permanent and guaranteed association with production. The capitalist controls the job. The workingman must seek the job because he is obliged to earn a living. But the capitalist is under no legal obligation to take care of the workingman when his wage contract has expired. While he sometimes does so, this is an expression of his good will rather than of any responsibility imposed upon him by the capitalistic system. Moreover, both employers and workingmen, without specific faults of their own and through forces beyond their control, are caught by the periodic depressions characteristic of the capitalistic system. The resulting unemployment and insecurity are the curse of all honest, capable, and industrious workers.

Insecurity is doubtless the most baffling problem of the capitalistic system. Its solution depends upon our mastery of those alternating periods of prosperity and depression that we call the business cycle. Fairly steady employment of both labor and capital provides the only real solution. Given confidence in the economic outlook, the steady movement of capital into our economic system comparable to the blood-stream of any organism, wisely timed public works to take up unavoidable slacks in private expenditures, compensation and annuities to provide for the contingencies of unemployment and old age, and it must be conceded that the problem of insecurity is not insoluble under the capitalistic system.

Overemphasis upon property rights. Finally, it must be said that throughout the criticism of the capitalistic system runs the constantly reiterated insistence that capitalism tends to emphasize property rights at the expense of human rights. Human welfare is said to be subordinated to the production of material wealth. In the United States the fourteenth amendment to the federal Constitution has become a quarry of defenses against the imposition of new burdens upon private property. The safeguard that no person shall be deprived of property "without due process of law," the provision that no State shall "abridge the privileges or immunities of citizens of the United States," and the prohibition laid upon the states of denying to any person within their jurisdiction "the equal protection of the laws," have been used deeply to entrench private property rights and to defeat measures looking to the protection of labor. Capitalism is motivated by the quest for profits; when merely human considerations interfere with profit-making, it is said that they are apt to be sacrificed. Excessively long hours at tedious or killing tasks; working

conditions in crowded factories that are prejudicial to safety and health; the exploitation of women weak in their bargaining power and of children who ought not to be bargaining at all; wages that are wholly inadequate to meet most of the emergencies of life; irregular employment fluctuating with changes in the outlook for profits—these the critics of capitalism claim all bear witness to the emphasis which the system places upon property rights often at the expense of human rights.

Need property rights have precedence over human rights in the capitalistic system? Of course they need not. Enlightened capitalism, while recognizing that property is one of the most important of human rights, freely grants that any economic system will ultimately stand or fall on its success or failure in promoting human welfare.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Private property is one of the principal foundations of a system of capitalism.
2. Private property is not a natural right; it is social in origin and depends upon society for its maintenance.
3. Without the institution of contract the capitalistic system would be impossible.
4. Competition guarantees to every individual a fair return for his services, so that each individual gets no more and no less than he deserves.
5. Even under the capitalistic system public authority must be relied upon as a control agency.
6. The shortcomings of the capitalistic system can be corrected without scrapping the system.
7. Increasing control by public authority over the economic system in the United States is undermining the foundations of capitalism.
8. Private ownership of the means of production may exist alongside either a democratic or a totalitarian form of government.
9. Private capitalism cannot exist in the face of economic planning by government.
10. Taxation, used as a means of regulating private profit, income and inheritance, threatens the institution of private property and hence also threatens the existence of a private capitalistic system.

SUGGESTIONS FOR FURTHER READING

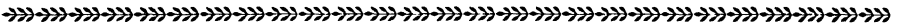
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(See also references for Chapter IV, "The Industrial Organization of Production".)

CHAPTER XXXIX

Government Regulation or Ownership of Public Utilities Within the Capitalistic System



THE CASE FOR REGULATION OF THE PUBLIC UTILITIES

GOVERNMENT REGULATION of the public utilities is today an accepted fact. Even the capitalists and managers engaged in the business of furnishing the public with such services as transportation, communication, light, and power would hardly choose to go back to the days of unregulated competition with its "cut-throat" rivalries and incessant friction with the consuming public. What they want is intelligent and fair regulation by government rather than freedom from all regulation. The consumer of the services of the public utility companies, at the same time, finds government regulation indispensable for the adequate protection of his interests.

There was a time when the American people put their faith in competition as a force sufficiently effective to protect the interests of the public. Competition was expected to keep rates down and the quality of the service up. Competing public utility enterprises were encouraged upon the deliberate assumption that this was the best means of protecting the public. But unregulated competition proved unequal to the task. The forces making for some form of combination were irresistible where large gains were to be effected thereby, and such combination was usually at the expense of the public. Competition having proved ineffective in the public utility field, the only alternatives in safeguarding the interests of the public were either government regulation or government ownership. For the most part the option chosen in this country was government regulation of privately operated public utilities.

The monopolistic character of the public utilities. The chief reason compelling government regulation is the fact that the public utilities are inherently monopolies. An industry or business today is properly described as a public utility not merely because it produces a commodity or service more or less essential to the convenience of the general public but because

its most successful operation is possible only under conditions of monopoly. The most common public utilities, indeed, are natural monopolies; their business characteristics are such as to render a multiplicity of competing plants and lines impracticable. To dig up city streets for more than one system of water mains or gas mains or electric light and power conduits would be not only an unmitigated public nuisance but also reckless extravagance. Many American communities still remember and some even now experience the inconvenience of more than one telephone system. In the case of the railroads there should be competition between traffic centers, but parallel competing lines do not serve the country nearly as well as a network of railways threading the entire territory. The necessity of preventing self-destructive competition, or the need of rendering efficient service to the public, have compelled the recognition of monopoly in the public utility field.¹ But unregulated private monopoly is intolerable in a free country. Consequently governments have either regulated or socialized the public utilities.

Governmental aid to the public utilities. The case for regulation of the public utilities, moreover, has been greatly strengthened by the historic fact that so many of the public service corporations have received concessions or direct aid from the government. The municipal utility corporations, including street railway or bus, telephone, light, and power companies, have obtained the use of city streets in franchises, which, if the government desires, afford an easy means of control. For the railroads, the state has often exercised the right of eminent domain, whereby the property of private individuals, unwilling to sell, has been taken from them at an appraised valuation and conveyed to the railroads. Was such seeming favoritism on the part of the state exercised for the purpose of giving the railroads what they want in the conduct of their business? Superficially this is true, but in reality the condemnation of private property for the use of a railroad is only undertaken because the construction of the road is deemed of public benefit. The use of the sovereign power of government on behalf of the railroads clearly defines their public status and obligations.

What is more, many of the public utilities, including the railroads, in particular, have been the beneficiaries of direct and indirect financial aid from the government. The United States Government, for instance, granted the Union Pacific, the Central Pacific, and four other corporations, which undertook the construction of the first railroad through to the Pacific Coast, twenty square miles of land for every mile of railroad construction—thirty-three million acres in all. It is estimated that as a result of the land grant policy of the government, federal and state, the railways

¹ Cf. Chap. V, "The Business Organization of Production," pp. 108-109.

came into possession of about 131,000,000 acres of land—almost one fifteenth of the entire area of continental United States.²

The credit of the government, too, was used in helping to construct the railroads. The Pacific railways just mentioned borrowed nearly sixty-five millions of dollars from the United States Government. More than a generation passed before any of it was repaid. The government never did get full payment for the principal and interest advanced, although the final settlements were more favorable than for a long time seemed probable. Local governments also offered generous financial aid to the railways within their jurisdiction; estimates placed the amount at two to three hundred millions of dollars. Cash bonuses and valuable tax-exemption privileges were granted by some governmental units. All this governmental aid—doubtless the largest ever given any private enterprise anywhere—was extended in the belief that good transportation agencies would hasten the settlement of the country, would establish outlets to markets, and would make for the prosperity of all. When abuses of the public arose in railway practice, the historic fact that extravagantly generous aid had been given the railways in the days of their youth was a moving consideration in establishing effective government control.

As far as the courts are concerned, the case for government regulation of railroads in the United States was first clearly stated in the celebrated case of *Munn v. Illinois*. When various state legislatures, coping with certain abuses in railway practice, sought to fix rates, the railways challenged their right to do so on the ground “that the owner of property is entitled to a reasonable compensation for its use, even though it be clothed with a public interest and that what is reasonable is a judicial and not a legislative question.” In this decision, however, the Supreme Court of the United States clearly affirmed the right of a state to regulate “properties burdened with a public interest.” The court said: “When one devotes his property to a use in which the public has an interest, he in effect grants to the public an interest in that use, and must submit to be controlled by the public for the common good to the extent of the interest he has thus created.”³

PURPOSE IN REGULATION OF THE PUBLIC UTILITIES

The chief objectives to be attained in the government's regulation of the public utilities are fair prices to the public and adequate service. The public utilities are inherently monopolies. The consumer, therefore, is

² The railroads received lands roughly equivalent to the combined areas of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Ohio, and Indiana.

³ *Munn v. Illinois*, 94 U.S. 113 (1876). Case pertained to public grain warehouses but was applied also to railways.

without the usual alternative of patronizing some other producer rendering the same service, if he finds the rates of a particular public service corporation too high to suit him. Nor can he usually dispense with the service, because the public utility companies supply services or commodities that are more or less essential. Consequently his best guarantee against excessive rates lies in effective regulation by the government. This has been supplied in the United States by both the federal and state governments.

What is true of rates is also true of service. Where there is absence of competition, other motives may not suffice to ensure the consumer the quantity, quality, and continuity of service to which he is entitled. Regulation by the government is the only effective means of assuring adequate service in the case of private monopolies rendering an indispensable service.

Although of lesser importance than the two considerations just mentioned, the establishment of regulatory bodies makes it easy for an aggrieved buyer of the service of a public utility to lodge complaint and secure justice, if his complaint has merit. While the courts are always open to anyone having cause for action, this mode of procedure is impracticable for the ordinary individual seeking redress in petty cases.

While regulation of the public utilities is primarily exercised for the purpose of protecting the consuming public, it is not without distinct service to the utilities themselves. The rates allowed, for example, are always based upon consideration of what constitutes a reasonable return to the public service corporations. Their rates have the stamp of government approval.

RAILWAY REGULATION: SPECIFIC COMPLAINTS AGAINST THE RAILWAYS

Since the railways, whether judged by the capital invested in them, the number of laborers they employ, or the nature of their service to the economic life of the people, are more important than any other public utility or combination of utilities, most of the discussion that follows will pertain to the problem of railroad regulation. Great as has been the indebtedness of the railways to the public, certain flagrant abuses appeared early in the practice of some roads. When criticism arose, the usual answer was that in view of the fact that the roads had been built, the public had received full equivalent for the aid granted the railway corporations. The operation of the roads, it was held, though serving a public purpose, was primarily a private matter. But this answer did not satisfy the public. One complaint after another arose until ultimately the number and seriousness of the charges against the railroads were so overwhelming that effective governmental regulation was established.

High rates. It is not surprising, when one recalls how much railway business is done under conditions of monopoly, that one of the earliest and loudest complaints against the railways was that they were charging unreasonably high rates. Railways have to meet competition at traffic centers; but at places where there is neither the competition of other railroads nor that of other means of transportation, they enjoy monopoly privileges. Not unnaturally, therefore, they based their rates upon the well-known principle of "charging what the traffic will bear." This meant that at some places rates were low in order to get business, and at others as high as they could be placed without killing business or driving it away. The objection, naturally, came from the high-rate communities. The railways for a long time remained indifferent to the complaint. Usually there was nothing in their charters concerning the maximum rates to be charged, and it took a long time to develop the necessary legal regulation of rates. In the meantime some communities suffered from high rates—even if not in silence or without company.

Discrimination between places. The principle of basing rates upon what the traffic would bear led to various forms of discrimination. One of the most serious of these was discrimination between places. It frequently happened that railroads charged no more for a long haul than a short haul. Sometimes, indeed, it happened that they charged more for the short haul than the long haul, even when the short haul was contained within the long haul. At one time, for instance, the cost of shipping goods from Chicago to Spokane was approximately 80 per cent higher than the cost to ship these same goods through Spokane to Seattle, 300 miles farther west.⁴ William Z. Ripley points out that Wichita, Kansas, not unnaturally complained because the rate of shipping cotton goods from New York to Wichita by way of Galveston, Texas, was \$1.36, while the rate to Kansas City, Missouri, by the same route but 225 miles farther, was only ninety-three cents.⁵

Why such discriminations? The only plausible reasons the railroads could allege were the necessity of meeting the competition of other carriers, by rail or water, at the traffic junction points, and the better terminal facilities of some places, which made them lower-cost shipping points. Such reasons, however, were not conclusive to incensed shippers or freight consignees living at the non-competitive points. In consequence they demanded that the government should correct what injustice existed. While many instances of place discrimination are justifiable, there was no escape from the fact that some of it was a masquerade to benefit favored individuals and communities.

⁴ U.S. Senate Document, Fifty-ninth Congress, Number 243 (1906), p. 2914.

⁵ *Railroads: Rates and Regulations* (New York, Longmans, Green and Company, 1912), p. 216.

Discrimination between individuals. The most reprehensible and deeply resented form of discrimination between individuals was that commonly known as rebating. In this practice favored shippers, though nominally paying the same rates as all other shippers, actually received a rebate from the railway companies on their shipments. This system of rebating enabled the favored shipper to overbid his competitors in buying goods (cattle or grain, for instance), or to underbid them in selling goods. It enabled railroads by secretly favoring some aggressive shipper temporarily to steal business away from some competing road. A conspicuous past beneficiary of such arrangements was the old Standard Oil Company.

There was nothing wrong in the mere granting of a rebate; the wrong lay in granting it to some and not to others. It often enabled favored shippers to crush their competitors. The success of the system depended upon its secrecy. The object was to get traffic away from a competing carrier. If the shroud of secrecy had been removed, the carrier granting rebates might as well have engaged in open rate warfare with all competing roads. To escape the calcium light of publicity the practice of rebating was often cleverly camouflaged. William Z. Ripley offers some ingenious examples.⁶ Spur track railway companies were sometimes organized in order to share the earnings of the carrier.

In Hutchinson, Kansas, for example, were salt works having a capacity of some 6,000 barrels a day. Two railways were available for shipments. A new company was incorporated, all its stock being held by the salt works owners, which constructed sidings to both railroad lines. The spur track was less than a mile long and cost only about \$8,000 to build. But the company was chartered as the Hutchinson & Arkansas River Railroad. Its officers were the owners of the salt mills. It owned neither engines nor cars. Yet it entered into a traffic agreement with the Atchison road for a division of the through rate to many important points, its share being about twenty-five per cent.⁷

Favored shippers were sometimes given the benefit of dark "midnight tariffs." They were secretly informed that beginning with midnight of a specified day a new and lower tariff of freight charges would be in effect. Twenty-four hours later, perhaps, the old tariff was restored. Anyone shipping on the specified date, of course, received the benefit of the lower rates. But buried in the mass of freight schedules constantly being filed, no one but an "insider" was in a position to profit materially by the temporary reduction in rates.

Still another elusive form of rebating arose out of the fact that some large shippers were also sellers of railway supplies. To get and to hold their business as shippers, it was easy to offer them an inducement in the form of prices above the market for all supplies sold the railroad.

⁶ Cf. *Railroads: Rates and Regulations* (New York, Longmans, Green and Company, 1912), pp. 195-209.

⁷ *Ibid.*, p. 195.

In this way no direct rebate was given, but indirectly the same end was accomplished.

The issuance of passes to certain favored persons was another form of individual discrimination. It was at one time very easy for members of legislative bodies, executive officers of government, and other leaders of the public to obtain free passes for themselves, and often for their families and friends.

Discrimination between commodities. A third form of discrimination growing out of the practice of charging what the traffic will bear is unfair discrimination between commodities. It is entirely fair that different rates shall be charged for different commodities. Heavy, bulky goods like coal cannot carry the same freight rate per ton-mile that shippers can afford to pay on light goods such as silk. Freight classifications are based on this sound idea, and when properly made are in the interest not only of the railways but also of the public.⁸ But the opportunities for abuse are numerous. To place one commodity in a given freight class bearing a low rate and to place a competing commodity in another class bearing a higher rate was to discriminate in favor of the former and against the latter.

The pooling of earnings or traffic. "Cut-throat" competition between the railroads sometimes led to the formulation of agreements to put a stop to such ruinous competition. The favorite device was the pool, a form of agreement in which the previously competing roads pledged themselves to divide earnings on traffic in accordance with some stipulated ratio. The "Chicago-Omaha" pool, previously described as entered into by the Chicago Northwestern, Burlington, and Rock Island railroads, was a conspicuous example.⁹ Such pooling arrangements when made and put into operation without any regulation by government usually proved prejudicial to the interests of the public, both as shippers and as passengers.

RAILWAY REGULATION: CONTROLLING LEGISLATION

The foregoing counts in the indictment of railroad practice—high rates, the long and short haul abuse, rebating, discrimination between commodities, and pooling agreements—slowly but surely led to governmental regulation. After a score of years of spirited discussion, the federal government undertook the regulation of the railroads in the public interest under the Interstate Commerce Act of 1887. While this act of Congress did not provide for very effective regulation of the railroads, it was greatly strengthened in later years and so may properly be said to have inaugurated a new era in the history of the railroads in this country. What the act did that has proved of supreme importance was

⁸ Cf. pp. 365-366.

⁹ Cf. pp. 112-113.

the creation of the Interstate Commerce Commission to regulate interstate railway traffic. The act also laid down the principle that rates must be just and reasonable; that there must be no undue preferences between places and between persons; and that the practice of pooling earnings or traffic must be abandoned. The commission was given power to investigate complaints against the railroads and to issue orders to the carriers to desist from any practices found to be illegal. For the enforcement of its orders, however, the commission had to depend upon the courts. This lamed, if it did not paralyze, the arm of the commission. As public opinion with reference to the railroads became better informed and ripened into more positive convictions, a long series of amendments was passed by Congress. These amendments of 1903, 1906, 1910, 1913, 1914, 1920, and 1933 all had as their purpose the strengthening of the Interstate Commerce Act of 1887.

The Elkins Act of 1903 is remembered chiefly as an effective effort "to put teeth" into the rebating prohibition of the Interstate Commerce Act. Although the practice was forbidden in the original act, so many loopholes were found that the law did not really get hold of the offenders. The Elkins Act imposed heavy fines upon any railroad corporation found guilty of granting lower rates to any shipper than those contained in the published tariff applicable to all.

With the passage of the Hepburn Act in 1906 the scope of the regulatory powers of the Interstate Commerce Commission was extended to include pipe-lines, express companies, and sleeping-car companies. The act prohibited the issue of passes to anyone except to a person belonging to a specified group. It prohibited a carrier from transporting for sale any commodity in which the carrier had a proprietary interest, lumber and lumber products alone excepted. It conferred power upon the commission, when upon complaint it found a rate "unjust or unreasonable, or unjustly discriminatory, or unduly preferential or prejudicial," to determine and fix the maximum rate which the carrier might charge. Prior to such authorization, about all the commission could do concerning unjust rates was to make an investigation and file a report. The railways could afford to disregard the orders of the commission, because the United States Supreme Court had held that prescribing the rates to be charged was a legislative power, which Congress had not conferred upon the commission.¹⁰ The Hepburn Act made the Interstate Commerce Commission a really strong commission; effective federal regulation of the railways dates from its passage in 1906.

What the Elkins Act had done to abolish rebating, the Mann-Elkins Act of 1910 did in eliminating the long and short haul abuse. It unequivocally

¹⁰ *Interstate Commerce Commission v. Cincinnati, New Orleans and Texas Pacific Railway Company*, 167 U.S. 479 (1897).

cally provides that no greater charge shall be made for a short haul than for a long haul over the same line or route and in the same direction, except upon authorization of the commission. The act also made the commission's power over rates still more effective by authorizing it to suspend for a time rate increases proposed by the railroads, until investigation by the commission should establish their reasonableness.

