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President of the Institute for Economic Research and Honorary Professor of Economics, University of Wisconsin

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OUTLINES OF ECONOMICS

BY

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Sixth Edition

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DEDICATED

to

The memory of Professor Thomas S. Adams, dear friend and loyal co-worker, to whom the present and previous editions of "The Outlines" owe much in theory and style.

PREFACE

The present edition appears without the names on the title page of my two associates, Professor Thomas S. Adams of Yale University and Professor Allyn Young of Harvard University. To me, personally, the passing of these two friends in their prime and at the height of their fame is a deep loss. To economics it is a misfortune because they gave promise of many years of distinguished service.

The name of another associate and former student, Dr. Ralph H. Hess, now appears as co-author on the title page. Dr. Hess, like Adams and Young, is a University of Wisconsin Ph.D., and like them, also, he was a member of the faculty of the University of Wisconsin. Now, happily, he is in New York in the economics department of the College of the City of New York. Thus it was possible for us frequently to get together and discuss the problems involved in the new edition, just as I used to get together in Wisconsin with Adams and Young.

The present edition is more than an ordinary new edition. The changes that have taken place since 1930 have been so momentous that a rewriting has been necessary. Thus it is almost a new book. At the same time, the work and the spirit of Adams and Young remain, and they deserve a large measure of credit for whatever merits the new book possesses. However, they must be absolved from any deficiencies in it which a reading of the text by them might have remedied.

I must mention some other persons whose assistance has proved valuable. First of all, I want to say that Mr. James F. McKenna, M.B.A., of Northwestern University, now of the economics department of Brooklyn College, spent a great deal of time on the manuscript and improved it both in style and in substance.

I am glad to acknowledge the services of Mr. John E. Burton, my student at Northwestern University and for several years my associate on the staff of the Institute for Economic Research. It was intended originally that he should be co-author, and he was

helpful in conferences and made valuable suggestions in first drafts of the revision of some chapters. When he became Director of Research of the New York State Mortgage Commission he was no longer able to give the time necessary for co-authorship and he withdrew from the undertaking.

Professor George F. Wehrwein of the University of Wisconsin should be credited for the improvements found in the chapter on agriculture. To Mr. Myron Hoch of the economics department of the College of the City of New York belongs the credit for the greater part of the second chapter on labor and for a considerable portion of the chapter on personal distribution of wealth and income.

It gives me pleasure to award praise to the youngest member of the staff of the Institute, Miss Pearl Rosenthal, A.M., of Columbia University. She has left her mark on all parts of the book from beginning to end.

RICHARD T. ELY

July, 1937

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PART I

INTRODUCTION

CHAPTER I

THE NATURE AND SCOPE OF ECONOMICS

The most striking characteristics of the subject of economics are its breadth and diversity. Starting from biology and psychology in its analysis of the human wants which explain or condition wealth, economics traverses the entire field of social activities and institutions arising from man's efforts to satisfy his material and cultural needs. It touches on the physical sciences, from which are borrowed some of its fundamental principles. It occupies joint territory with politics, ethics, and law, although their respective jurisdictions are distinct in the main. It constitutes at once the most fertile and the most thoroughly developed province of the science of humanity.

Within its confines opportunities are offered for the exercise of nearly every mental aptitude and every scientific method. The historian's gift is needed to unravel the past and trace the development of industrial institutions, while present-day problems in turn offer indefinite scope for the more practical student with a taste for administration or business management. For the legal mind there are the subtle problems of property, inheritance, and corporate policy; for the mathematically-inclined, the technique of modern statistics; for men with practical political interests, the government regulation of business, social legislation, public finance, and taxation. In the planned utilization of natural resources, there are countless important problems in which economics and politics are inextricably interwoven; for the humanitarian, there are unemployment, social insurance, and many other social problems springing from the maladjustments of modern economic life. Animating the entire subject, and blending with the love of truth for truth's sake common to all scientific endeavor, is the persistent hope that by systematic study we may eventually lessen greatly or even abolish that material poverty which stunts and deadens the lives of millions

of our fellows. The study of economics is permeated with the infinite variety of human struggle, calling not only for systematic thinking but for human sympathy, imagination, and the saving grace of common sense.

Economics is frequently said to treat of man's efforts to earn a living. This is acceptable if by "man" is understood "mankind," and if it is fully appreciated that the individual's efforts to obtain pecuniary profit merit but little concern in comparison with the community's efforts to feed, clothe, and shelter itself. Satisfaction of communal needs, and not individual profit, is its primary objective. Economics has thus been characterized as the philosophy of human industry; this description is illuminating provided "industry" is broadly interpreted. Even the traditional definition, that economics is the science of wealth, is acceptable if it is clearly understood that there can be no wealth without man, and that the science which deals with wealth in this sense, so far from being a "gospel of mammon," necessarily begins with and ends in the study of man. As we prefer to define it, however, *economics is the social science which treats of the phenomena arising from the wealth-getting and wealth-using activities of man.*

Science: content and method.