What constitutes a reasonable rate depends both upon what the public can afford to pay and upon what the railroads can afford to take. The railroads are interested in getting a fair return on their invested capital as well as in meeting ordinary operating expenses. The public had no way of knowing whether the returns were fair or not, because the valuation of the invested capital was unknown. To help remedy this situation, Congress in 1913 passed the Adamson-LaFollette Valuation Act. Under this measure the Interstate Commerce Commission was directed to ascertain the capital value of the railways—a task upon which the commission spent about fifteen years. The commission, through its Bureau of Valuation, made an inventory of all the physical property of the railroads. It tried to ascertain for each the original cost, the cost of reproduction new, the cost of reproduction minus depreciation, and “other values and elements of value, if any.” The original cost could not be determined either completely or accurately; in many instances “original costs” had to be reconstructed from known price data at the time of original construction, and thus they represented estimates projected into the past. The valuation activities of the commission centered on ascertaining what it would cost to reproduce the railway properties new and what their cost of reproduction new less depreciation would be. Primary valuations were based upon the cost of materials and labor prevailing in 1914, or upon the average net prices paid during the five-year period ending in 1914. For railway carriers as of January 1, 1937, the Interstate Commerce Commission computed cost of reproduction new of the railway property other than land as \$26,238,856,914; cost of reproduction less depreciation, \$18,906,861,318. Original cost was estimated at \$23,019,167,496. The value of land and rights, amounting to \$2,606,869,985, should be added to the three preceding figures for a more complete valuation on each of the three bases.¹¹ Now that this basic valuation work has been done, the valuation for any subsequent year can be more easily determined. New investments are a matter of record, rates of depreciation are a matter of experience, and changes in the general level of prices affecting reproduction costs can be calculated.

¹¹ Cf. *Fifty-second Annual Report of the Interstate Commerce Commission*, 1938, pp. 113-116. Cf. also other references to this subject in Chapter V, “The Business Organization of Production,” pp. 103-105, and Chapter XIII, “Transportation,” pp. 368-370.

In valuation discussions a very interesting controversy developed as to which basis of valuation should be given primary weight in fixing the general level of rates. Since the price level fluctuated widely in the twenty-year period following the enactment of the valuation law, reproduction costs showed sharp changes. At the time the Valuation Act was passed in 1913 the "liberals" favored reproduction costs as a basis of rate-making; the railways clung to original costs. The First World War interrupted the valuation work and temporarily obscured the controversy. The price level in the meantime more than doubled. When valuation questions again commanded attention after the war, the "liberals" were found championing original costs, particularly the prudent investment theory, and the railways espoused reproduction costs. The "liberals" wanted the lowest valuation figures, the railways the highest, on which to base the general level of rates. With the post-war fall in prices, particularly in the depression of the thirties, another shift in position seemed imminent. Both sides were saved the embarrassment (if any) of another change, because economic conditions became so bad that the question of railway property valuation as a rate base had academic interest only. What the public could afford to pay fell far short of a reasonable return on any valuation base.

During the long controversy, however, the Supreme Court had rendered an important decision in the case of the St. Louis and O'Fallon Railway, a small railway that would have remained unknown to most people except for this "test case" decision of the court. In this decision, so far as the principle of valuation is concerned, the court held that present-day costs of reproduction must be given due consideration in arriving at a valuation, without, however, indicating what weight to give such reproduction costs. The Interstate Commerce Commission in its valuation work had adopted a compromise method by calculating reproduction costs as of 1914, adding the actual costs of extensions and betterments since 1914, and subtracting a sum for depreciation.

The Clayton Act of 1914 refers only incidentally to the railroads, but its prohibition of interlocking directorates and of intercorporate stockholding, the effect of which is to lessen competition, is important in this connection.

The Esch-Cummins Act of 1920 in a number of ways marked an important departure from previous regulatory policy. For the first time Congress declared what should be regarded as a fair rate of return. It directed the Interstate Commerce Commission to divide the country into rate districts and to initiate such rates that carriers in each district (not each individual road, necessarily) would be able to earn an aggregate amount that would represent a fair return upon the aggregate value of their railway property. It specified that from March 1, 1920 (the date the railroads were returned to their owners after twenty-six months of

operation by the government), to March 1, 1922, such fair rate of return would be $5\frac{1}{2}$ per cent, with an additional $\frac{1}{2}$ of 1 per cent to provide for unproductive improvements. After the latter date the commission was empowered to change the fair rate of return, without however impairing the principle that the railways should be allowed to earn, if they could, a fair return on their invested capital. The commission exercised its power, and on March 1, 1922, the standard rate of return was reduced to $5\frac{3}{4}$ per cent. Since the rate of return must be applied to some figure as a base, the commission was obliged to fix a tentative valuation of all the railroads of the country without waiting for the completion of its own valuation work. The valuation announced in 1920 for rate-making purposes was \$18,900,000,000.

A second new principle embodied in the Esch-Cummins Act was the so-called recapture of earnings. If any efficient carrier earned from its transportation business an income in excess of the standard rate of return on its valuation, one half of such surplus might be retained by the carrier as a reserve, but the other half was payable to the government. The surplus paid the government was to be used as a revolving fund to aid weaker railroads in providing necessary transportation facilities. Naturally some railroads were quick to challenge the constitutionality of this recapture clause. The United States Supreme Court, however, in the Dayton Goose Creek case declared it valid.¹² Comparatively little was actually paid to the government under this act, although much larger sums were payable. The economic distress of the railways during most of the time following the enactment of the law made it inexpedient for the government to press the collection of its claims. Finally, the entire provision of the law for the recapture of earnings was repealed, and the repeal given retroactive effect, by the Emergency Railroad Transportation Act of 1933.

Still another radical departure of the Esch-Cummins Act from traditional regulatory policy was the permission granted the railroads, subject to the approval of the commission, to effect consolidation of their properties into a limited number of railway systems. So far no important consolidation has actually taken place. How revolutionary this proposal is becomes apparent when one recalls that the original Act to Regulate Interstate Commerce forbade the existence of pools among the railroads, and that holding companies such as the Northern Securities Company were prosecuted as being contrary to the public interest because they were in restraint of trade. Whatever consolidations may occur under the act will be voluntary, not compulsory. It will be a complete reversal of the public attitude toward the railways, if at some time in the near future such consolidations are made mandatory, not optional. The key to this

¹² Dayton Goose Creek Railway Company v. United States Interstate Commerce Commission, 263 U.S. 456 (1924).

changing public opinion is furnished by the effectiveness of governmental control.

A depression-inspired amendment of the Act to Regulate Interstate Commerce was the Emergency Transportation Act of 1933. In some respects this act abandoned some of the ground previously taken in the regulation of the railways, and in other respects it broke new ground. The most sweeping change made was the abandonment of the rule that in setting rates cognizance should be taken of what constitutes a reasonable return on the fair valuation of railway property. For it there is substituted the general rule that rates must be "just and reasonable," and Section 205 of the Emergency Transportation Act further directs:

In the exercise of its power to prescribe just and reasonable rates, the Commission shall give due consideration, among other factors, to the effect of rates on the movement of traffic; to the need, in the public interest, of adequate and efficient railway transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable the carriers, under honest, economical and efficient management, to provide such service.

The recapture of earnings provision of the previous law was repealed, and the sums collected under it were returned to the railways. Railway holding companies, established for the purpose of effecting consolidations, were brought under the control of the commission, thus making sure that whatever consolidations occur are in accordance with the commission's general plan of consolidation.

The most recent of the acts to regulate interstate commerce, which affect the railways, are the Motor Carrier Act of 1935 and the Wheeler-Lea Act of 1940. They grew out of an effort to put the regulation of different transportation agencies more nearly on a par. The Motor Carrier Act brought motor common carriers, which operate over regular routes and between fixed terminals, and contract carriers, which do not operate either over regular routes or between fixed terminals, under the regulatory powers of the Interstate Commerce Commission. The Wheeler-Lea Act brought domestic water carriers (coastal, intercoastal, and inland) under the jurisdiction of the Interstate Commerce Commission. The new measure also did away with the requirement of the Esch-Cummins Act that railway consolidations, if they are made, must conform to an official plan proposed by the Interstate Commerce Commission. Railroads now have the opportunity to propose mergers along "natural lines," which they deem best suited to their needs. Aside from these and other specific provisions, the act commits Congress to a program for promoting a financially sound and well-coördinated transportation system. In more than a half-century of regulation our policy has shifted its emphasis from restraint to promotion.

Two decisions of the Supreme Court of the United States, bearing upon the regulation of the railways and other public utilities, were those in the Natural Gas Pipeline Company case of 1942 and the Hope Natural Gas Company case of 1944.¹³ The effect of both decisions was to loosen the restrictions heretofore placed on regulatory bodies in passing upon the reasonableness of rates. The Natural Gas Pipeline Company brought gas from fields in the Texas Panhandle to Illinois utilities. A reduction in rates had been ordered by the Federal Power Commission under the act to regulate such rates passed by Congress in 1938. The Natural Gas Pipeline Company attacked the constitutionality of the act and the fairness of the rate reduction that had been ordered. But the Supreme Court in a unanimous opinion sustained the constitutionality of the act and approved the authority of the Commission to regulate natural gas rates. The Court declined to accede to the arguments of the Company that in setting up amortization allowances for the depletion of gas present values must be taken as the base. The Court held that the cost of the property to the Company might suffice. In the opinion of the Court, Chief Justice Stone said:

The Constitution does not bind rate-making bodies to the service of any single formula or combination of formulas. Agencies to whom this legislative power has been delegated are free, within the ambit of their statutory authority, to make the pragmatic adjustments which are called for by particular circumstances.

The decision was generally regarded as denying that public utility regulatory bodies must necessarily value utility properties at "cost of reproduction, new less depreciation" in arriving at a fair capital value for rate-making purposes.

This opinion was confirmed two years later in the decision of the Supreme Court in the Hope Natural Gas Company case. In substance the Court held that regulatory bodies, when placing a valuation upon the property of public utilities for rate-making purposes, may use any "basic yardstick" that seems best, provided only that the "end result" is reasonable. The Court said:

Under the statutory standard of "just and reasonable," it is the result reached not the method employed which is controlling. . . . It is not the theory but the impact of the rate order which counts. . . . Rates which enable the company to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for risks assumed, certainly cannot be condemned as invalid, even though they might produce only a meager return on the so-called "fair value" rate base.

¹³ *Natural Gas Pipeline Company v. Federal Power Commission*, 315 U.S. 575 (1942); *Federal Power Commission et al. v. Hope Natural Gas Company*, 320 U.S. 591 (1944), 64 Sup. Ct. 281 (1944).

No longer need regulatory bodies in arriving at fair capital value and reasonable rates make use of any single formula, or show allegiance to any single principle such as cost of reproduction. Only the "end result" of their calculations must be equitable. Presumably, however, an equitable result will still have to include a fair return on the value of the property, no matter how this value may be determined, if the investment of new capital is to be attracted.

RAILWAY REGULATION: POWERS OF THE INTERSTATE COMMERCE COMMISSION

It has become increasingly evident throughout the preceding recital of the more important steps taken by the federal government in regulating the railroads that the indispensable administrative agency for the protection of the public is the Interstate Commerce Commission. From a body of five members, as originally constituted in 1887, the commission has been enlarged until now it consists of eleven members. Continuity of membership is provided for by overlapping terms of seven years for each of the commissioners, who are appointed by the President with the consent of the Senate. From powers that were largely investigative and monitory—and even so, frequently greatly weakened by the courts—it has come to exercise powers that are as fully regulatory as any controlling body could wish. Some idea of the magnitude of the task imposed upon the commission may be gathered from the fact that it was necessary to build up an organization of about 2,000 employees, experts of many kinds together with their assistants, to discharge the duties delegated to it by Congress in the successive acts to regulate interstate commerce. The commission is the arm of Congress in handling interstate commerce.

Under the federal Constitution, of course, the regulatory powers of Congress are restricted to interstate commerce. The regulation of intrastate commerce is left to the several states. Some of the states exercised their powers long before the federal government assumed its responsibilities in the matter. Today, every state in the Union, except Delaware, has its own railway or public utility commission. The railways are sometimes restive under this dual control, preferring exclusive federal regulation. One of their spokesmen has said that their status is analogous to the well-known situation of a pet chameleon, which when put on a piece of green cloth obligingly turned green, on a piece of red cloth turned red, and on a piece of yellow cloth turned yellow. In an ill-advised moment, however, someone experimented by putting the little lizard on a piece of Scotch plaid, with the result that the chameleon burst all to pieces trying to live up to expectations. The railways often like to say that somehow or other they managed to do what was expected of them

when they had only the state legislatures to obey. When the Interstate Commerce Commission was created, they still managed to get along. But today when Congress, forty-eight state legislatures, the Interstate Commerce Commission, and public utility commissions in every state except Delaware all participate in regulating them, the plaid has become too variegated and they bid fair to burst in the attempt to make good.¹⁴ It is altogether unlikely, however, that the states will very readily surrender any of their prerogatives in the matter of railway control. A dual system of regulation seems inevitable in this country for an indefinite time to come.

Railroad regulation by the federal government, as the preceding discussion has shown, did not come to pass in a day or a year. Once established, however, it has proved substantial, comprehensive, and effective. Its success has materially helped in changing the spirit of some railway executives from "the public be damned" (a sentiment once expressed by Cornelius Vanderbilt) to "the public be pleased." At the same time, because it has given the public a sense of security against possible abuses by the railroads, it has helped to overcome bitterness and to develop greater open-mindedness and sympathetic interest on the part of the public in finding the wisest solutions of railway problems. The success of railroad regulation by the federal government promises to continue. Should it fail, it will not be for lack of the necessary authority.

How extensive and intensive the present regulatory functions of the Interstate Commerce Commission are may be somewhat clarified by a classified summary of its more important powers under the Act of 1887 to Regulate Interstate Commerce as amended during the succeeding fifty years.

As to scope. The present jurisdiction of the Interstate Commerce Commission includes not only the steam railways, to which its regulation was originally restricted, but also electric railways, express companies, sleeping-car companies, pipe-lines, private car lines together with switching and terminal properties, motor buses and trucks, and water carriers—all to the extent that they do an interstate business. In the main the powers of the commission are coextensive with the interstate business of common carriers operating by rail or by combination of rail and water.

The interstate business of telephone and telegraph companies from 1910 to 1934 was also within the range of the commission's regulatory activities. The Communications Act (June 19, 1934) created the Federal Communications Commission and entrusted it with the responsibility of regulating the interstate and foreign business of the telephone, telegraph, and radio companies. Powers previously vested in the Interstate Com-

¹⁴ Cf. Blewett Lee, general solicitor of the Illinois Central Railroad, "The Next Thing in Railway Regulation," *Outlook*, Vol. 113 (1916), pp. 1049-1052.

merce Commission and the Federal Radio Commission are now lodged in the Federal Communications Commission of seven members.

As to rates. The Interstate Commerce Commission has power to establish rates that are just and reasonable. Such rates must be fair both to the public and to the railway companies rendering the service. The specific rates to be charged for various classes of freight are proposed by the railroads but are subject to approval by the commission as to their reasonableness.

The commission has the power to fix both maximum and minimum rates upon either its own initiative or the complaint of a shipper. To fix maximum rates means to protect the shipper; to establish minimum rates means to protect the railroads against possible cut-throat competition.

Schedules of freight rates proposed by any carrier may be suspended by the commission for a limited period of time. If investigation establishes their reasonableness, they may be allowed; if not, a definite rate may be prescribed.

Copies of freight rate schedules and passenger fares must be filed with the commission, and no carrier is allowed to depart from these published rates.

As to discriminations. Interstate commerce law directs the commission to prohibit unfair discriminations of all sorts. Accordingly, the granting of rebates render both shipper and carrier liable to punishment. Free passes are prohibited except to groups of persons specified in the law. Unfair discriminations between places are prohibited; no greater charge may be made for a shorter haul than for a longer haul, the shorter being included within the longer, unless the commission has given specific authorization for such discrimination.

As to combinations. While pooling was prohibited by the original Act to Regulate Interstate Commerce, an amendment of this act, the Esch-Cummins Act of 1920, authorized the commission to "prepare and adopt a plan for the consolidation of the railway properties of the continental United States into a limited number of systems." The Wheeler-Lea Act of 1940 modified this to the extent that the consolidations may be proposed by the railroads, need not conform to an official plan of the Interstate Commerce Commission, but must be approved by the Commission. Such consolidations are subject to the limitation that competition between consolidated systems shall be preserved as fully as possible. Under the earlier Clayton Act (1914), intercorporate stockholding and interlocking directorates, the effect of which is to lessen competition, are prohibited. The commission is charged with the administration of this provision so far as it pertains to the carriers of interstate commerce.

As to accounts and finance. The commission has power to specify the form of all accounts, and to require uniform accounts—a most important

power, because regulation, if it is to be intelligent, must be based upon accurate and reliable data. The carriers are required to submit regularly statements of their revenues and expenses, and the commission is authorized to inspect all their accounts and records. Such procedure results in publicity of railway operations, which has been indispensable to the commission, particularly in the performance of its rate-regulating duties.

The commission has exclusive control over the issue of railway securities. No bond or stock issue may be floated without the approval of the commission, but its consent in no way obligates the government as to the securities so issued. The commission must be convinced that the proposed issue is for the best interests of the railroad in the discharge of its duties as a common carrier and is also compatible with the public interest.

As to service. The commission is vested with both ordinary and extraordinary powers over railway service. It may prescribe the amount of railway service. It may control the movement of equipment. It may require the purchase of new equipment. It may order the common use of rolling stock and terminals by a number of roads. No new line may be built or old line be abandoned without its permission. In the event of a national emergency, such as war, it may direct that certain traffic shall have priority in transportation.

RAILWAY REGULATION: POWERS OF STATE PUBLIC UTILITY COMMISSIONS

Long before the Interstate Commerce Commission was created, some of the states had already established a semblance of control over the railways within their respective territories. Today all the states exercise such control. The regulatory powers of each state, however, are constitutionally restricted to commerce confined within its own borders. No very serious attempt was made by any state to regulate its railways until about 1870. *Laissez faire* conceptions of government were one important deterring influence. For another thing, the states were more interested in getting railroads built than in controlling them. Since that time, however, direct statutory control and commission control of the railroads have become general. The early state commissions were of the advisory type, weak in regulatory powers; the later commissions, particularly those created since 1897, are of the mandatory type, strong in their powers to regulate. The state commissions consist of three to seven members, three fourths of the states having three-member commissions. In about half of the states they are appointive officers; in the rest, they are directly elected by the people.

The powers of the state commissions differ widely. The stronger of these commissions have powers that on a more limited scale are com-

parable to the powers of the Interstate Commerce Commission. The supervision of rates, particularly the adjustment of intrastate rates to interstate rates, the prohibition of discrimination, the regulation of accounts, and control over service, including safety and sanitation, are the usual functions discharged by these commissions.