Science is ordered knowledge within a given field, obtained by the assembly, classification, analysis, and correlation of facts, with the purpose of discovering and formulating general principles relating to that field. Scientific research aims at finding and stating the laws and principles which govern the interrelationships of phenomena not previously considered or proven to be related. All sciences arise from the mass of human experiences, but only after a sufficient number of such experiences have been separated from the mass and so treated that they reveal new truths in the form of tested generalizations.

The natural and social sciences.

The sciences are individually characterized by the nature of their subject matter, the most evident line of demarcation being that between the "natural" and the "social" sciences. The natural sciences, pertaining to things and conditions in nature, have often been termed the "exact" sciences, in contrast with the "inexact" social sciences, which pertain to the shifting interrelationships between men in their social activities. This aspect

of differentiation is based upon the disparity between the relative degrees of stability of the raw material in the two fields. Until quite recently, natural laws were clothed with an appearance of enduring finality subject merely to further verification, while the actively-changing nature of the data underlying the social sciences characterized many of their principles as being temporary and rather untrustworthy. Recent and current advances in both fields have narrowed this gap considerably. The Einstein theory of relativity, for example, while it cast no doubt upon the existence of incontrovertible and unchanging natural laws, did shake to its foundations the confidence of many that these laws had been completely observed and formulated. At the same time, close observation and continued careful analysis of social phenomena have improved greatly the precise measurement of their more important elements, especially in those categories which are properly susceptible to statistical treatment. It is still true, however, that the natural scientist seeks the enduring laws afforded by most of his subject matter, while the social scientist must seek truths which may become obsolete while he is finding them.

These great divisions differ also with respect to the research methodology, or methods of ascertaining truths, appropriate for each. The chemist and physicist excel in research through experimentation, susceptible of careful control and undisturbed by erratic behavior of the subject. Man's life and his social activities may be experimental in character, but they are seldom consciously so, and can never be observed as if isolated within a test tube or beneath a microscope. In our efforts to formulate the principles of the social sciences, we can but observe events, and then we must impute or deduce causal relations carefully and to the best of our ability.

All research is colored inevitably, although in varying degrees, by the personalities and mental inclinations of those conducting it; these factors operate as greater obstacles to faultless achievement in the social sciences than in the natural sciences. Prejudice, tradition, and sympathy have wider scope in the processes despite the most rigorous attempts by investigators to exclude them. When combined with the factor of swift change in subject matter, this circumstance appears in the guise of a severely limiting impediment to the ultimate accuracy of results.

In dealing with the social sciences, we find that the material undergoes constant change before our eyes. True, the physical world changes also — new stars are born and old ones die, mountains are eroded and great rivers change their courses — but with reference to a man's life-span, its degree of change is almost imperceptible. In contrast, the web of human relationships increases daily in the number and complexity of its filaments; attempts to segregate and describe its components become more and more difficult, and we are further hindered by the entry into the problem of man's capricious will.

The widespread "economic illiteracy" of perhaps the majority of the population and of the voting public, observed among all social strata as they experienced the acid test of the Great Depression, must be progressively attacked and conquered as more dangerous in its potentialities than the general illiteracy of earlier days, which has almost disappeared before the system of compulsory education for all. Until a similar level in universal economic and sociological education can be achieved, the reins of government and the far-reaching influence of its administrative activities will be at the mercy of demagogues, with their attractive proposals, "noble in purpose" but fatal in their ultimate effects, as proven repeatedly in the past.

Economics as a social science.

Economics constitutes that subdivision of the social sciences which deals with the activities, conditions, and mutual relationships of men in making their living and accumulating wealth. Or it may be termed the study of human behavior in making, owning, exchanging, or using wealth.

In early society the general truths of human action, condition, and relation were not easily ascertained or even accorded serious attention because of the inadequate and scattered nature of the material available for analysis. With the passage of time and as man has risen above the primitive self-sufficing economy, relationships among men have multiplied and have emphasized man's actions and conditions so that they influence our lives in every way. Economics became a recognized independent branch of knowledge in the latter part of the eighteenth century, and as human relationships have attained greater significance so has economics obtained a wider popular recognition and a

larger scientific following. The economist seeks fundamental truths and tendencies in the broad field of human actions, conditions, and relationships, and with this knowledge he is in a position to assist in planning and creating an ever-increasing richness of human life.

Economic experimentation.

In the United States we are embarked upon a far-reaching program of increasing experimentation in our economic life. It is not scientific in purpose, in so far as it is not aimed specifically at the goal of truth-finding; rather, it has for its chief avowed purpose the improvement and enrichment of the average man's environment. Accordingly, we may expect, as indeed we have already observed, that many of the experiments will be unsuccessful and that a few will attain their objectives. By its very nature, such a program cannot hope for complete success — even the chemist must attempt many experiments and discard their results before the correct formula or process is obtained. This program is of interest to economists in several ways. Each experiment should be preceded by careful and impartial research, and formulated with due regard to proven and tested economic principles, in order to assure best chances for success and least social disruption in case of failure. Also, the operations and effects of each attempt afford the economist valuable material for observation and analysis, regardless of its outcome.