While the jurisdiction of the state and federal commissions now seems clearly enough defined, important disputes have arisen and doubtless will continue to arise as long as our dual system of control continues. Local intrastate rates, for instance, established by a state commission, may have important bearings upon interstate commerce. In such a case, who shall determine the rates to be charged, the state commission or the Interstate Commerce Commission? The Supreme Court of the United States answered this question. In the so-called Shreveport Rate Case¹⁵ Louisiana shippers had complained that certain rates established by the Texas Railway Commission on Texas intrastate traffic were proving discriminatory against traffic originating in Shreveport, Louisiana, and destined for Texas markets; that the low intrastate rates rendered competition by outside industries paying the high interstate rates impossible; that Texas, by endeavoring to secure commercial advantages for herself in her own markets, was in reality forcing a downward revision of interstate rates in order that outside industries might compete, and thus was in effect regulating interstate commerce. The Supreme Court fully sustained the power of the Interstate Commerce Commission to set reasonable rates, and the commission directed the railroads to eliminate the discriminatory rates, even though this meant violating the orders of the Texas Railway Commission. Subsequently, in the Esch-Cummins Act, the principle of the Shreveport Case was enacted into law; where rates made by any state discriminate against interstate commerce, the rates established by the Interstate Commerce Commission to remove such discrimination shall prevail, "the law of any state or the decision or order of any state authority to the contrary notwithstanding." Commerce knows no state lines, and governmental control must be adjusted accordingly.

The position of the Court in the Shreveport Case (1914) and the statutory declaration of the Esch-Cummins Act (1920) were reaffirmed by the United States Supreme Court in the Wisconsin Passenger Fare Case (1922).¹⁶ The Wisconsin legislature had placed a two-cent per mile passenger fare law upon its statute books in 1907. Years later the Interstate Commerce Commission had declared a charge of 3.6 cents per mile reasonable for interstate passenger transportation. Could Wisconsin be permitted in 1922 to enforce its low passenger fare law in the face of

¹⁵ 234 U.S. 342 (1914).

¹⁶ Railroad Commission of Wisconsin v. Chicago, Burlington & Quincy Railway Company, 257 U.S. 563.

much higher interstate rates that had been declared reasonable? Again the Court denied the right of a state to enforce intrastate rates that were prejudicial to interstate rates. The Court held that such a low rate would discriminate against interstate movements and, if passengers in Wisconsin were carried at a loss, would place heavier burdens upon other traffic of the railways to make up the deficit.

While there has been a steady extension of federal regulation of the railways at the expense of the state governments, this has been inevitable and even desirable in view of the interdependence of the parts of our transportation system. The growth and success of federal regulation, however, do not imply that state control is no longer necessary. There are still numerous railway problems of local concern with which the state commissions are best qualified to cope. As for the past, the state regulatory bodies have scored many notable achievements of benefit both to the public and to the railways.

REGULATION OF PUBLIC UTILITIES OTHER THAN THE RAILWAYS

The spectacular and prolonged contest for effective control of the railways has overshadowed the struggle effectively to control other public utilities as well. To the extent that their business may properly be classified as interstate commerce, some of these other public utilities have been brought under the regulatory powers of the Interstate Commerce Commission. This is notably true of the interstate business of motor bus and truck companies. Others, such as the telephone, telegraph and radio, have been brought under the regulation of the Federal Communications Commission to the extent that interstate business is involved. Still others, such as natural gas, are subject to the control of the Federal Power Commission. But much of what control there is over public utilities other than the railways is exercised by the state public utility commissions. Telephone and telegraph companies, street transportation companies, electric light and power companies, gas companies, and, less frequently, water companies are subject to control by the state commissions. Control of municipally owned and operated utilities is not as usual as control over private companies.

The problem of controlling the public utilities has been steadily growing in importance. Primarily this has been due to the rapid growth of their business and the increasing dependence of the public upon the services rendered by them. Secondly it has been due to the tendency of the public utilities to consolidate into larger and more formidable units, capable at times of ignoring both the consuming public and the government. How much the services of the public utilities have become part

of our standard of living can be realized, perhaps, if we imagine ourselves suddenly deprived of all of our common carriers, of both telephone and telegraph, of water-works, of gas and electric light and power. Judged by any standard—capital invested in them, volume of business done, income derived from them, people employed by them—the public utilities constitute one of the country's major industries and one which directly and intimately affects the well-being of all the people. It is reported that in 1948 there were over 33,549,000 customers for residential or other domestic uses of electricity in the United States.¹⁷ While candles and kerosene and gas are still being used for artificial illumination, there is no real substitute for electricity. Its convenience, cleanliness, power, and cost make it the ideal source of illumination. When an industry becomes so indispensable to the comfort of the public, and when in the interests of economy its service must be rendered under monopolistic conditions, it is inevitable that public control should develop.

The need of increasingly effective government control has also been evidenced by the consolidation into larger corporate organizations of one-time independent local utilities. This movement made particularly rapid progress during the decade following the First World War. By 1932, it is estimated, 75 per cent of the business of supplying electric light, heat, and power to the people of the United States was in the hands of ten large holding companies.¹⁸ Through the superposition of holding company upon holding company, and the device of interlocking directorates, a small number of financial groups came to dominate the electric light and power business of the country. Conspicuous among these financial interests have been or are such groups as J. P. Morgan and Company, Bonbright & Company, Drexel & Company, Henry L. Doherty & Company, H. M. Byllesby & Company, Stone & Webster, Inc., the General Electric Company—and the Insulls. When an industry grows to such commanding size as did some of the loose-jointed "super-power" companies, the public welfare must be protected through more stringent government control.

The chief purpose in the regulation of all public utilities is to assure the public adequate service at reasonable prices. Wherever and whenever public utility service is unsatisfactory, some customer is likely to lodge complaint. It is the duty of the regulatory bodies not only to pass upon the merits of such complaints, but also to order satisfactory service upon their own initiative. Public utility service may be considered reasonably adequate if both the quality and regularity of the service meet the needs of the consuming public. In discharging their duty to regulate service, commissions must pass upon the quality of the service rendered as judged

¹⁷ *Statistical Abstract of the United States, 1949*, p. 518.

¹⁸ James C. Bonbright and Gardiner C. Means, *The Holding Company* (New York, McGraw-Hill Book Company, Inc., 1932), p. 97

by both prevailing and possible standards, and may authorize both the extension and abandonment of service lines.

The problem of establishing reasonable prices is much more difficult. On a smaller scale, it is the same type of problem already discussed in connection with the regulation of railroad rates.¹⁹ Public utility rates must be low enough to encourage public consumption of the utility furnished and, at the same time, high enough to yield a fair return on the investment. In order that a commission may pass upon the reasonableness of a proposed electric light charge per kilowatt hour, for example, it must ascertain the following facts: the annual operating expenses of the company in rendering the desired public service; a fair allowance for the annual depreciation of the company's plant; the value, on some accepted principle of valuation, of the company's investment; what constitutes a fair rate of return on an investment in the particular electric light and power enterprise. With these facts known, the commission, after estimating the revenue to be derived from the proposed rates, can at least tentatively answer the question: Is the proposed rate a reasonable charge, fair to both the consuming public and the public service corporation? Regulatory bodies are called upon to protect the interests of both the consuming and the investing public.

Regulation of public utilities other than the railways largely rests with the state public utility commissions. (Delaware alone is without such a regulatory body), because the business of these utilities is predominantly local and intrastate. When one recalls that some of these commissions are elected rather than appointed, that the terms of office are often too short to attract competent men from other work, that the personnel of the commission is constantly changing, that their powers are restricted, that their financial resources and the technical staffs they can recruit are limited and subject to constant loss, the amazing thing is that forty-seven state public utility commissions have accomplished what they have in controlling the public utilities. Control over service has proved fairly easy and satisfactory. Control over rates has been more difficult to achieve because of the intricate problems involved.

The handicaps of the state public utility commissions in exercising effective control are partly due to lack of jurisdiction and necessary authority. Hardly any of the commissions has power over the holding companies which manage the local operating companies. Moreover, if a holding or an operating company in a field like electric light and power does an interstate business, and at the same time the Interstate Commerce Commission or the Federal Power Commission has no control, it will escape effective control except through the coöperation of the states,

¹⁹ Cf. discussion of establishing both the general level of rates and of fixing specific rates in Chapter XIII, "Transportation," pp. 365-370.

which is not always easily secured. Certain of the state commissions even lack authority to regulate some of the utilities, like electric light and power, or must share their powers with municipal authorities. In general, the commissions cannot initiate proceedings looking to the revision of rates but must act upon the complaint of interested parties. But greater than the handicap of inadequate jurisdiction and power are the limitations upon the activities of the commissions attributable to inadequate appropriations. The salaries of the commissioners themselves and of the technical experts employed by them are usually too small to attract and hold some of the most competent and desirable men in the state service. It has been common experience for the commissioners to lose some of their keenest men to the service of the public utilities themselves. This "nibbling" process has often had an unfortunate effect upon the efficiency of the commissions. It takes able, fearless, and experienced men in the service of the government to match wits with the legal and other expert talent the private corporations can assemble. Inadequate funds to work with have meant technical and administrative staffs unequal to the task imposed upon them. Some states, like Wisconsin, have sought to meet the problem of financial resources for regulatory work by assessing the costs of specific rate investigations against the public utilities involved.

The most serious attempt on the part of the federal government to regulate the public utilities subject to its jurisdiction came with the passage of the Public Utility Act of 1935. Its theme is that the public utility holding company and its subsidiaries are "affected with a national public interest." Since state regulation cannot be effective, federal regulation is held to be necessary. The act is concerned with holding companies that operate in the field of the electric and gas public utilities. For purposes of the act holding companies are defined as companies which, directly or indirectly, control at least 10 per cent of the voting stock of underlying public utility companies.

The act provides that public utility holding companies must register with the Securities and Exchange Commission. The purpose of such registration is to secure detailed financial information concerning the corporate structure, connections, and operations of each holding company. The Securities and Exchange Commission has power to regulate security sales by registered holding companies and their subsidiaries. It may grant or withhold its approval of such sales. It may pass upon the appropriateness of any proposed capital issue, considering in its judgment the corporation's present financial structure and earnings. The commission is directed to examine the structure of public utility holding companies to ascertain whether it can be simplified and, if so, to order such simplification. After January 1, 1938, the commission is instructed to require each holding company and each subsidiary to make sure that the

system of which it is a part constitutes a "single integrated system." Such a system is defined as a system not so large as "to impair the advantages of localized management, efficient operation, and the effectiveness of regulation." The act speaks of a single integrated system as meaning a system whose properties are either physically interconnected or capable of such interconnection in serving the needs of a single region. The holding company is not outlawed, but the superposition of more than one holding company upon another is prohibited; holding companies beyond the second degree must be eliminated. Important exceptions are allowed, however, and the future of such companies is still much in doubt.

When the Supreme Court of the United States in March, 1938, upheld the constitutionality of the act, the public utility holding companies, that had failed to register with the Securities and Exchange Commission, quickly complied. Some have voluntarily offered to simplify their corporate structures, and others have been ordered to submit plans to this end. What the public utility structure in the United States will look like in a few years depends upon negotiations, hearings, orders, appeals, and decisions now in process or in prospect, but a much simpler structure seems to be emerging.

THE ALTERNATIVE OF GOVERNMENT OWNERSHIP AND OPERATION OF THE PUBLIC UTILITIES

While it is true that regulation of the public utilities is today an accepted fact, this does not mean that it meets with the unqualified approval of all. Some critics, not without a measure of truth, find fault with the partisanship, provincialism, and politics that have often been revealed in the action of state regulatory bodies. Others are convinced that regulation is only a temporizing measure; that ultimately the state must own and operate all public utilities in the public interest. One thing is clear to all who recognize the peculiar relations between public utility enterprise and the consuming public, namely, the only alternatives worth considering are effective government regulation and some form of government ownership.

Government ownership and operation of the public utilities are far less common in the United States than in Europe. What government ownership we have is almost wholly restricted to the local utilities. Waterworks are very generally municipally owned; in 1938, 70 to 75 per cent of the water-works systems of the United States were owned and operated by local governments.²⁰ Except for sewage treatment plants, only a minor percentage of the other local utilities is publicly owned and operated. The

²⁰ Burns and McDonnell Engineering Company, "Status of Municipal Ownership of Waterworks in the United States," *The American City*, Vol. 53 (1938), pp. 53-54.

following table summarizes the situation as to public ownership and operation of local utilities in the United States.

PUBLIC OWNERSHIP AND OPERATION OF PUBLIC UTILITIES IN 2,033 CITIES WITH POPULATIONS OVER 5,000, CLASSIFIED BY NUMBER AND PERCENTAGE

<i>Type of Utility</i>	<i>Number</i>	<i>Per Cent</i>
Bus and trolley bus systems	41	2.0
Electric generation and distribution	261	12.8
Electric distribution only	171	8.4
Gas manufacturing and distribution	44	2.2
Gas distribution only	48	2.4
Street railway	11	0.5
Sewage treatment plant	986	48.5
Water supply and distribution	1,405	69.0
Water distribution only	113	5.6

The International City Managers' Association, *Municipal Year Book*, 1950, p. 47.

Private ownership has been steadily maintained in the railways, telephone, and telegraph. We had government operation, but not ownership, of our entire railway system as a necessary war measure from December 28, 1917, to March 1, 1920. By operating all the railways of the country as a single system the government was able to make them function more efficiently in transporting troops and the extraordinary shipments of goods necessitated by the war. It was a costly venture, because government operation involved a deficit of nearly two billions of dollars, but economy is not a prime consideration during war, and the costliness of a war-time venture is not a convincing argument against government ownership. During the period of the Second World War, private operation of the railways continued—and with high efficiency even under the handicap of inadequate equipment. The United States Government also operated the telephone and telegraph business of the country as a war-time necessity in the period of the First World War, but only for a year beginning August 1, 1918. The one important nationally owned public utility in the United States is, of course, the postal system, which is also a public enterprise everywhere else.

The building of dams at Muscle Shoals in Alabama, at Norris Dam in Tennessee, at Boulder Dam in Arizona, and at Bonneville and Grand Coulee on the Columbia River in Oregon and Washington mark the entrance of the United States Government into the business of producing hydro-electric power. Perhaps the most notable of these hydro-electric power enterprises is that under the direction of the Tennessee Valley Authority. Since 1933, a series of dams and electric generating plants have been built in the valley of the Tennessee River and its tributaries. More

than \$500,000,000 have been invested in the enterprise, including approximately \$110,000,000 for the acquisition of more than a score of privately owned utility companies operating in the territory. The project is designed to produce electric energy on a sufficiently large scale to achieve all possible economies, and by distributing it at low rates greatly to increase the demand for electricity in its many uses. At the conclusion of negotiations for the transfer of the properties of the Tennessee Electric Power Company to the Tennessee Valley Authority, David E. Lilienthal, Director of the latter, said:

Today in most of Northern Alabama, in Northern Georgia, North and Central Mississippi, a part of Western North Carolina and virtually the whole of Tennessee, public agencies are responsible for electrical service to 325,000 homes, farms, places of business and industries. In the fiscal year 1940 the TVA's revenues will exceed \$11,000,000; by 1950 the government will receive more than \$20,000,000 from the same market. Further appropriations from Congress will no longer be required after the completion of the system of dams in 1946 or 1947. In an area almost as large as Great Britain a demonstration of the social implications and economic consequences of an economy of power-in-abundance under public management is under way at last.²¹

This governmental power enterprise was largely conceived as a "yardstick" by which to measure the performance of privately owned and managed public utilities. Definitive comparisons are as yet impossible, but the venture will be watched with close interest by both the proponents and opponents of government operation in the public utility field.

Government ownership and operation of nationally important as well as of local utilities have had their longest history in Europe. More than one half of all European railways, including the whole or a major part of the railways of Austria, Belgium, Bulgaria, Czecho-Slovakia, Germany, Great Britain, Hungary, Italy, Poland, Rumania, Switzerland, and Russia are government-owned.²² The telegraph and telephone business is as a rule operated by the government. Whether messages be sent by mail or by wire, the government regards the communication business as a natural monopoly which it should own and operate in the public interest. In Great Britain and on the Continent municipal ownership of local utilities is common. In Germany even prior to the First World War the field of such

²¹ "T.V.A.: The Second Phase," *New York Times Magazine*, August 20, 1939, pp. 2, 3, 19. Actually, in fiscal 1949 the total sales of electrical energy amounted to \$57,618,811. When the operating expenses and interest charges were deducted, the "net power income" was reported as \$20,944,415. Cf. Annual Report of the Tennessee Valley Authority for the Fiscal Year Ended June 30, 1949, Financial Statement, Appendix A, p. A4.

²² The German railways, long operated by the provincial governments, have since 1924 been operated by a corporation created by the government for the purpose. French railways were privately owned until 1937 when a National Railway Company was established to take over all French railways on January 1, 1938. The government owns a majority of the stock in the company.

municipalization included not only the public utilities of water, light, and transportation, but also milk distribution and slaughter-houses in some municipalities. The revolutionary political changes that have occurred in the governments of so many European countries during the past quarter-century have greatly stimulated the socialization of the public utilities as well as of other enterprises.

Canada has two great railway systems, one of which (the Canadian Pacific) is privately owned and operated, while the other (the Canadian National) is a government enterprise. The best-known Canadian experiment, however, in government ownership is the highly successful Hydro-Electric Power Commission of Ontario. Created by the Province of Ontario and aided by the loan of provincial funds, this commission has developed the electric power resources of the Niagara River into the greatest single electric power system in the world. As a result of the availability of the Niagara and the large-scale generation and distribution of its electric energy, electric power is furnished to the people of Ontario at amazingly low rates per kilowatt hour.

The argument as to whether the merits of public or private ownership of any or all public utilities outweigh its disadvantages has proved highly controversial. So far the weight of the argument has at times been on one and again on the other side, depending upon prevailing conditions. There is no universally applicable conclusion to be drawn from the argument. In the main, the argument itself turns on three considerations: relative costs, the adequacy and efficiency of service, and the exclusion or intrusion of politics in operating the public utilities. Proponents of government ownership insist that with the elimination of the private capitalist the prices charged consumers can be materially lower. In the long run the contention is not without merit. In the short run, the consumer's expectations concerning lower rates have usually proved illusions. The reason is simple. The government must still pay interest and allow for profits. Unless the government expropriates the present owners, government ownership usually means the assumption by the government of any existing indebtedness of the utility, or at least of such percentage thereof as represents fair value in the judgment of some impartial tribunal. The equity of the stockholders, if valuation shows that there is a real equity, is commonly also acquired through issuing bonds of the government enterprise in exchange for the stock. Until all these bonds, and any additional issues for other purposes, are retired, the government must continue to pay interest. As far as profits are concerned, to the extent that they represent a payment for socially necessary risk-taking, and so long as risk-taking continues to characterize public utility enterprise, the government will have to charge consumers (or taxpayers) enough to cover losses sustained from any unsuccessful risk-taking. Whatever reductions in cost develop, as a result of

government ownership, arise not through the elimination of all interest and profits, but through possible reductions in interest rates and the volume of profits, and through other economies of operation. If government enterprise were substituted for private initiative in the public utility field, and if it proved at least equally efficient, it would be possible, from the point of view of taxpayers, to save the present cost of government regulation.

Upon the issue of adequate and efficient service the advocates of public and private ownership clash sharply. There is no valid reason why both public and private management cannot be highly efficient. There is no gainsaying the fact that there have been numerous instances of incompetent and inefficient management of both types of enterprise. On the whole, private initiative lured on by the hope of profits is apt to prove somewhat more venturesome in making experiments that may ultimately lead to better service. It is for this reason that some authorities have held that a public utility should not be socialized until it has reached its economic maturity and is past the stage of necessary and constant experimentation to discover the best and most economical ways of rendering its service. While the profits motive for rendering acceptable service is lacking in public enterprise, there are compensating substitutes. Employees may be anxious to retain their jobs. The management may be eager to make a record and to win community approbation. Civic pride may spur men on to do their best.

Although politics *can* be kept out of the business of operating the public utilities, the temptation to mix politics and business is admittedly one of the biggest handicaps of government ownership. The question always is, *Will* politics be excluded? Our oldest governmentally operated public utility, the postal system, has never been wholly free from the hampering influence of politics. Politics in the conduct of a business enterprise breeds inefficiency. When its employees, be they "higher-ups" or men in subordinate positions, are selected because they are deserving Democrats or worthy Republicans rather than on the basis of their capacity and training for the available positions, inefficiency in the functioning of the organization is almost sure to develop. Political appointees are not readily amenable to ordinary business and industrial discipline. Their jobs depend on the past and prospective mood of voters. But in reply to the argument that politics may have an enervating effect upon the efficiency and discipline of the personnel, champions of public ownership caustically ask: Is the intrusion of politics into the operation of governmentally owned public utilities any worse than the intrusion of privately owned public utilities into politics? If there is some risk of introducing the spoils system under government ownership, have we not witnessed wholesale corruption as a result of the efforts of private corporations to secure selfish concessions

and favors? The rejoinder ignores the issue. The people should not be asked to choose between the spoils system in the public utilities and the corruption of public officials by concession-seeking private corporations. Neither is necessary; there are other possible choices.

Experience, including statistically measurable results as to cost of service, offers no easy, invariable answer to the question: Is government ownership of the public utilities preferable to their private ownership under government control? The answer may be different for different communities, and for the same community at different times. At a given time and place it may favor public ownership for some and private ownership for other public utilities. For the success of government ownership much depends upon the degree of maturity of the industry, the ability of the government to operate the utility, and the ripeness of the people for the change. The *sine qua non* for successful government ownership and operation anywhere lies in the ideals and traditions, the ability and integrity of those serving the public. The fact that in most European countries the public service has offered men more of an opportunity for a career than here is no little responsible for the greater extent and success of government ownership in Europe than in the United States.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Private monopoly in the field of the public utilities is intolerable in a free country.
2. Fair prices and adequate service are the chief objectives in the regulation of the public utilities.
3. Railway rebates would be defensible if granted to all rather than merely to a favored few.
4. The pooling of earnings of traffic was a satisfactory way of eliminating "cut-throat" competition among the railways.
5. Even though a public utility may be allowed only a 7 per cent return on its fair capital value, it can in many cases pay a much higher dividend on its common stock.
6. The railways of the United States have never been guaranteed any fixed return on the fair value of their invested capital.
7. Maximum railway rates should be regulated, but minimum rates can safely be left to the judgment of the railway managements.
8. If a proposed merger of the Great Northern and Northern Pacific Railroads is ever allowed by the Interstate Commerce Commission, it will be a radical departure from the public policy on which the Supreme Court's decision in the Northern Securities Company Case was based in 1901.
9. Since the Interstate Commerce Commission permits no rate competition among railroads, there is no reason why lines serving the same region should not be allowed to consolidate.

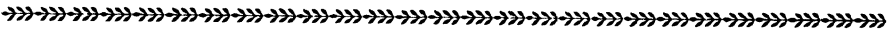
10. It is unsound to encourage railroad consolidations, since the need for regulation is thereby increased.
11. The extent of the control of the Federal Trade Commission over industrial combinations is not as great as that of the Interstate Commerce Commission over the railroads.
12. The problem of establishing reasonable prices is much more difficult than that of ordering adequate service by a public utility.
13. Since public utilities render necessary services to the public, they should not be regulated by government.
14. Attempts at regulation in the public utility field indicate that the only successful solution of this problem lies in government ownership.
15. Government ownership of public utilities would immediately make possible substantially reduced rates to consumers.

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CHAPTER XL

Government Regulation of Combinations in Restraint of Trade



THE UNDERLYING IDEA in the policies of state and federal government in the United States toward combinations in restraint of trade has been the maintenance and preservation of competition. In both legislation and administration this policy has been written large so that he who runs may read. But in one form or another and for a variety of reasons capitalistic combinations persist in our modern economic life. Some serve the public interests better than competitive enterprise possibly could; others are detrimental to the best interests of the public. What to do with combinations and how to do it most effectively, whether the policy be one of suppression, prevention, or regulation, is still one of the most difficult problems in economic politics.

Big business, we are sometimes told, needs no more control by the government than does small business; the mere bigness of an enterprise should neither condemn it nor raise suspicions concerning it. But unfortunately for the truth of this contention, big business has so often imperiled the very existence of small business, has so often discouraged the establishment of new business enterprises, and has so frequently obtained some measure of monopoly power that public interest has required the exercise of government control. Thomas N. Carver has expressed the thought most effectively in the following passage:

The larger the corporation, the greater is its power for good or evil, and that makes it especially important that its power be under control... If I may use a homely illustration, I will take the common house cat, whose diminutive size makes her a safe inmate of our household in spite of her playful disposition and her liking for animal food. If, without the slightest change of character or disposition, she were suddenly enlarged to the dimensions of a tiger, we should at least want her to be muzzled and to have her claws trimmed, whereas if she were to assume the dimensions of a mastodon, I doubt if any of us would want to live in the same house with her. And it would be useless to argue that her nature had not changed, that she was just as amiable as ever, and no more carnivorous than she always had been. Nor

would it convince us to be told that her productivity had greatly increased and that she could now catch more mice in a minute than she formerly could in a week. We should be afraid lest, in a playful mood, she might set a paw upon us, to the detriment of our epidermis, or that in her large-scale mouse-catching she might not always discriminate between us and mice.¹

LEGAL DOCTRINES RELATING TO COMBINATIONS

Combinations have been caught in the meshes of both the common and the statute law. The common law has grown out of the usages of people, and as expounded from time to time by the courts it has come to have the sanction of precedent. Statute law is a matter of legislative enactment. It takes precedence over the common law on a given subject, since it is a deliberate, formal expression of the will of society. Statutory enactments concerning combinations were late in appearing; there was no federal statute on the subject in the United States until the Sherman Anti-trust Act of 1890. Prior to that time, however, a substantial body of common-law practices and doctrines had already grown up.

The earlier combinations in this country came in conflict with the common-law principle forbidding undue restraint of trade. What constituted undue restraint of trade was not clearly defined, but was left for determination in the light of all the facts in each specific case. Gradually a distinction was established at common law between reasonable and unreasonable restraint of trade. Contracts and combinations in partial restraint of trade were held to be reasonable and accordingly valid. But contracts in general restraint of trade or combinations that suppressed competition and controlled prices were held to be unreasonable and accordingly void. The criterion of unreasonable restraint of trade lay in whether or not a particular combination was subversive of the public welfare. Some courts were extravagantly generous in the amount of trade restriction which they allowed to stand as reasonable. On the whole, however, the legal status of combinations under the common law was rather uncertain. It was always a matter for court determination. It was this common-law doctrine of undue restraint of trade which invalidated such pools as destroyed competition.

Closely akin to the common-law principle forbidding unreasonable restraint of trade was the common-law prohibition of the formation of partnerships of corporations. To form such combinations was an unwarranted delegation of corporate powers; the corporations so combining were acting *ultra vires* (were exceeding their legal powers). It was on this principle that the early trusts were declared illegal. The courts held in the so-called sugar trust² and oil trust³ cases that the combining cor-

¹ *Essays in Social Justice* (Cambridge, Harvard University Press, 1915), pp. 329-332.

² 121 New York 585 (1890).

³ 49 Ohio State 137 (1892).

porations had exceeded their powers and violated the conditions on which the state had granted them corporate life. Consequently, the agreements were null and void. These decisions of the courts caused the abandonment of the trust device as a type of corporate combination, such trusts being perverted forms of an otherwise very useful mode of property-holding. While the right of one corporation to hold the stock of other corporations does not exist under the common law, this right has now been expressly granted by many states in their incorporation laws. Holding companies and mergers are legally permissible forms of combination only because legislative bodies have chosen to make them such. General authorization for intercorporate stockholding was first granted in this country by New Jersey in 1889, but since then has become common. While statute law now sanctions intercorporate stockholding under certain limitations, this does not mean that corporations may form combinations in general restraint of trade.

Indeed, the rapid growth of combinations, many of which were monopolistic, led to a vigorous and widespread demand for legislation that would definitely outlaw these combinations. The result of this agitation was the enactment by Congress in 1890 of the so-called Sherman Anti-trust Act. This act in its opening section declares: "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared to be illegal." This seemed at the time of its enactment to be a sweeping denunciation of all combinations in restraint of trade. Similar laws have since been passed in many states, doing for intrastate trade what the federal statute seeks to accomplish for interstate trade.

For more than two decades there was no intimation by the Supreme Court that the Sherman Act meant anything less than the prohibition of all combinations in restraint of trade, whether monopolies or not. In 1911, however, the Supreme Court of the United States in the *Standard Oil Company* and the *American Tobacco Company* cases (discussed later in this chapter) held that the Sherman Act means to prohibit not all combinations in restraint of trade, but only those which unreasonably restrain trade. The court laid down the "rule of reason," saying that combinations might be in reasonable restraint of trade and accordingly be declared legal, or they might be in unreasonable restraint of trade and accordingly be declared illegal. In thus applying the "rule of reason" to combinations, the Supreme Court has by interpretation of statute law reestablished the older common-law distinction between reasonable and unreasonable restraint of trade.

In summary, it must be said that the legal status of combinations has turned on the application of four "rules": (1) the common law prohibiting unreasonable restraint of trade: (2) the common law forbidding inter-

corporate stockholding—a practice since legalized under certain conditions by statute law; (3) the statute law prohibiting all restraint of trade; and (4) the rule of reason applied to combinations by the courts in interpreting the statute law.

THE SHERMAN ANTI-TRUST ACT

Provisions. The Sherman Anti-trust Act of 1890, which passed Congress with only one dissenting vote, is one of the briefest, yet most comprehensive, statutes ever passed by Congress. The law contains only eight short sections and less than 1,000 words. Its provisions may be briefly summarized as follows.⁴ The first section, as already stated, prohibits combinations in restraint of interstate or foreign trade. Section two forbids monopoly or the attempt to monopolize. Section three does for the territories of the United States and the District of Columbia what section one does for the states. The next three sections designate the legal agencies and means for preventing violations of the act. Section seven is the famous triple damages section. It allows the injured person to sue the offending party, and if the fact of his injury be sustained, to “recover threefold the damages by him sustained, and the costs of suit.” The eighth section stipulates that the word “person,” as used in the act, “shall be deemed to include corporations and associations,” regardless of the place of their incorporation.

Relatively little use was made of the Sherman Act in curbing combinations during the first ten years of its history. An adverse decision of the Supreme Court with reference to the applicability of the act, together with the prolonged economic depression of the nineties, which was not particularly conducive to the creation of combinations, were largely responsible for this. Some idea of the growing importance of the statute may be gathered from the following numbers of prosecutions instituted in the administrations of our federal government during which the act has been in force: ⁵

Reports of the Attorney General, 1938 through June 30, 1949.

Harrison's Administration (1890-1893).....	7
Cleveland's Administration (1893-1897).....	8
McKinley's Administration (1897-1901).....	3
Roosevelt's Administration (1901-1909).....	44
Taft's Administration (1909-1913).....	80
Wilson's Administration (1913-1921).....	90
Harding's Administration (1921-1923).....	50
Coolidge's Administration (1923-1929).....	83
Hoover's Administration (1929-1933).....	26
Roosevelt's Administration (1933-April 12, 1945).....	332
Truman's Administration (April 12, 1945-1949).....	169

⁴ Cf. Appendix of the chapter for full text of the act.

⁵ U.S. Department of Justice, *The Federal Anti-Trust Laws* (1938); Annual

The meaning and scope of the act, which represents the government's greatest attempt to control combinations, can be best understood by considering a few of the most significant United States Supreme Court cases that have arisen under it.

Knight Case. The first case decided by the Supreme Court under the Sherman Anti-trust Act was the case against the "sugar trust," a case known as *United States v. E. C. Knight Company*.⁶ The American Sugar Refining Company had, prior to 1892, obtained control of all of the cane-sugar refineries in the United States, with the exception of four in Philadelphia—the E. C. Knight Company, the Spreckels Sugar Refining Company, the Franklin Sugar Refining Company, and the Delaware Sugar House—and one in Boston—Nash, Spaulding and Company, later known as the Revere Sugar Refining Company. The four Philadelphia companies refined about 33 per cent and the Boston Company about 2 per cent of the total amount of sugar refined annually in the United States. Early in 1892, the American Sugar Refining Company, by purchasing the four Philadelphia refineries, acquired control of 98 per cent of the sugar refining of the country. The bill of complaint of the United States charged that the American Sugar Refining Company by effecting this combination was monopolizing the manufacture and sale of refined sugar in the United States and controlling its price.

The proceeding against the sugar trust failed because, as the court said, "the contracts and acts of the defendants related exclusively to the acquisition of the Philadelphia refineries and the business of sugar refining in Pennsylvania and bore no direct relation to commerce between the States or with foreign nations." The court held that manufacturing was not commerce, and that the government had failed to show any direct interference with interstate commerce, such as is prohibited by the Sherman Anti-trust Act. This decision of the court cast great doubt upon the power of the federal government to suppress combinations. At least the decision seemed to leave all control over merely manufacturing combinations to the several states. The decision gave a new impetus to the combination movement, which developed rapidly after the country's emergence in 1897 from a four-year depression. Subsequent decisions of the Supreme Court, as shown later in this chapter, revealed the fact that the federal government had adequate power under the statute to control combinations.

Northern Securities Company Case. In the *Northern Securities Company Case*⁷ the United States challenged the legality under the Sherman Act of a great railway combination. In 1901, the Northern Securities Company had been organized in New Jersey as a holding company with a capital stock of \$400,000,000, for the purpose of obtaining a controlling

⁶ 156 U.S. 1-46 (1895).

⁷ *Northern Securities Company v. United States*, 193 U.S. 197-411 (1904).

interest in the Northern Pacific Railway and the Great Northern Railway, two competing roads in the Northwest. The Northern Securities Company in exchange for its own stock had acquired 96 per cent of the stock of the Northern Pacific and 76 per cent of the stock of the Great Northern, which two roads had already somewhat earlier purchased approximately 98 per cent of the stock of the Burlington. The government in its bill of complaint alleged that the Northern Securities Company was a combination in restraint of interstate trade and accordingly in violation of the Sherman Act.

By one of its memorable five-to-four decisions, the Supreme Court sustained the contention of the government and ordered the company dissolved. The dissolution was effected by giving to the stockholders of the Northern Securities Company in exchange for their stock pro rata stockholdings in both the Northern Pacific and the Great Northern. The significance of the decision lies in the fact that it showed that a holding company was vulnerable to legal attack when its operation tended to stifle competition or to promote monopoly. It was the first case in which a holding company was attacked under the statute. The court decision produced a temporary paralysis of the combination movement.

Standard Oil Company Case. In the summer of 1911 the Supreme Court handed down two decisions which have materially changed the subsequent interpretation of the Sherman Act and the legal status of combinations, namely, decisions in the suits brought for the dissolution of the Standard Oil Company and the American Tobacco Company. These two cases were somewhat spectacular by reason of the mere size of the combinations involved. Both had attained world-wide importance. When the government challenged them, it threw down the gauntlet to the entire combination movement.

The Standard Oil Company of New Jersey,⁸ the holding company of the oil trust, was prosecuted for being a combination in restraint of trade under the Sherman Act. As the case finally came before the Supreme Court, the Standard Oil Company of New Jersey was charged with having acquired a controlling interest in thirty-seven other corporations which had become subsidiary to it. The combination had acquired over 85 per cent of the petroleum products business of the country, although it did not have a natural monopoly of petroleum. The charges against the combination, as summarized by Chief Justice White in rendering the decision of the court, were these:

Rebates, preferences, and other discriminatory practices in favor of the combination by railroad companies; restraint and monopolization by control of pipe lines, and unfair practices against competing pipe lines; contracts

⁸ Standard Oil Company of New Jersey v. the United States, 221 U.S. 1-106 (1911).

with competitors in restraint of trade; unfair methods of competition, such as local price cutting at the points where necessary to suppress competition; espionage of the business of competitors, the operation of bogus independent companies, and payment of rebates on oil, with the like intent; the division of the United States into districts and the limiting of the operations of the various subsidiary corporations as to such districts so that competition in the sale of petroleum products between such corporations had been entirely destroyed. . . .⁹

In its decision the court held that the Standard Oil Company of New Jersey was in fact a combination in restraint of trade and a monopoly in violation of the Sherman Act; that it should therefore be dissolved by the transfer back to the stockholders of the thirty-seven subsidiary corporations of all stock given to the Standard Oil Company of New Jersey in exchange for its stock; that the officers of the Standard Oil Company of New Jersey should be prohibited from voting the stock of the subsidiary companies; and that the officers of the subsidiary companies should be prohibited from paying any dividends to the New Jersey holding company. The significance of the decision of the court, however, lies not in the fact that the Standard Oil combination was ordered dissolved (which was to have been expected, granted the correctness of the charges), but rather in the further fact that the Supreme Court in reaching its adverse conclusion applied the "rule of reason" to combinations in restraint of trade. Earlier decisions of the court, in applying the Sherman Act, had drawn no distinction between reasonable and unreasonable restraint of trade, it having been assumed that the Sherman Act applied to all combinations in restraint of trade, whether reasonable or unreasonable. Indeed, in the *Trans-Missouri Freight Association Case*¹⁰ of 1897 it was generally supposed that the court had specifically declared itself on this point when it included *all* restraint of trade under the prohibitions of the statute. In the present case the court declared that the Standard Oil Company of New Jersey was illegal, not merely because it was a combination in restraint of trade, but because it was a combination in *unreasonable* restraint of trade. The court apparently reversed the position taken fourteen years earlier in the *Trans-Missouri Freight Association Case*; this was certainly the contention of Justice Harlan, who filed the dissenting opinion in the *Standard Oil Company Case*. The court decision declared that *every* combination is not necessarily illegal. It seemed to imply that ultimately in any given case the court must decide whether a particular combination is an honest attempt to secure greater efficiency, without tending to produce monopoly. If so, it involves only such restraint of trade as is reasonable; but if it be a combination intended to stifle competition, it is unreasonable and therefore illegal. Apparently, in reaching its decision the court con-

⁹ 221 U.S. 42-43 (1911).

¹⁰ *United States v. Trans-Missouri Freight Association*, 166 U.S. 290-374 (1897).

strued section two of the Sherman Act—the monopoly section—as a limitation upon section one—the section prohibiting restraint of trade. The decision seems to say: not all restraint of trade, but only such restraint of trade as monopolizes or attempts to monopolize (that is, unreasonable restraint of trade), is prohibited by the law. As pointed out earlier in this chapter, this decision of the court, which the critics called “judicial legislation,” reintroduced into statute law the old common-law distinction between reasonable and unreasonable restraint of trade.

The case against the American Tobacco Company was essentially similar to the Standard Oil Company Case in both the bill of complaint and in the decision of the Supreme Court.¹¹

United States Steel Corporation Case. The United States Steel Corporation is one of our most highly integrated businesses.¹² It is not only a vertical but also a horizontal combination. The government brought suit against the company¹³ in the fall of 1911 charging it with undue restraint of trade and with being a monopoly. The Supreme Court’s decision was not rendered until 1920. By a four-to-three decision, two of the judges not participating in the case, the government’s bill of complaint was dismissed. The Court held that whatever the purposes of the organizers of the United States Steel Corporation may have been, the corporation never had had and did not then have monopoly power. Therefore it did not come under the ban of the Sherman Act. The United States Steel Corporation, it was admitted, was a combination of commanding size, but mere bigness is not an offense under the law. It is only when a big business is guilty of monopolizing trade that it comes under the prohibition of the Sherman Act. The Steel Corporation was allowed to go its way.

The four cases just briefly reviewed illustrate (1) the initial failure in the application of the law to manufacturing combinations, in which no restraint of trade was shown (the Knight Case); (2) the application of the law to combinations of common carriers (the Northern Securities Company Case); (3) the prohibition of industrial combinations proved to be in unreasonable restraint of trade (the Standard Oil Company Case); and (4) failure to apply the act to combinations not proved to be in monopolistic restraint of trade (the United States Steel Corporation Case).

THE CLAYTON ANTI-TRUST ACT

After nearly twenty-five years of experience under the Sherman Act, and much acrimonious debate concerning its wisdom, Congress, in 1914, supplemented it by passing the so-called Clayton Act, the subtitle of which

¹¹ 221 U.S. 106-193 (1911).

¹² Cf. pp. 107-108.

¹³ United States v. United States Steel Corporation, 251 U.S. 417-466 (1920).

reads "An act to supplement existing laws against unlawful restraints and monopolies, and for other purposes." While the Clayton Act is an omnibus measure covering a wide range of more or less related subjects in its twenty-six sections, its main trend is to prevent control by combination of so large a part of any industry as to lessen competition and tend to create monopoly. In spite of the ambiguity and evasiveness of some of the language of the act, Congress showed itself resolute in the desire to maintain competition. Among the more important provisions of the Clayton Act designed to help achieve these ends are prohibitions (1) of local price discriminations, (2) of tying clauses in contracts, and (3) of intercorporate stockholding and interlocking directorates, that lessen competition.¹⁴

Price discriminations. Price discriminations, the effect of which is substantially to lessen competition or to create monopoly, are prohibited. It had been a favorite practice of the trusts temporarily to cut prices in given localities in order to crush an independent competitor. Such local price discriminations the Clayton Act intends to prohibit. The effectiveness of the prohibition is rendered somewhat questionable, however, by the provision that nothing contained in the act shall prevent "discrimination in price in the same or different communities made in good faith to meet competition." It is not clear how far trusts or independent manufacturers may go in meeting each other's prices and still be acting in good faith.

Tying contracts. A second trade practice which had grown up during the combination movement was the insertion of tying clauses in sale or lease contracts by which the buyer or lessee agreed not to use the goods of competitors in connection with the good he had bought or leased. The United Shoe Machinery Company, for instance, refused to lease (it never sold) its indispensable lasting machines to a shoe manufacturer unless he signed a contract binding himself also to use other machines of the company, such as the welting and stitching machines. These latter machines were also produced by other shoe machinery manufacturers. Although a shoe manufacturer could have bought or leased them on more favorable terms than those of the United Shoe Machinery Company, in practice he did not have this option. He needed a lasting machine, which was patented by the United Shoe Machinery Company and merely leased by the company to its customers. In order to get it, he had to agree to use no other competing shoe machinery. The A. B. Dick Company, manufacturers of patented rotary mimeographing machines, sold them only with the license restriction that the buyer must use in operating the machines only the stencils, ink, and other supplies furnished by the A. B. Dick Company. Such practices enabled companies to tie the use of non-patented or competitively produced commodities to the use of a patented commodity. The

¹⁴ Cf. Clayton Act, 38 U.S. Stat. 730, Sections 2, 3, 7, 8.

Clayton Act definitely prohibits tying clauses in contracts, under which commodities, whether patented or unpatented, are leased or sold on condition that the lessee or purchaser shall not use the goods of competitors, where the effect of such tying contracts is substantially to lessen competition or to create monopoly in any line of commerce.

Intercorporate stockholding and interlocking directorates. The favorite device for the creation of capitalistic combinations was the holding company. The Clayton Act decisively reinforces the Sherman law prohibiting combinations in restraint of trade, when it declares:

That no corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital of another corporation engaged also in commerce, where the effect of such acquisition may be to substantially lessen competition between the corporation whose stock is so acquired and the corporation making the acquisition, or to restrain such commerce in any section or community, or tend to create a monopoly of any line of commerce.¹⁵

Never has there been more emphatic expression of the anti-monopoly spirit of the American people. A strict interpretation and enforcement of this section would have prevented any material growth of the combination movement after 1914. The section, however, closes with the clause: "Nothing contained in this section shall be held to affect or impair any right heretofore legally acquired." This seems to imply that any combination of the holding company type that had successfully run the gauntlet of legislation and the courts prior to the passage of the Clayton Act may be left undisturbed.

The act also prohibits interlocking directorates of certain corporations, if "such corporations are or shall have been by virtue of their business and location of operation, competitors, so that elimination of competition by agreement between them would constitute a violation of any of the provisions of any of the anti-trust laws."¹⁶

As far as the enforcement of the provisions of the Clayton Act is concerned, the Interstate Commerce Commission is responsible where they are applicable to railroads and other common carriers; the Board of Governors of the Federal Reserve System where they are applicable to banks and trust companies; and the Federal Trade Commission where they are applicable to other corporations.

The Appalachian Coals, Inc., Case. When in 1911 the Supreme Court of the United States in its decisions of the Standard Oil Company and American Tobacco Company cases proclaimed the "rule of reason" with reference to combinations, many professed to see a weakening of our anti-trust legislation. The ultimate response of Congress to this situation was

¹⁵ Section 7 of the Clayton Anti-trust Act, 38 U.S. Statutes 730.

¹⁶ Section 8, Clayton Act, 38 U.S. Statutes 730.

the passage of the Clayton Act, which its advocates frankly asserted was intended to put teeth into the Sherman Act. Not quite twenty years after the Clayton amendment of the Sherman Act had become law, the Supreme Court rendered a decision in the case of *Appalachian Coals, Inc.*, which looks like a reaffirmation of the rule of reason applied to combinations.

One hundred thirty-seven producers of bituminous coal in the Appalachian territory of Virginia, West Virginia, Kentucky, and Tennessee had organized an exclusive selling agency known as *Appalachian Coals, Inc.* In return for a commission of 10 per cent of the gross selling price of the coal, this company agreed to sell at the best prices obtainable all the coal delivered to it by its principals, and to prorate the orders upon a stipulated basis, if all the coal produced could not be sold. The companies in the combination mined 11.96 per cent of all bituminous coal produced east of the Mississippi River in 1929, and their production in this same year was 64 per cent of all coal produced in Appalachian territory. The contract between the coal mine operators and their subsidiary, the selling agency, was made to expire April 1, 1935, but was renewable from year to year.

Suit was brought against *Appalachian Coals, Inc.*, on the grounds that it was a combination in restraint of interstate commerce in bituminous coal and an attempt to monopolize part of such commerce. The government contended that the plan violated the Sherman Anti-trust Act because it eliminated competition among the coal operators themselves and gave their selling agency power substantially to affect and control the price of bituminous coal in many interstate markets. The coal operators defended themselves by disclaiming any intention either to restrain or to monopolize interstate commerce. They argued that their selling agency did not have the power to fix the price of coal in any consuming market; that the price of coal would continue to be set in open competitive markets; and that their plan of promoting the sale of coal from Appalachian territory by better methods of distribution and the elimination of destructive trade practices would promote rather than restrain interstate commerce.

The United States District Court sustained the contention of the government. But when the case was appealed to the Supreme Court of the United States, the decree of the District Court was reversed and the bill of complaint was dismissed. The court took the position that in the case of *Appalachian Coals, Inc.*, there is "no intent or power to fix prices, abundant competitive opportunities will exist in all markets where defendants' coal is sold, and nothing has been shown to warrant the conclusion that defendants' plan will have an injurious effect upon competition in these markets."

But the special interest and importance of this case lie in an apparent reaffirmation of a liberalized interpretation of our anti-trust laws. The

language of Chief Justice Hughes, who delivered the court's opinion, is strongly suggestive of the rule of reason in passing upon the legality of combinations. The restrictions of the Sherman Act, says the court,

call for vigilance in the detection and frustration of all efforts unduly to restrain the free course of interstate commerce, but they do not seek to establish a mere delusive liberty either by making impossible the normal and fair expansion of that commerce or the adoption of reasonable measures to protect it from injurious and destructive practices and to promote competition upon a sound basis. . . .

In applying this test, a close objective scrutiny of particular conditions and purposes is necessary in each case. Realities must dominate the judgment. The mere fact that the parties to an agreement eliminate competition between themselves is not enough to condemn it. . . . The question of the application of the statute is one of intent and effect, and is not to be determined by arbitrary assumptions. . . .

A cooperative enterprise, otherwise free from objection, which carries with it no monopolistic menace, is not to be condemned as an undue restraint merely because it may effect a change in market conditions, where the change would be in mitigation of recognized evils and would not impair, but rather foster, fair competitive opportunities. . . . The fact that the correction of abuses may tend to stabilize a business, or to produce fairer price levels, does not mean that the abuses should go uncorrected or that cooperative endeavor to correct them necessarily constitutes an unreasonable restraint of trade. The intelligent conduct of commerce through the acquisition of full information of all relevant facts may properly be sought by the cooperation of those engaged in trade, although stabilization of trade and more reasonable prices may be the result. . . . Putting an end to injurious practices, and the consequent improvement of the competitive position of a group of producers, is not a less worthy aim and may be entirely consonant with the public interest, where the group must still meet effective competition in a fair market and neither seeks nor is able to effect a domination of prices.¹⁷

THE FEDERAL TRADE COMMISSION ACT

Contemporaneous with congressional discussion of the Clayton bill was the debate over the proposed establishment of the Federal Trade Commission. As a matter of fact the latter measure became a law (September 26, 1914) about three weeks before the former (October 15, 1914). The Federal Trade Commission consists of five members, appointed by the President and subject to ratification by the Senate. Each full-term appointment is for seven years. Not more than three of the five commissioners may belong to the same political party.

The primary function of the commission is *to prevent unfair methods of competition in commerce*. Section five of the act creating the Federal Trade Commission declares: "That unfair methods of competition in com-

¹⁷ *Appalachian Coals, Inc., et al. v. The United States of America*, 228 U.S. 344-378 (1933).

merce are hereby declared unlawful. The commission is hereby empowered and directed to prevent persons, partnerships, or corporations, except banks, and common carriers subject to the acts to regulate commerce, from using unfair methods of competition in commerce.”¹⁸ To the extent that such unfair competition led to restraint of trade or to monopoly, it was already illegal under the Sherman Act and those guilty of it were subject to prosecution. The Federal Trade Commission, however, constitutes an additional agency not only for the correction, but also for the prevention of unfair competition. Unlike the courts, which must wait for some overt wrong before they can act, the commission can act in advance of wrong-doing by helping to build up high standards of competition. Certainly the commission can do much to check incipient attempts to restrain trade or to create monopoly. In exercising its powers and performing its duties with reference to the prevention of unfair competition, the commission is authorized to institute proceedings, to conduct hearings, and to order offenders to cease and desist from such methods of competition. If the order is not obeyed, the commission may apply to any United States Circuit Court of Appeals having jurisdiction for the enforcement of its order. The courts have broad powers of review, but the findings of the commission as to the facts, if supported by testimony, are conclusive.

Along with the duty imposed upon the commission of preventing unfair competition go far-reaching *powers of investigation*. A few of the more important are the following. In the first place, the commission is empowered to gather information concerning, and to require general or special reports from, the corporations subject to its special control, with particular reference to the organization, business, conduct, practices, and management of such corporations and their relation to other corporations, partnerships, and individuals. Failure to comply with the requests of the commission subjects the offending parties to a fine; wilful falsification of data entails fine or imprisonment or both. The provision in the law of such penalties makes the Federal Trade Commission a real fact-finding body. Secondly, the commission also has the power “upon the direction of the President or either House of Congress to investigate and report the facts relating to any alleged violations of the anti-trust acts by any corporation.”¹⁹ Thirdly, in cases of such alleged violations of the anti-trust laws, the commission may upon the request of the Attorney-General make recommendations as to how offending corporations can readjust their trade policies so as to make them accord with the law. While the commission cannot give any combination an “immunity bath,” it can suggest forms of economic reorganization that will render prosecution unlikely. Fourthly,

¹⁸ 36 U.S. Stat. 717.

¹⁹ Section 6 (d) of the Federal Trade Commission Act.

the commission is also authorized, upon its own initiative or upon that of the Department of Justice, to investigate the way in which court decrees arising out of the violation of the anti-trust laws are being carried out.

The Federal Trade Commission has now been in existence for nearly forty years. The commission has proved itself a most useful agency in the government's attempt to prevent unfair competition. Of the thousands of formal complaints served charging unfair practices in competition, the most celebrated and spectacular was that against the United States Steel Corporation in 1923. For many years the Steel Corporation had been quoting steel prices in terms of "Pittsburgh plus," i. e., the price at Pittsburgh plus the cost of transportation from Pittsburgh to the point of delivery. The base price was the same, no matter whether the steel was actually produced in and shipped from Pittsburgh, Gary, Duluth, or Birmingham, in all of which places the United States Steel Corporation maintained plants. Steel could not be bought at the mill; it could only be bought delivered at the point of destination at "Pittsburgh plus" prices. A purchaser of a ton of steel in Chicago paid the price of steel in Pittsburgh, say \$40, plus \$7.60, the freight charge from Pittsburgh to Chicago, even though the steel was manufactured in Chicago.²⁰ The independent producers followed much the same price-fixing policy, disposing of their output at "Pittsburgh plus" prices in periods of heavy demand because of their ability to make relatively prompt deliveries. An organization of buyers of steel, known as the Western Consumers of Rolled Steel Products, entered complaint before the Federal Trade Commission against the "Pittsburgh plus" practice; a little later the case was taken up by the Attorneys-General of Illinois, Wisconsin, Minnesota, and Iowa, supported by a total of thirty-two states. The complaint was entered on the ground that the practice was discriminatory and suppressed competition. There was no discrimination by Pittsburgh mills, for all purchasers paid the same price for Pittsburgh steel, plus transportation costs from Pittsburgh to the point of delivery. The discrimination was by Chicago and other non-Pittsburgh mills, whether belonging to the United States Steel Corporation or to the independents, that charged prices in accordance with the "Pittsburgh plus" practice. "At Davenport, Iowa, for example," says John R. Commons, "the freight from Pittsburgh is \$9.50, and the freight from Chicago is \$3.40, so that, when the Chicago mills are selling to Chicago purchasers at \$47.60 (the Pittsburgh plus price at Chicago) they are selling the same steel to Davenport at \$49.50 and are then deducting the actual freight from Chicago to Davenport, leaving them only \$46.10 for the steel alone when delivered at Davenport as against \$47.60 when delivered in Chicago."²¹ Chicago

²⁰ Freight rates are those of 1920 as quoted by J. R. Commons, "Delivered Price Practice in the Steel Market," *American Economic Review*, Vol. 14 (1924), p. 508.

²¹ *Op. cit.*, p. 512.

consumers of Chicago-made steel paid \$1.50 more per ton than Davenport consumers of Chicago steel delivered in Davenport. This was discrimination. The Federal Trade Commission, in 1924, after prolonged deliberation, held that the "Pittsburgh plus" practice was unfair; that it caused discrimination and restraint of trade; and therefore ordered it discontinued. The United States Steel Corporation did not appeal to the courts, but accepted the decision of the commission.

While the United States Steel Corporation abandoned the practice of quoting steel prices exclusively on a "Pittsburgh plus" base, it did not abandon the basing point principle. It substituted a multiple basing point system, and the steel industry as a whole followed suit. By 1937, the number of such basing points had grown to forty-seven; the basing points were either production centers or principal Pacific Coast or Gulf Coast ports. At each of these basing points a "delivered price" for steel was established, and by some time in 1938 practically all basing point prices were the same as prices in Pittsburgh. The steel customer paid the price of the nearest basing point plus the cost of transportation to his location, rather than the transportation cost from Pittsburgh. Under this system the steel industry claimed (as its argument in 1940 before the Temporary National Economic Committee revealed) that distant producers of steel could compete for the business of a consumer, provided they were willing to absorb the extra transportation costs. The advantage, of course, lay with the steel producers at the basing point, who enjoyed the protection of low freights. But it was possible that they might not be able to supply the total demand made upon them. It was also possible that distant producers might want to compete with them for greater business volume and the lower unit costs which this might make possible. The basing point system, it was argued, allowed such competition; without it, the tendency was for each producer to obtain a monopoly in his own immediate territory in which he had a distinct freight advantage. The Federal Trade Commission, on the other hand, continued to insist that each steel producer, no matter where he might be located, should quote "prices at the mill" and require each consumer to pay his own freight.

In 1948 a case bearing upon the whole problem and policy was decided by the United States Supreme Court.²² The Federal Trade Commission had issued a cease and desist order in 1943 against seventy-four companies engaged in the cement business, who were basing prices on the multiple basing point system. The Supreme Court sustained the commission. It held that a multiple basing point delivered price system was illegal under the Federal Trade Commission Act as an unfair method of competition and under the Robinson-Patman Act as a form of price discrimination. The Court's decision turned on the issue of conspiracy (the illegality of which

²² Federal Trade Commission v. Cement Institute *et al.*, 333 U.S. 683 (1948).

was admitted by everyone), but also held that the whole basing point price system was illegal, whether there was collusion or not. The result was that in 1948 the cement industry abandoned the pricing system it had followed for about forty years. In July, 1948, the United States Steel Corporation and four of its subsidiaries announced that they would abandon the multiple basing point delivered price system. "Prices at the mill" would henceforth replace "delivered prices" figured on either a single or multiple basing point system.²³

In the attempt to prevent unfair methods of competition in commerce, the Federal Trade Commission has condemned such practices as misrepresentation in the sale of stock, misbranding of commodities, adulteration, and false statements in advertising.

COMBINATIONS UNDER THE NATIONAL INDUSTRIAL RECOVERY ACT

The fundamental purpose of the National Industrial Recovery Act of June 16, 1933, was to accelerate recovery by increasing employment and purchasing power. Industries were encouraged to draw up codes of fair competition, including particularly provisions concerning maximum hours and minimum wages. When approved by the President such codes became the standard of fair competition within the industry, such as the textile, steel, or motor industry. Violations of a sanctioned code were deemed "unfair competition" as defined by the Federal Trade Commission Act. The usual agency through which industries set up their codes was the trade association. The important sections of the act pertaining to industrial combinations were sections three and five, which in part read as follows:

Sec. 3. Upon the application to the President by one or more trade or industrial associations or groups, the President may approve a code or codes of fair competition for the trade or industry or subdivision thereof, represented by the applicant or applicants, if the President finds (1) that such associations or groups impose no inequitable restrictions on admission to membership therein and are truly representative of such trades or industries or subdivisions thereof, and (2) that such code or codes are not designed to promote monopolies or to eliminate or oppress small enterprises and will not operate to discriminate against them, and will tend to effectuate the

²³In spite of this decision of the Supreme Court and public announcements of abandoning the controversial price policy the issue persisted and the debate went on. A bill was finally passed by both houses of Congress in 1950 legalizing the use of "delivered prices," if no conspiracy was involved in the establishment of such a price system. The bill failed to become law as a result of a veto by President Truman. The President held the legislation unnecessary because, as he said, "it is quite clear that there is no bar to freight absorption on delivered prices as such." The Supreme Court, however, had seemingly held that "uniformity of delivered prices" is *prima facie* evidence of wrong-doing.

policy of this title: Provided, That such code or codes shall not permit monopolies or monopolistic practices.

Sec. 5. While this title is in effect . . . and for sixty days thereafter, any code, agreement, or license approved, prescribed, or issued and in effect under this title, and any action complying with the provisions thereof taken during such period, shall be exempt from the provisions of the antitrust laws of the United States.

The act did not repeal the anti-trust laws but under certain specified conditions temporarily suspended them. Persons or businesses operating under a prescribed code of fair competition, approved by the President, were exempted from the application of the anti-trust laws. This "immunity" was welcome to business and industry represented under the codes. With the adverse decision of the Supreme Court in the *Schechter Poultry Corporation Case* (May 28, 1935), under section three of the National Industrial Recovery Act, the whole code-making authority collapsed.

THE ROBINSON-PATMAN ACT

The Robinson-Patman Act of 1936, an amendment of the Clayton Act, was a further attempt by Congress to define and control unfair trade practices. In the present act, however, the emphasis is not so much upon practices that are subversive of competition and promotive of monopoly, as it is upon practices that are described as destructive competition, which may contribute to the economic ruin of all participants. The act prohibits persons engaged in interstate commerce from granting or receiving, directly or indirectly, any discriminations in price or service in the sale of commodities, when such discrimination substantially lessens competition. The reduced competition effected by price discrimination may be among manufacturers, wholesalers, or certain classes of retailers. Price differences are permissible if they represent real differences in the cost of manufacturing or selling to different customers, or changes in price to meet some new source of competition. The Federal Trade Commission is authorized to set limits upon discounts on sales in quantity, in order to prevent such quantity purchases at lower prices from tending to destroy competition and promote monopoly—a provision principally directed against possible abuses by chain-stores.

PUBLIC POLICY TOWARD COMBINATIONS

Policy of suppression. Our public policy toward corporate combinations has been guided by the desire to maintain fair competition. This purpose is unmistakably revealed in the Sherman, Clayton, and Federal Trade Commission Acts. To this purpose we are still committed. Conse-

quently, corporate combinations that restrict competition or tend to create monopoly are outside the pale of the law and subject to prosecution whenever the Department of Justice sees fit to act. Such an atmosphere chills and stunts, if it does not kill, the growth of monopolistic combinations. True it is that the large corporate combinations in this country arose subsequent to the passage of the Sherman Act. But the blame for this attaches not to the law but rather to the failure to enforce it promptly. Decisions of the Supreme Court, of which the cases cited earlier in this chapter are fair samples, have gone far to check the development of any new monopolistic combinations. The opinion is widespread in this country that industrial monopolies are neither necessary nor inevitable; that they are for the most part the creatures of unfair methods of competition; that they have yet to prove themselves more efficient than large-scale competitive enterprises. This accounts for our policy of suppression. In the actual repression of industrial combinations, however, the government has been only partly successful. One reason for this has been that an industrial combination restricting competition or creating monopoly must be an accomplished fact before the government can hope to prosecute successfully.

Policy of prevention. While the government is continuing its policy of exterminating such monopolies as can be proved to exist, it has also undertaken a policy of prevention. The Federal Trade Commission, as shown above, is an indispensable agency in the carrying-out of this policy and can be made increasingly useful in preventing monopoly and preserving fair competition. It has frequently been said that under our policy of suppressing monopolies and combinations in restraint of trade, as expressed in the law and interpreted by the courts, business men do not know where to draw the line between legitimate cooperation and unreasonable restraint of trade; that there is no way of telling in advance whether a given practice will meet with approval or disapproval; and that corporations have a right to know in advance of prosecution whether a given business practice is or is not in accordance with the law. The Federal Trade Commission, actually and even more potentially, can function as such a monitor. By repressing unfair methods of competition, the commission can prevent the formation of some monopolies. The policy of prevention is superior to the policy of destruction much as a prophylactic against disease is usually preferable to a major operation. To destroy an existing monopoly is not to undo the damage done to competing producers who have perished or to consumers who have suffered from high prices. To prevent the formation of monopoly is to attack the problem at its source and to offer adequate protection to all honest competitors. The policy of prevention, however, is not as fully developed as either of the other two.

Policy of regulation. Opposed to the view of those who would prevent what monopolies they can and destroy what they cannot prevent

is the view of those who would allow monopolies to exist but would regulate them in the public interest. This is the policy which, after some hesitation and many misgivings, we have adopted with reference to public utilities. It was not adopted, however, until after we had in many places tried the experiment of maintaining competition. The experiment proved not only unsuccessful but disastrous. Gradually both the futility and wastefulness of this procedure became evident and the more enlightened policy of regulation was adopted. Now there are those who claim that what we have done with public utilities we ought also to do with industrial monopolies. The two cases are very different, however, because the so-called public utilities are *natural* monopolies, while there is nothing natural or inevitable about monopoly in most industrial fields. Wherever private monopoly appears, there public control must develop. Monopoly necessitates public control over prices and service. The difficulties of regulating the prices, the quality of goods, and the service rendered by combinations, operating under conditions that are not naturally monopolistic, are so stupendous that it is small wonder that the government and the public should shrink from the undertaking. A competitive system, in which competition is really effective, has this great advantage over an economic system in which prices and service are regulated by the government: regulation is from within the system rather than superimposed upon it from without, and the control is both more efficient and less costly. Our policy toward capitalistic combinations, then, may be said to include three forms: the suppression of monopoly and prevention of combinations in restraint of trade, wherever there is room for effective competition; the acceptance and control of monopoly wherever it is natural and inevitable; the maintenance of fair competition wherever possible. Although often weakly and ineffectively pursued, this policy has had, and still has, much more to commend it than to condemn it.

APPENDIX: TEXT OF THE SHERMAN ANTI-TRUST ACT

Sec. 1. Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal. Every person who shall make any such contract or engage in any combination, or conspiracy, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding five thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

Sec. 2. Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize, any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine not exceeding five thousand dollars, or by imprison-

ment not exceeding one year, or by both said punishments, in the discretion of the court.

Sec. 3. Every contract, combination in form of trust or otherwise, or conspiracy, in restraint of trade or commerce in any Territory of the United States or of the District of Columbia, or in restraint of trade or commerce between any such Territory and another, or between any such Territory or Territories and any State or States or the District of Columbia, or with foreign nations, or between the District of Columbia and any State or States or foreign nations, is hereby declared illegal. Every person who shall make any such contract or engage in any such combination or conspiracy, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding five thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

Sec. 4. The several circuit courts of the United States are hereby invested with jurisdiction to prevent and restrain violations of this act; and it shall be the duty of the several district attorneys of the United States, in their respective districts, under the direction of the Attorney-General, to institute proceedings in equity to prevent and restrain such violations. Such proceedings may be by way of petition setting forth the case and praying that such violation shall be enjoined or otherwise prohibited. When the parties complained of shall have been duly notified of such petition the court shall proceed, as soon as may be, to the hearing and determination of the case; and pending such petition and before final decree, the court may at any time make such temporary restraining order or prohibition as shall be deemed just in the premises.

Sec. 5. Whenever it shall appear to the court before which any proceeding under section four of this act may be pending, that the ends of justice require that other parties should be brought before the court, the court may cause them to be summoned, whether they reside in the district in which the court is held or not; and subpoenas to that end may be served in any district by the marshal thereof.

Sec. 6. Any property owned under any contract or by any combination, or pursuant to any conspiracy (and being the subject thereof) mentioned in section one of this act, and being in the course of transportation from one State to another, or to a foreign country, shall be forfeited to the United States, and may be seized and condemned by like proceedings as those provided by law for the forfeiture, seizure, and condemnation of property imported into the United States contrary to law.

Sec. 7. Any person who shall be injured in his business or property by any other person or corporation by reason of anything forbidden or declared to be unlawful by this act, may sue therefor in any circuit court of the United States in the district in which the defendant resides or is found, without respect to the amount in controversy, and shall recover threefold the damages by him sustained, and the costs of suit, including a reasonable attorney's fee.

Sec. 8. That the word "person" or "persons" whenever used in this act shall be deemed to include corporations and associations existing under or authorized by the laws of either the United States, the laws of any of the Territories, the laws of any State, or the laws of any foreign country.

PROBLEMS

A

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Cut-throat competition in industry is economically as undesirable as unregulated monopoly.
2. According to the common law, all agreements and contracts restricting trade are unlawful.
3. Industrial combinations became liable to prosecution only with the passage of the Sherman Anti-trust Act.
4. The holding company device adopted by the Standard Oil companies enabled them successfully to evade prosecution under the Sherman Anti-trust Act.
5. The Standard Oil Company case, decided in 1911, held that under the Sherman Act absolutely no combinations that tended to restrain trade could legally exist.
6. Both the law and court decisions have strongly influenced the capitalistic combination movement of the United States.
7. The Federal Trade Commission may issue "cease and desist orders" in its attempt to prohibit unfair competitive practices in either state or interstate commerce.
8. The attitude of the federal government toward industrial combinations has undergone material modification since 1890.
9. Large capitalistic combinations are the inevitable result of our economic evolution and should be safeguarded against interference by the federal government.
10. A policy of prevention is wiser than a policy of suppression in the government's attempt to control industrial combinations.

B

1. It is popularly supposed that a combination in restraint of trade exists in the aluminum business.
 - a. If the facts warrant the belief, what could the Federal Trade Commission do about it?
 - b. If the so-called "aluminum trust" were prosecuted by the federal government, what would the government have to show in order to secure the dissolution of the combination?
2. There are three possible policies toward industrial combinations and monopolies: suppression, prevention, and regulation. Illustrate the application of each of these policies to a field of business or industry in which it has been followed by the United States Government.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XLI

Coöperative Enterprise



THE PLACE OF COÖPERATIVES WITHIN THE CAPITALISTIC SYSTEM

THE CAPITALISTIC SYSTEM does not preclude public ownership and operation of some businesses, if the people desire, nor does it preclude the organization and functioning of coöperative enterprises, if special groups desire. While all but the simplest forms of modern productive enterprise require coöperation in the broadest connotation of that term, the term "coöperative enterprise" has been preempted by certain forms of productive enterprise. So-called "coöperative enterprises" ("co-ops" they are popularly called in the United States) are voluntary business organizations owned by and operated for the benefit of those who are member-patrons of the enterprise concerned. In ordinary private business enterprise, whether it be organized as a sole proprietorship, partnership, or corporation, any net income is claimed by the owners of the enterprise (those who have supplied the "venture capital"), whether they are patrons of the enterprise or not. In a public enterprise, any net income usually flows into the public treasury to be used as directed by legislative bodies. But in a "coöperative enterprise" any net income accrues for the benefit of the members, and if distributed rather than retained in the enterprise goes to them in proportion to the amount of business they have done through the coöperative of which they are members. The coöperative may or may not be incorporated under the laws of some state, but commonly it is. It may do a limited amount of business with non-members. It may pay a specified rate of dividend on any outstanding capital stock if its capital was raised in that way. But essentially a coöperative represents a pooling of the resources of its members in order to serve their interests most efficiently. It represents the substitution of collective action for individual action in buying or selling in order to do such business on the most favorable terms possible, and to become the beneficiary of any net income that may accrue from such operations.

Since coöperative associations accept the basic institutions of private property, and strive for high productive efficiency in rendering their services, and incidentally doing so profitably, they readily find a place

within the framework of the capitalistic system. There is no internal conflict between the underlying economic philosophies of coöperative enterprise and of private enterprise under capitalism. But there is such a clash between the economic philosophy of the coöperative movement and that of socialism and communism. Both socialism and communism favor the abolition of private property in the more important production goods and the substitution of collective ownership and operation. They are opposed to the retention of capitalism. On the other hand, the coöperative movement, both as an ideology and as a practical form of business organization, can live and flourish within the capitalistic system. Its proponents have often described it as the "middle way" between more or less unfettered individualism on the one side, and collectivism on the other. Its more enthusiastic advocates think that it avoids the extremes and combines the merits of both.

TYPES OF COÖPERATIVES

Coöperative associations differ in the specific purposes which they are expected to serve and in the details of their organization and functioning. Perhaps the best-known types of coöperatives are those concerned with the selling of produce, the buying of either consumers' or producers' goods, the provision of services such as those pertaining to financing, and the production of goods.¹

Coöperative selling associations, also known as coöperative marketing associations, pool the selling of specified products of their members. The commodities are produced by the individual operators but they are sold through the locally or regionally organized marketing associations. The growing or raising of the product may be a matter left to individual decisions; the selling, and possible processing, packing, storing, and financing that precede it, are matters of joint decision. They represent the distinctive field of the marketing associations. Among the well-known examples of coöperative selling or marketing associations—some of them now of more historic than contemporary interest in the United States—are those in the fields of marketing livestock and grain, vegetables and fruits, cotton and tobacco, dairy products and poultry products, as well as scores of others. Most coöperative marketing associations deal in a single commodity, but some are multiple commodity selling organizations. Specific central coöperative marketing associations are exemplified by Land O'Lakes Creameries, Inc., Twin City Milk Producers Association, Equity Coöperative Livestock Sales Association, California Fruit Growers Exchange, and Pacific Wool

¹ The classification and terminology used in the discussion that follows are based on Henry H. Bakken and Marvin A. Schaars, *The Economics of Cooperative Marketing* (New York, McGraw-Hill Book Company, Inc., 1937), Chap. 9.

Growers. In the United States coöperative marketing has had its most important development in the North Central states and on the Pacific Coast, although it is found in all parts of the country—South and East, as well as North and West. What has brought producers together in these marketing associations—and keeps them there—is the promotion of their own economic interests. It is the hope and expectation of greater financial rewards that constitute the “tie that binds.” These rewards may come not only through more effective bargaining on price but by building up a reputation for quality products.

Coöperative buying associations, also commonly known as consumers' coöperatives, pool the buying by their members of specified products which they need as consumers. The buying may also extend, as in the case of some agricultural purchasing associations, to commodities needed in production. Consumers' coöperatives have developed both among urban and rural dwellers. Coöperative stores and buying clubs, and especially consumers' associations organized for the purchase of such standardized products as gasoline and oil, are perhaps the most widely distributed and best-known coöperative enterprises among consumers. Well-known examples are those of the Midland Coöperative Wholesale Association of Minneapolis, specializing in the distribution of petroleum products to consumers, and the Central Coöperative Wholesale Association of Superior, Wisconsin, servicing grocery stores. While in the United States consumers' coöperatives now do an annual business in excess of one billion dollars, their relative importance is quite secondary to that of the marketing associations.

Coöperative service associations pool the resources of their members in providing services not otherwise obtainable or only obtainable at costs that discourage their acquisition. In the United States the development of such associations has occurred in insurance, the use of the telephone, electric light and power, irrigation, medical and hospital care, and in the extension of credit. What distinguishes them from the preceding type of consumers' coöperative is that they provide services rather than commodities for their members. Some of the mutual insurance companies covering the risks to both life and property have grown to such commanding size that one rarely thinks of their humble origin as coöperatives. Much fraternal insurance, on the other hand, was not soundly conceived and foundered on the financial rocks.² Mutual and coöperative telephone companies, while large in number, do a very small part of the country's telephone business. But in the field of electric light and power, in recent years the Rural Electrification Administration has promoted the organization of many coöperative service associations which now do a very substantial business. Coöperatives for the provision of medical care and hospitalization are to-

² Cf. Chap. XXX, “Providing Protection Through Private Insurance,” p. 700.

day well-established organizations, even though involved in a rather bitter struggle over the possible socialization of medicine. Among the most numerous and vigorous of coöperative service associations today are the credit unions which now do an annual business in the United States amounting to hundreds of millions of dollars. They pool the savings of their members and at the same time provide credit for them, if the need is real and the purpose well-conceived. They seek to do so at rates lower than are charged by the regular commercial credit agencies.

Producers' coöperative associations pool the productive efforts of their members for their common interests. Farmers have long coöperated in certain productive operations such as threshing grain or shredding corn. They may own the necessary equipment in common or hire it, and pool their labor. Much more rarely, industrial workers have organized to own and operate the factories in which they work. Sometimes consumers' coöperatives, particularly at the wholesale level, have owned certain producers' coöperatives. During the great depression of the thirties in the United States, unemployed workers organized self-help coöperatives. At first they exchanged services on a barter basis. But as the depression lengthened some of these self-help coöperatives had the temerity to produce for the general market and to divide the proceeds among the coöperating workers. On the whole, producers' coöperatives are the least well-developed type of coöperative organizations.

GUIDING PRINCIPLES IN COÖPERATIVE ENTERPRISE

The coöperative movement can trace its beginnings to ancient times, but the modern coöperative movement is only a little more than a century old. The Society of Equitable Pioneers in Rochdale, England, undertook the operation of a small, coöperative store in 1844. The Rochdale Pioneers were a group of weavers and of a few other craftsmen, whose economic status was far from satisfactory. They were interested in reducing their cost of living. They were convinced that the prices they were called upon to pay for the necessities of life were higher than they need be, that profits were excessive, and that costs of production and distribution could be reduced. So they organized their little coöperative store to help bring down their cost of living. To obtain the necessary capital out of their own savings required some heroic efforts. They began with a capital investment of only £28. But the venture succeeded. From this small beginning the coöperative movement spread through Great Britain, Europe, North America, and other parts of the world.

The principles and procedures upon which the Rochdale Pioneers built their coöperative enterprise have become standard practice throughout the world. Among the most important of these are the following.

First, control of the coöperative resides in its members on the principle of one member, one vote. In this respect the coöperative differs from the ordinary business corporation in which control rests with stockholders but in accordance with the number of shares of stock that they own.

Second, membership in a coöperative association is democratic. It is open on equal terms to all who share the same status as consumers or producers. To admit all to membership regardless of race, color, or creed (religious or political) is designed to avoid splits which might jeopardize the success of the movement.

Third, on the capital paid in by members a fixed rate of dividend or interest is allowed. Any net income in excess of such requirements may be paid to members, but not in proportion to the capital which they paid in. In this respect, too, the consumers' coöperative differs from the ordinary business corporation in which dividends are paid in accordance with the amount of capital stock held, and in the case of the common stock without any limit on the rate.

Fourth, the net income of a coöperative is distributed to members in proportion to the volume of business they have done through their coöperative. In the case of a coöperative buying association this will be measured by the amount of their purchases. In the case of a coöperative marketing association it will be measured by the proportionate volume of sales.

Fifth, a consumers' coöperative sells goods to its members at prevailing prices rather than at cost. To cut prices would invite the retaliation of private business concerns. The wiser policy is to avoid the under-cutting of prices, to make adequate provision for all proper expenses and charges, and to distribute any savings to members in cash or patronage refunds.

Sixth, coöperative associations do business on a cash base which lessens the amount of working capital required and reduces the costs of operation.

ALLEGED ADVANTAGES OF COÖPERATIVES

The most enticing advantage claimed for coöperative enterprise is that it enables its members to buy what they need and to sell what they produce more advantageously than they could in their individual capacities. Pecuniary gain is the economic motive *par excellence* in organizing and joining coöperatives. Coöperative buying aims at procuring goods at wholesale at the lowest possible market price; coöperative selling of produce, at disposing of such products at the highest obtainable market price. Whatever economies can be effected in the conduct of business, including the elimination of some advertising costs which membership in a coöperative makes superfluous, revert to the patron-members in the form of refunds.

Coöperatives represent customer-ownership of business enterprise. Whether buying consumers' goods or producers' goods, or selling produce, through a coöperative, the patron-members of the association are doing business with an enterprise of which they are part-owners. This, it is claimed, should arouse and sustain interest in the problems of the enterprise, and help in their solution.

Still another advantage claimed for the coöperative is that the financial rewards of members are in direct proportion to the business that they contribute to the enterprise—volume of purchases through consumers' coöperatives, volume of sales through coöperative marketing organizations. They who contribute most to the success of the enterprise through their patronage get the largest returns in cash or other refunds. This is suggestive of the productivity principle previously considered in the theory of distribution.

OBSTACLES AND OPPOSITION TO COÖPERATIVE ENTERPRISE

Amazing as has been the growth of coöperative associations during the past century, particularly in Europe and more recently in the United States, there have been many obstacles and some strong opposition to the development of coöperatives. Unquestionably, the problem that has dwarfed all others has been the problem of procuring and retaining efficient management. Superior management is not plentiful. Highly efficient managers are eagerly sought by private business enterprise, and high salaries are offered to attract them. Coöperatives have often been unwilling to pay salaries high enough to compete with other forms of enterprise. Sometimes the results have been unfortunate, and occasionally disastrous. Intelligent interest and understanding of this problem by the membership of a coöperative is the first step toward its solution.

Sometimes the problem of management takes another form. As a coöperative grows in size, relations between the owning members and management tend to become more impersonal, which is precisely what they do in large corporations. With the personal touch gone, many members become apathetic, members and management drift apart, and there is a strong tendency for management to perpetuate itself in office. This, too, may prove unfortunate.

Again, management may prove short-sighted or deficient in seasoned experience. Inadequate reserves, for example, may be set up for depreciation and contingencies. The earnings of the enterprise may be withdrawn as immediate distributable gains without making adequate provision for the future. This may weaken the financial structure of the enterprise.

The raising of adequate capital has often proved a serious handicap to coöperative enterprise. Subscription to capital stock by members has been

the usual initial way of obtaining the necessary capital, and it has been the practice to require a minimum subscription as a condition of membership. New capital has chiefly come from reinvested earnings, or new subscriptions to capital by members, old or new, and sometimes by outsiders. Ordinary business corporations with the free marketability of their shares of stock are not as handicapped in this respect as are coöperatives with their much less freely marketable memberships.

General conditions, economic, social, and political, may or may not be favorable for the growth of the coöperative movement. Until recently they were much more favorable in Europe than in the United States, which doubtless largely accounts for the rapid development of coöperatives there and the delayed development here. Coöperatives take root in the soil of adversity. They are attempts to improve the economic condition of the groups concerned. The depression of the thirties gave great impetus to the coöperative movement. Willingness to work together in undertakings for the common good and to share responsibilities and rewards, are indispensable to the growth of the movement.

Coöperatives have benefited from some favorable legislation in the United States. The refunds in cash or patronage, which are the coöperative's way of distributing its net income, have been recognized by Congress as not in violation of legislation prohibiting price discrimination. Particularly notable, also, has been the privileged tax status of many cooperatives in the United States. They pay no income tax as ordinary corporations do. This leaves them freer to expand by the use of retained earnings, rather than to pay a large part of them to the government as ordinary corporations must. Such discriminatory tax exemption has been the subject of much rankling criticism and bitter opposition by other forms of business enterprise.

The coöperative movement has suffered from the fact that at times certain forms of business enterprise have appropriated the use of the term "coöperative" to themselves, when they were not genuine coöperatives at all. Success begets imitation. Some imitators were hybrid forms, and others pseudo-forms trying to profit from the use of a form that has proved successful.

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

1. Coöperative enterprise in the United States operates in the fields of production, marketing, finance, and consumption.
2. Producers' coöperatives have been less successful in the United States than consumers' coöperatives.
3. Credit unions are a form of coöperative enterprise.

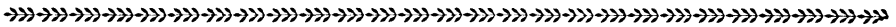
4. In coöperative enterprise there is a closer relationship between the ownership and control of the productive processes than in private enterprise.
5. Consumers' coöperatives are anti-capitalistic, since they do not support either the profit system or the institution of private property.
6. Most consumers' coöperatives in the United States are organized and operated according to the Rochdale Plan.
7. The basic principles of consumer coöperation are recognized by federal and state laws.
8. Any enterprise which gives rebates (discounts) to its customers, based on a percentage of the amount of their purchases, is a coöperative.
9. The federal and state governments have aided coöperative enterprise by means of direct grants, loans at low interest rates, exemption from taxation, permission to incorporate, and educational and promotional assistance.
10. Coöperative enterprise may be expected gradually and completely to replace private and public enterprise in the United States.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XLII

Socialism, Communism, and Other Alternatives to Private Enterprise



SOCIALISM AS A PLAN FOR ECONOMIC RECONSTRUCTION

TO CAPITALISM as a form of economic organization there are many alternative proposals, ranging all the way from the most complete socialization of all wealth, at the one extreme, to the most unrestrained individualism at the other. Of all the voices in the chorus of protest against capitalism, the most powerful is that of socialism.

Nature of socialism. The term "socialism" is properly used to designate any one of three things: (1) a proposed organization of economic society; (2) a political movement aiming at the attainment of the socialistic state; and (3) a certain body of economic principles or theories set forth by socialists as a philosophical basis of the socialist movement. It is the first of these conceptions that concerns us here, though the others will have to be considered in order to understand how the socialistic state is to be brought about.

The socialistic state. There is no unanimity of opinion among socialists as to the precise nature of the socialistic state. In consequence there are many contending socialistic groups. All, however, are united in opposition to private capitalism. What they all have in common is this: (1) insistence upon the substitution of collective ownership for private property in all means of production which afford the opportunity to exploit labor; (2) the substitution of some central authority controlling production for the present supposedly automatic control by competition. In a socialistic society the only important source of money income would be wages, which would be fixed by central controlling boards in accordance with some principle of their own adoption. Socialism is not opposed to capital, as is often represented; it is only opposed to the private ownership of capital and seeks to abolish private capitalists who live and thrive by collecting interest, rents, and profits.

While socialists agree upon the abolition of private capitalism and the competitive régime, there is no such agreement among them upon either

the precise form of collective ownership and control of the means of production or the way in which it shall be established. Upon these important issues socialists have split into many rival groups, some of which will be considered next.

The socialistic movement and socialistic theory. Socialism as a political movement, including all groups, numbers millions of adherents throughout the world. Even prior to the First World War it was a force to be reckoned with in every industrial nation. Its most conspicuous triumphs, however, came during and after the world war periods, such as the Bolshevik Revolution in Russia in 1917, the establishment of the German Republic in 1918 with a socialist as its first president, and the victory of the British Labour Party in 1945. In the United States the Socialist Party has never won more than a few seats in Congress, but it polled 919,799 votes in the presidential election in 1920, representing 3.7 per cent of the total. To many of its followers socialism is a religion. It reveals to them a higher life, it points the way to the realization of a better social order, and it inspires them to give unstintedly of their time, energy, and substance for the advancement of the common cause.

This was markedly true of two of the earliest socialistic groups, which in the history of the movement are usually known as *Utopian socialists* and *Christian socialists*. The Utopians, represented by such men as Robert Owen, a wealthy and philanthropic factory owner in early nineteenth century England, and Babœuf, Cabet, Saint-Simon, and Fourier in France, were profoundly influenced by the ideas of the French Revolution. They were idealistic social reformers, believing in the perfectibility of human nature and the possibility of establishing an ideal economic order which, once established, could be permanently maintained. To the attainment of these ends they devoted themselves with religious fervor.

The economic program of these idealistic socialists was even more sweeping than that of present-day socialists: it was essentially communistic. By this is meant that they not only believed in the socialization of production goods (as modern socialists do) but also in the common ownership of consumption goods.¹ Numerous colonies based upon the communistic principles of the Utopian socialists were established in both Europe and the United States. Among the better known of these was Robert Owen's colony at New Harmony, Indiana (1825-1827), and the Brook Farm experiment (1841-1847) in Massachusetts.

The program of the Christian socialists, in general, was similar to that

¹ It is exceedingly confusing to the uninitiated reader to find that the socialistic and communistic movements have exchanged names during the course of their development. As stated above, the early Utopian socialists were really communists. On the other hand the adherents of Marx, who have consistently advocated the socialization of production goods alone, were originally known as communists.

of the Utopian socialists. They exalted the brotherhood of man and believed that this Christian doctrine could only be adequately realized in a socialistic society. They pointed to the communistic society of the early Christians as an ideal. Christian socialists differ from the Utopian socialists in that they base their program upon definite religious convictions rather than upon mere idealistic aspirations.

The form of socialism, however, that has left altogether the deepest impression upon both the thinking and life of the world is associated with the name Karl Marx and is commonly called *Marxian socialism*. Until the middle of the nineteenth century socialism had been Utopian. Karl Marx (1818-1883) and his associates, notably Friedrich Engels, sought to establish it upon a more realistic basis. To begin with they called themselves communists; later on their doctrines and movement came to be known as "scientific socialism" to distinguish them from the Utopian forms of socialism. In 1848 Marx and Engels issued the famous "Communist Manifesto," a clarion call to the workingmen of the world to unite and to throw off the yoke of the capitalists. It closed with the stirring words: "Let the ruling classes tremble at a communistic revolution. The proletarians have nothing to lose but their chains. They have a world to win. Working men of all countries unite!" Subsequently, in 1867, Marx published his *magnum opus*, *Capital*, a book which has been called the Bible of the international socialist movement. In these two works the economic philosophy of socialism is developed.

Marxian socialism has as its ultimate objective the collective ownership and management of the instruments of production, with the struggle of a class-conscious proletariat as the means to the attainment of this goal. Marx describes the evolution of economic society and professes to see the inevitable breakdown of capitalism, which, he thinks, will be replaced by socialism. Marx's economic philosophy includes three main doctrines: the economic interpretation of history, the class struggle, and surplus value. According to the first, economic conditions exert a preponderant influence upon the course of human history. (One can, of course, subscribe to this proposition without endorsing socialism.) According to the second,

The history of all hitherto existing society is the history of class struggles.

Freeman and slave, patrician and plebeian, lord and serf, guild-master and journeyman, in a word, oppressor and oppressed, stood in constant opposition to one another, carried on an uninterrupted, now hidden, now open fight, a fight that each time ended, either in a revolutionary re-constitution of society at large, or in the common ruin of the contending classes. . . .

The modern bourgeois society that has sprouted from the ruins of feudal society, has not done away with class antagonisms. It has but established new classes, new conditions of oppression, new forms of struggle in place of the old one.

Our epoch, the epoch of the bourgeoisie, possesses, however, this dis-

tinctive feature; it has simplified the class antagonisms. Society as a whole is more and more splitting up into two great hostile camps, into two great camps directly facing each other: Bourgeoisie and Proletariat.²

Between these two, according to Marx, a ceaseless class struggle must go on until the capitalistic bourgeoisie shall be overthrown by the propertyless proletariat. Finally, what keeps this class struggle going is the existence of surplus value, created by labor but withheld from labor by exploiting capitalists. Labor, Marx holds, creates all value and is justly entitled to the full product of its creation. In practice, however, labor gets only a part, which tends to be a subsistence wage. The rest is surplus value over and above wages and is withheld by the capitalist who controls the means of production. His income (interest and profits) is not due to any socially necessary functioning of the capitalist but is derived from the exploitation of labor.

The backbone of the socialist movement is made up of those whose articles of confession are drawn from this Marxian economic philosophy. Harsh as it seems to many in its emphasis upon inevitable class conflict resulting in the eventual overthrowing of the existing order, to many others there is something captivating about it, namely, the ideal of sympathetic coöperation. Both the realism of labor's daily struggle with capitalists and the idealism of an ultimate coöperative commonwealth have won adherents for Marxian socialism. Perhaps the most conspicuous political triumph of the Marxians was in Germany, where even prior to the First World War the Social Democrats (a Marxian group) had become the dominant political party. It was they, too, who furnished leadership for the revolution of 1918 and organized the German Republic. Post-war difficulties, particularly of an international sort, rendered their program of socialization inoperative and led to the defeat of the party. Marxians have been numerous and influential in the political life of almost every industrialized nation. In the United States they dominate the socialist movement, but the movement itself has made no great headway in this country.

Many modern socialists, while subscribing in the main to the doctrines of Marx, disagree with him in regard to the way in which the ultimate socialistic order can best be established. They reject in particular his doctrine of an inevitable class struggle. Marx urged socialists not to compromise with capitalists. Modern socialists on the contrary are opportunists. They believe in taking part of the loaf now rather than to deny themselves until they can get it all. This opportunistic point of view is well represented by the *Fabian socialists*, a name properly given to the members of the Fabian Society organized in England in 1889, but sometimes also applied to adherents elsewhere of the principles for which the society stands.

² Opening paragraphs of Marx and Engels' *The Communist Manifesto*.

The Fabian Society itself, with a membership never exceeding a few thousand, but these mostly composed of "intellectuals," has had an extraordinary influence in England. Among its well-known members at one time or another in recent years were Graham Wallas, Sidney and Beatrice Webb, Ramsay MacDonald, Bernard Shaw, H. G. Wells, and Philip Snowden. Fabians are collectivists in principle but opportunists in procedure. They have coöperated with other parties in effecting economic and political reform legislation. They emphasize gradual evolution rather than sudden revolution as the way leading to the ultimate establishment of the socialistic order. Within this order they leave room for much individual initiative in economic enterprise.

A comparatively recent form of socialism is known as *guild socialism*. It arose in England during the First World War period. It differs from Marxian socialism principally in the form of control over economic life which it proposes. If economic society were organized in accordance with the ideas of the guild socialists, the state would be the owner of the principal means of production, but each industry would be managed, not by the state, but by the workers of each particular industry. Workers would be united in local industrial guilds, and these would be federated into national guilds and represented in a guild congress assembled for such coöperative direction of industry as might seem desirable. Alongside such a congress or parliament of the representatives of labor, guild socialists would permit the continued existence of present political parliaments, which largely represent consumers. The economic and the political organizations would in reality function as a bicameral legislature. Guild socialism is an interesting variation of the socialist program, but as yet it commands no political strength.

Ways of establishing the socialistic order. The preceding discussion of the socialistic movement and its underlying theories has suggested two distinctly different ways for the establishment of a socialistic society. One is the way of revolution, violent if need be. The other is the way of peaceful evolution with reliance upon legal modes of procedure. The former is sometimes the method of bullets; the latter is always the method of ballots. The one is direct in procedure and immediate in results; the other is indirect with deferred results. Under the influence of the French Revolution and the revolutions that spread over Europe in 1848, many socialistic thinkers thought of the social revolution that would usher in the socialistic state in terms of violent force. Gradually this idea was abandoned as they came to see that a revolution based upon a majority in an election and the subsequent use of legal methods gave promise of greater permanence than one based on illegal rebellion.

Assuming that socialists have been victorious at the polls, and that they have come into control of the various branches of government, the prob-

lem remains of how to acquire for the state the industries that are privately owned. Extremists among socialists urge confiscation, the taking of private property for social purposes. To the proposal that such property-holders ought to be at least partly indemnified they reply: Why indemnify capitalists for taking away from them a special privilege to exploit—a privilege which they ought never to have had? More moderate socialists propose that the socialization of industries shall be brought about through compensation of owners and taxation. By imposing heavy property or income taxes, and especially by levying progressive inheritance taxes and gradually abolishing the right of inheritance entirely, it would not take more than a few generations for private property in the important industries to disappear. Which of these methods, or any variation of them, might be adopted would depend very largely upon the peculiar development of the socialistic movement in any given country.

THE STRENGTH OF SOCIALISM

A movement that proposes so revolutionary an organization of our economic society, and that at the same time has commended itself so strongly to millions of people, must have within it certain undeniable sources of strength. The socialist movement has gathered strength from many sources and for many reasons, not all of which are closely related to the merits of the plan it espouses. But the plan, too, must have inherent merits to make it seem attractive. One of these outstanding merits is its emphasis upon a more scientific organization of production in contrast to the planlessness of the present system. Socialists never tire of arraigning the wastes not only in the production of goods but also in their market distribution and utilization. In contrast to the shortcomings of the competitive régime they extol a system in which production shall be much more closely geared to consumption, the results of which shall be the elimination of unusable surpluses in production, of periodic industrial depressions, and of unemployment. It is an attractive picture, particularly to those who are suffering injustice under the present system. The real point at issue, however, is whether men would be willing to give up some of their present freedom of choice as producers and consumers for the sake of having a more perfect adjustment between production and consumption. Defenders of our system of private capitalism argue that what maladjustments exist can largely be corrected without destroying the system.

A second strong feature of the socialistic proposal is its emphasis upon a more equitable distribution of income and wealth. Such emphasis, to be sure, is not an exclusive feature of socialism, but it is one of the most effective socialistic campaign arguments. Striking inequalities of income

and wealth are apparent at every turn. While socialists do not expect to be able to level all such inequalities, they do hope to remove the more glaring differences. The means selected for the attainment of this end is the abolition of the private receipt of property income—interest, contract rent, and profits. Since in a socialistic society the income of all would be restricted to wages for services rendered, a much more equitable distribution of income and wealth could be brought about by fixing wages. Socialists say that as long as we have a system of private property and inheritance, in which some are born to economic ease and power while others know nothing but poverty and struggle, there can be no real equalization of opportunity. Genuine democracy, however, should provide opportunity for the fullest self-realization of all. Without it, democracy is a mockery. The argument is convincing to great masses of people. On the other hand, two questions may properly be raised in rebuttal: Is it reasonable to assume that socialism can “make good” in effecting a more equitable distribution of wealth? And further, even if it can, does socialism provide the best means of achieving this admittedly desirable end?

PRACTICAL DIFFICULTIES INVOLVED IN SOCIALISM

Ill-founded objections to socialism. Those who do not believe that the future economic society should be socialistic instead of capitalistic are quick to point out what they regard as insuperable practical difficulties in the socialistic program. Some of the denunciations hurled against socialism, it must be admitted, however, are not supported by any careful analysis of socialism. Blind partisans of the existing economic order, wishing to damn socialism with the unthinking, sometimes call it anarchistic. Nothing could be further from the truth. About all that socialism and anarchism have in common is opposition to capitalism; their programs of economic reconstruction are diametrical opposites.

Knowing the strong hold which religion and the family have upon the great masses of people, champions of capitalism sometimes argue that socialism will undermine religion and destroy the family as a social institution. Whatever the views of individual socialists, or individual capitalists for that matter, on these subjects may be, it is a libel on socialism to say that it contemplates the abolition of either organized religion or the monogamous family.

Again, it is often said that socialism implies the negation of liberty, a statement designed to arouse the opposition of every liberty-loving individual. But what is liberty? If liberty merely means exemption from restraint, it must be admitted that there will be less of such negative liberty under socialism than there is today in capitalistic society. But if liberty implies the possession of means for the realization of ends, it is

possible that there may be more such positive liberty for larger numbers of people in a socialistic society than there is today.

It is also commonly argued that socialism contemplates the abolition of all forms of private property, which statement is calculated to arouse the opposition of all who like to have some goods that they can call their own. The argument is of course an exaggeration. While socialism proposes to abolish private property in the most important forms of capital, it does not propose to do so in consumption goods, nor even in such capital goods as cannot be used to exploit labor.

Closely akin to the last argument is the contention that socialistic society would be hampered by inadequate accumulation of capital. While there may be some truth in this objection, it does not necessarily follow that the objection is well founded. Whether or not there would be adequate capital for the purposes of socialistic society would depend entirely upon the way in which production would be managed. If socialistic managers should fail to show wisdom in setting aside part of the annual net income as capital, or if they should yield to a popular clamor to distribute all income for consumption purposes, socialistic society would indeed soon find itself embarrassed by lack of capital. But it must be conceded that wise management in a socialistic state, concerned not only with present needs but also with the future welfare of society, could avoid this danger.

Difficulty of maintaining and increasing wealth production. Ill-founded as are the previous objections to socialism, there are some very real and formidable difficulties in the socialistic program for the reconstruction of economic society. Basic among these is the difficulty of increasing, or even maintaining, wealth production. It is common among socialists to express high hopes that hours of work can be materially shortened and incomes be greatly increased, without at the same time showing how the present scale of wealth production will be either maintained or increased. It is the hope of large personal gains that drives the capitalistic managers of industry at top speed in the production of wealth. With the elimination of personal profits in socialistic society, will there be a sufficiently strong inducement to call forth the greatest productive energy of both the leaders and the rank and file? As for the leaders, will the "laurel wreath" of social recognition prove as stimulating as the hope of pecuniary gain? Much can be said in favor of the contention that it will, for even now many men are driven more by the desire for recognition and distinction than by the desire for wealth. As for the great mass of ordinary men placed in less conspicuous positions, it is very doubtful that such a motive could be relied upon to call forth their greatest productive energy. The assurance of definite status and fixed income would doubtless cause many men to relax in their productive efforts. One knotty problem,

then, that socialistic society must solve in order to ensure necessary production is the problem of maintaining both discipline and efficiency.

A problem akin to this problem of maintaining the efficiency of the human factor in production is the problem of properly providing for the depreciation of capital and thus of maintaining its efficiency. With insistence by the workers that wages shall be as high as possible, socialistic leaders, knowing the political strength of the masses, will be under strong pressure and temptation to distribute earnings as generously as possible. In such a situation, as in the case of some badly managed private enterprises, there is the risk that inadequate provision will be made for the maintenance, depreciation, and obsolescence of capital. Tomorrow's capital account is apt to be drawn upon to meet the consumption demands of today.

Whether socialism will commend itself to men as a form of economic organization superior to regulated capitalism will doubtless turn on its ability or inability to maintain and increase the level of wealth production. The redistribution of existing wealth will prove of no permanent benefit without the efficient and steady maintenance of wealth production.

Difficulty of avoiding the evils of bureaucracy. Many there are who believe that the Gordian knot of socialistic society is the difficulty of avoiding the evils of bureaucracy. Socialism involves the substitution of the judgment and initiative of governmental officials for those of the individual. Much of the world's experience with the governmental management of economic enterprises, and certainly the socialistic experiments that have been tried, support the contention that socialism inevitably tends to become bureaucratic. If we could be assured that the executives and administrators of the socialistic régime would only be men of the highest ability and integrity, there would even so be no particular cause for alarm. But in an economic democracy what reasonable hope is there that men best qualified by training and experience to manage our economic enterprises would be placed in positions of power? Is it not altogether probable that elections to the strategically most important positions would be won by men who understood the political art of appealing to the mass of voters rather than by men trained for economic leadership? Political democracy bears witness to the apathy of voters and its dire consequences. Is it reasonable to assume that human nature will be greatly changed if we substitute a socialistic organization for the prevailing capitalistic system? Those who fear the evils of a socialistic bureaucracy revolt against the possibility of dictation as to what goods shall be produced. They also fear that such a bureaucracy will stifle originality and repress individuality. Genius does not usually flower early in life. Will socialistic leaders be competent to decide who has the "divine spark" within him, furnishing the necessary educational opportunities for some and closing the doors

of opportunity for others? The prospect is not very reassuring. It places tremendous powers and responsibilities in the hands of a relatively small number of officials. The present system has the merit of no such bureaucratic concentration of power over the fate of potential leaders and geniuses.

Difficulty of agreeing upon an equitable standard of distribution. A third Herculean task of socialistic society is presented by the difficulty of agreeing upon a generally acceptable standard of income and distribution, at once just and sufficiently stimulating to evoke the best efforts of all. Since socialism contemplates the abolition of the private receipt of interest, rent, and profits the socialistic problem of distribution resolves itself into the question: Upon what basis shall wages be fixed? In answering this question socialists are far from unanimous. Some have proposed the principle of *need*, a very lofty ideal often realized in the family, but which in general practice would virtually have to be equality. The needs of individuals are so largely a matter of environment and habit that the only way in which socialistic administration could satisfy the masses would be by treating all alike. Others have stressed the principle of *sacrifice*, saying that wages ought to be adjusted to the duration and disagreeableness of the work. If all jobs were equally agreeable or disagreeable, then whatever wage differences are recognized would depend solely upon the time spent in labor. To apply the principle of sacrifice it is necessary to assume that all men are free to choose whatever occupation they will. There is no way of telling which jobs are the more disagreeable except by observing the free choices of men. But men are so unequal in capacity that it is an obvious absurdity to assume the existence of perfect freedom of choice. A third principle of distribution, in fact the most commonly accepted principle of income distribution in capitalistic society, is that of *productivity*. This principle is based upon the idea that there are differences in the capacities and productive efficiencies of men, and that in consequence there must be differences in the reward offered, if the best of all are to be called forth. Socialists recognize the force of this principle but shrink from accepting its full implications as a wage base in a socialistic society. To do so might mean to reestablish some of the very differences in income which those socialists who have a passion for equality have severely criticized.

It would be partisan to assert that socialism is foredoomed to failure. It is only fair to point out, however, that unless socialism can greatly strengthen non-pecuniary incentives to economic effort, its chances of success are limited. With the private receipt of interest prohibited, some other incentive to capital accumulation must be developed. With contract rent forbidden and productive land all socialized, some other stimulus than pride of ownership must be furnished for the preservation and develop-

ment of the land. With the lure of profits gone, some non-financial motive must be supplied to evoke the best efforts of men who now direct our great industries. It is not impossible that all this can be done, but it is by no means as easy and probable as socialists would have us believe. Certain it is, on the contrary, that socialists greatly underestimate the effectiveness of existing economic motives in supplying men with the goods they desire in the gratification of wants.

THE PLAN OF COMMUNISM

Early forms of communism. Communism sometimes in its objective and again in its procedure presents an even more revolutionary program than does socialism. Early plans of communism differed from socialism in objective; present-day communism has the same objective but differs in procedure. Early communism was distinguished from socialism by its broader objectives; for while socialism would do away with private property only in the more important forms of production goods, communism went further by demanding the abolition of private property in consumption goods as well. Such communism represents the most extreme form of domination of the many over the one. All goods are to be owned in common, for private property is abolished. Each is to produce in accordance with his capacities and to consume in accordance with his needs. In practice, this would come close to meaning equality of personal income.

Communism is one of the oldest dreams of idealistic thinkers. From Plato's *Republic* to H. G. Wells' *New Worlds for Old*, the literature in criticism of the prevailing economic system contains many fanciful pictures of what human society might be like under idealized conditions of socialization. Scores of actual communistic experiments have been tried. Most of these have been short-lived; where communistic colonies have lasted a generation or more, they have invariably had a religious foundation. The communistic society established by Robert Owen at New Harmony, Indiana (1825-1827), and the spectacular Brook Farm, Massachusetts Colony (1841-1847) based on the principles of Fourier, are conspicuous examples of short-lived non-religious communities. The Amana Society of Iowa, founded in 1843, is a religious society that is still operating.

Communism of the type that includes the socialization of consumption goods as well as of production goods presents a highly altruistic program, but it also makes very heavy demands upon human nature. Its success depends upon the degree to which men will be willing to share everything they have with everybody else. It calls for a high degree of regimentation. The analogy so frequently drawn from the family, in which love is the guiding principle, is misleading when applied to communistic society be-

cause there is a vast difference between sharing everything with a small number of people bound by ties of love or with millions of people bound only by economic ties. It is hard to love a million in the way in which one can love a few.

Russian communism. Modern communism, as developed in Russia, differs from socialism more in the procedure of attaining the state of collective ownership and management than in the objective itself. Present-day communism is more suggestive of a method of action, namely direct revolution by means of force, than it is of any specific resulting form of economic organization. When the Russian Bolsheviks, who were the majority group of the Marxian socialists, were successful in their revolution of November, 1917, they adopted the name of the Communist Party. Under the leadership of Lenin and Trotsky they set up a dictatorship of the proletariat largely based on force and terror. In Russia revolutionary socialism turned communistic. Dictatorships, communists say, are necessary during the transition from a capitalistic to a communistic society, but eventually they are to be replaced by democratic forms of control. Violent revolution, a ruthless dictatorship on behalf of the proletariat, the socialization of production goods, virtual equality of income, except on the basis of the greater need of selected individuals,—these represent the tactics and objectives of the modern communist movement.

More than thirty years have passed since communism was established in Russia. Profound changes have occurred in the economic and political life of the country. The expectations of the capitalistic critics and of the dispossessed classes that Russian communism would soon flounder and crash on its own mistakes have not come true. The movement has steadily gained in strength, and today the Union of Soviet Socialist Republics (U.S.S.R.) seems securely established in place of the quasi-feudalistic state that once was czaristic Russia.

The economic and political government of Russia is built up of soviets, which are local councils of workers. The soviet dominates the life of city and rural village. A new constitution was adopted in November, 1936, which in Article 12 declares: "Work in the U.S.S.R. is the obligation of each citizen capable of working, according to the principle: 'He who does not work shall not eat.' In the U.S.S.R. the principle of socialism is being realized: 'From each according to his ability, to each according to his work.'" According to Article 30 "The supreme organ of state power of the U.S.S.R. is the Supreme Council of the U.S.S.R." This is a bicameral legislative body which in outward form at least resembles the parliaments of democracies. It consists of two chambers, the Council of the Union and the Council of the Nationalities. The former is elected by the citizens of the U.S.S.R. on the basis of one deputy per 300,000 population. The latter consists of deputies representing the republics and provinces that

make up the U.S.S.R. The chief executive and administrative bodies are the Presidium, composed of thirty-seven members, and the Council of People's Commissars, who direct the foreign relations and internal economy of the country. In practice, however, the government of Soviet Russia is a government of men and not of laws. It is a dictatorship set up by the leaders of the Communist Party, which is a relatively small but closely-knit, rigidly disciplined, political organization. First Lenin, then Stalin, have provided the top leadership continuously since the Russian Revolution of 1917.

Communism in Russia has passed through a number of stages. The years immediately following the First World War witnessed the development of a stern and ruthless dictatorship, which communists say was necessary to protect their movement against counter-revolution from within and possible attack from without. To the world at large this phase of the movement was typified by the OGPU or secret police. Imprisonment, exile, and executions were common. There was no freedom of speech, press, or assembly. Large landholders and industrialists were expropriated. Nationalization of natural resources and developed capital occurred without compensation to their owners. Labor was conscripted as soldiers were drafted in time of war. The currency was inflated until it became worthless. External debts were repudiated, with consequent lack of recognition of the new régime in Russia by foreign governments. Economic chaos was unavoidable, at least temporarily.

Realizing their mistakes, communist leaders headed by Lenin adopted a new economic policy in 1921 (popularly called NEP), which has generally been regarded as a strategic retreat from communism for the purpose of consolidating position. It marked a temporary compromise with private industry in order more quickly to effect the economic rehabilitation of the country. Although there was no change as far as the socialization of the land, large industries, transportation, and banking is concerned, private initiative in industry, trade, and agriculture was again permitted alongside of collective operation. The coöperatives were allowed to function. Conscription of workers ceased. Money wages largely on the basis of collective bargains were restored. The seizure of grain and other farm products from the peasants was abandoned, and a policy of taxing the peasants' production was substituted. Economic concessions were granted foreigners in order to attract foreign capital, though this did not succeed to any great extent. The currency was stabilized. Russian economic conditions gradually improved. By 1928, the pre-war level of production had been reached. After a large measure of rehabilitation had been effected the communists launched a new economic offensive directed to drive the private operator from the field. Socialization was again accelerated.

Under the advice of a State Planning Commission (a body of economic

and technical experts known as the "Gosplan") a series of measures and plans was undertaken to coördinate and speed up state production. The first so-called "Five-Year Plan" was put into operation in the fall of 1928. It aimed particularly at the greater socialization and increased productiveness of agriculture and capital-goods industries. The objectives were substantially realized. The second Five-Year Plan was more directly concerned with the increased productiveness of the consumer-goods industries, and the raising of the standard of living of the Russian people, which still leaves much to be desired. The third Five-Year Plan, which was started in 1938, was in operation when Russia entered the Second World War and had to turn to the production predominantly of war goods.

The first post-war Five-Year Plan was called "The Five-Year Plan for the Rehabilitation and Development of the National Economy of the U.S.S.R. for 1946-1950." As did the previous plans, it covered the whole of the national economy: industry, agriculture, labor, trade, etc., and it included plans for each constituent Republic. Its main difference from the other plans was that objectives were given only for 1950 and that these objectives were compared not with 1945, but with 1940, the last pre-war year. Consequently, this was not a plan for purely new developments during the five years, 1946-1950, but a plan for the *rehabilitation* of what was lost between 1940 and 1945 in the development of the national economy, plus some further development during 1946-1950. To this extent it was a five-year plan intended to cover a period of ten years. As in previous five-year plans, the main part was devoted to capital development in industry in order to rehabilitate the national economy after the devastation of the war and to ensure further development in the future.³

Whatever one's opinion of the Russian plan of economic organization may be, it seems tolerably clear that communism in Russia, in spite of the great size of the country with an area more than twice that of the United States and a population nearly a third larger, is well on the road toward realizing its own ultimate objectives. The rapid progress in industrialization of the country, the mechanization and collectivization of almost all of Russian agriculture, and the redistribution of population between agriculture and industry, and between small-scale peasant farming and large-scale collective farming, give evidence of this. In Russia practically everyone works for wages; a few are self-employed in small private industries that survive because the government is not yet providing adequate quantities of consumption goods. But in the main the socialization of industry

³ From current reports emanating from Russia it is conjectured that Russia is developing a new economic program not just for the Union of Soviet Socialist Republics but for the whole Soviet empire from the Elbe River to the Yellow Sea. The merging of Manchuria and eastern Europe, including East Germany, into the Soviet economy seems one goal of Russia's new economic offensive. The other is building an industrial war potential as great as that of the whole capitalist West.

and agriculture has been achieved. The greatest strides have been made in the heavy goods industries, such as iron and steel, electrical power and equipment, agricultural machinery, and chemical. The consumption goods industries are still laggards, with the result that the Russian standard of living is far below that of the highly developed capitalistic nations.

One interesting result from the standpoint of early communistic theory is the breakdown of the plan to equalize wages. Communistic leaders soon found that equality of wages failed to call for the greatest efforts of the more efficient workers. To secure the greater productivity so urgently needed, it was necessary to revert to the wage-system of capitalistic countries of measuring wages by performance. But comparatively wages are much lower and the differentials are not so great. Although labor is organized into unions, these are not bargaining associations, as they are in the United States and Great Britain, because government completely dominates the economic life of the country.

THE PLAN OF SYNDICALISM

A very different plan from either socialism or communism is that of syndicalism.⁴ Syndicalism makes common cause with socialism and communism in opposition to capitalism, but beyond this the community of interest ceases. It is more closely related to anarchism than to socialism. While both socialism and communism exalt the place of the state in economic organization, syndicalism would ultimately dispense with the state. The political state, it is said, represents the interests of consumers, not of producers. While the socialist wants ownership and control of the more important industries by the state, the syndicalist wants ownership and control of industry by the workers themselves. One has only to imagine our large industries, such as the railroads, owned and operated by the workers for their own benefit to have a picture of what syndicalistic society would be like. Economic society would be composed of autonomous industries. These self-governing industries would be federated for the purpose of taking any common action that was in the general interest. In such a scheme of things the state would play a very minor rôle and would gradually disappear.

Syndicalism differs from socialism not only in the economic organization of industry which it proposes but also in the means for reaching its ends. Socialism, for the most part, stands for orderly political action; syndicalism champions what is known as direct action, including sabotage, the general strike, and the boycott.

Syndicalism as a movement exercised its greatest influence in France

⁴ The word "syndicalism" is derived from the French *syndicat*, meaning "trade-union."

and Italy early in this century, for a time permeating the entire French labor movement. In the United States, syndicalistic principles were expressed in the program for the Industrial Workers of the World, which has not, however, had any very considerable effect upon the American labor movement. While the syndicalistic emphasis upon direct action rather than political procedure, and upon industrial control by producers rather than by the community, has had its appeal to some reconstructionists, the great majority have been unwilling to abandon the state as the most effective agency for the economic reorganization of society.

THE PROPOSAL OF ANARCHISM

At the extreme left of all the proposals for the reconstitution of economic society stands anarchism. Anarchism is often unwittingly confused with anarchy, and popularly sometimes associated with violence. It never stands for the former, and not necessarily for the latter. Anarchy means lawlessness in the sense of utter confusion. Anarchism stands for order based upon voluntary coöperation. As to violence, some anarchists (revolutionary anarchists such as Bakunin and Kropotkin) countenance it as a means of establishing the anarchistic order, while others (philosophical anarchists such as Tolstoi) denounce it, extolling the doctrine of non-resistance in its stead and relying upon education as the means of attaining their end. Anarchists are really pacifists, for they are opposed to all compulsion.

Anarchism, from one point of view, is the diametric opposite of socialism. Unlike socialism, it places the rights and interests of the individual above those of society. It is individualism raised to the n th degree. The socialist would greatly extend the functions of government; the anarchist would abolish government. Anarchism would do away with law and political regulations, permitting every man to become a law unto himself. It does not oppose organization, but insists that organization shall be voluntary rather than compulsory. Anarchism, then, may be defined as a plan of economic organization that would dispense with the state and substitute voluntary coöperation for government by compulsion. It would also supplant private property with possession in common by the members of any freely coöperating group.

While anarchism is popularly associated with terroristic methods of revolution, its underlying philosophy is really based upon a very high conception of the perfectionistic possibilities of human nature. Kropotkin, for instance, who advocated revolutionary but highly idealistic anarchism, held that "mutual aid" is as great a principle of survival as the Darwinian principle of selective struggle. If men could only be persuaded to do away with government, he argued, "mutual aid" could be relied upon to give us

better results than the present compulsory methods. The basic difficulty, however, with anarchism as an economic program lies in the conception of human nature, which is its major premise. Men may some day—perhaps in a future anarchistic Utopia—be sufficiently intellectualized and self-disciplined that every one can be trusted to do his full duty and to play fair with all his associates. Until that far-off day breaks, human nature being what it is, we can hardly afford to take chances with a system that would abolish government and dispense with all forms of compulsion. Since most people still need a large amount of social control, it seems better that we “bear those ills we have, than fly to others that we know not of.”

PROBLEMS

Comment on the following statements, explaining why they are *true*, *false*, or *inadequate*.

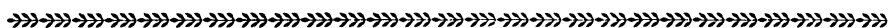
1. Public ownership of the means of production may exist alongside either a democratic or a totalitarian form of government.
2. In a private enterprise economy the rate of interest performs the function of equating the supply of and the demand for loanable funds as well as allocating goods between present and future uses.
3. In a socialist economy the rate of interest serves only the function of allocating goods between present and future uses, since the need for it to equate the supply for and the demand of loanable funds is superseded in a planned economy.
4. Under socialism the risks of business would not be assumed, since the private receipt of profits would be eliminated.
5. Socialism does not contemplate the abolition of all forms of private property.
6. Economic planning is typified by socialism but is not synonymous with it.
7. Fallacies in the economic theories of socialists do not condemn socialism as a form of economic organization any more than fallacies in the economic theories of capitalists condemn private capitalism as a form of economic organization.
8. Socialism does not furnish a productive incentive as strong as the profit motive of a capitalistic system.
9. Syndicalism differs from socialism both in its ends and in its means to the attainment of these ends.
10. As far as the role of public authority is concerned, anarchism has nothing in common with socialism.

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