In private economic affairs, only a limited amount of experimentation is carried on specifically for experimental purposes. Yet almost all private enterprises serve equally well for the observation of the economist in his search for causal relationships, and for his curiosity concerning their underlying forces. Why does this business succeed and that one fail; what are the most effective methods of industrial management or personal finance, according to actual experience; which schemes of wage payment develop most beneficially for employer and workers together, and so on? Every new undertaking is an experiment under the existing social order, with the founder taking the consequences, whatever they may be. Others may profit, if they will, by such experience.

Economic theory and its application.

The initiate in economics may well be warned at this point against the ancient but persistently popular fallacy, "what's

true in theory may be false in practice." This misconception is founded chiefly upon an incorrect comprehension of the nature and meaning of "theory." According to Webster's dictionary, theory is "the general abstract principles of any body of facts"; 'the analysis of a given set of factors in their ideal relations with one another"; "a general principle offered to explain phenomena." In mathematical terminology, theory is "a body of general statements capable of proof, presenting a clear and systematic view of a subject." It will be observed at once that much which passes commonly for theory, or is advertised as such, is excluded from that category by definition. The perfect theory is that which accommodates and explains every fact pertaining to its subject. In so far as positive exceptions to its general application can be adduced, it recedes in degree from the status of perfection, and by so much is deficient in its usefulness in application. Conflict of theory with practice, in economics as in all other fields, is generally due not to any basic incompatibility between them, but rather to incorrect formulation of the theory, or to inadequacies in the explicit or implied assumptions underlying it.

Economics treats of man.

The supreme importance of man in the study of wealth has not always been appreciated or properly emphasized by exponents of the subject. Too often, man has been considered merely a producer of wealth, the one *by whom* these things are produced. Of course no one denies this, but it might as well be denied as ignored. One result of this oversight is that rules are skillfully devised by which man may be converted into the best possible manufacturing machine. It escapes notice that the mechanized man may become a very poor sort of man. His ability to develop and improve his wants may become neglected while he learns merely how to supply his present wants most easily. There are several alternative conceptions of poverty — the common one referring to a lack of goods for satisfying pressing needs. There may also be a lack of means for satisfying the higher wants; and finally there may be a *lack of wants* for the higher goods. To become rich in goods without also acquiring the ability to benefit from them is unhappily a common occurrence. Not all phases of human development enter into the subject matter of economics;

but those economic activities aiming at manhood, well-balanced development of character, and the equitable organization of human relationships are the central parts of the subject matter of the social sciences, and no one should consider economics so narrowly as to exclude these subjects and objectives.

Economics treats of man in the process of development.

Few truths are more quickly acknowledged or more persistently ignored than that of change in human life and condition. Nothing so invalidates theories, customs, institutions, and enterprises as the great laws of change, of which few persons take full account. Take, for example, bequests. It has often happened that a legacy has been bestowed under specified and detailed conditions, legally binding for all of time. Money is left perpetually endowing a charity or religious sect which will disappear within a few decades, or a school is founded for the dissemination of doctrines which will be discredited within the near future. These and other labored efforts of the would-be philanthropist or statesman often lose their worth entirely for future generations because their authors assume that the future will remain like the present. Even the wage system and the class divisions between capital and labor, which seem so firmly rooted in the constitution of modern society, have been really significant for only two centuries. The phenomena with which we deal in the study of economics are pervaded by the essence of life, and of its progress or decay, under the influences which control the rise and fall of social institutions.

The evolutionary character and complexity of economic phenomena, which account for much of the subject's charm, also saddle it with unusual difficulties. Conclusions true for one generation are invalid for the next. Terms and definitions appropriate to one stage of industry are unsuited to a succeeding stage, while generalizations valid for one nation or government are inapplicable to others. Even those laws or uniformities which the science prizes as the finest products of its research are but statements of approximations and probabilities — declarations of what is most likely to occur for the mass of men in the long run under specified circumstances. In no department of knowledge, consequently, is there greater need for temperate statement and that humility of approach which is the surest safeguard against

bigotry and dogmatism. No system of economics is applicable to all times and places: the premises of the arguments change; the ingredients of nearly every problem are discovered in differing proportions; and the conditions of almost every question vary, from country to country and from generation to generation. The student must not expect "rules of thumb" by which he can solve and dismiss offhand the economic problems of the city or country of his present interest. No general treatise on economics can decide authoritatively the practical problems of particular times and places, although the economist, even more than workers in many other fields, is compelled to deal with practical problems. Such a treatise, however, can point out common errors in logic among the current discussion of economic questions, call attention to obscure and invisible factors of great importance in social and economic trends, which the business man may overlook or ignore, give tentative solutions of some typical problems likely to arise, and thus afford a training which will assist the student in solving practical problems for himself in later years.

The peculiar and distinctive task of the economist is to emphasize the less tangible truths, the more remote consequences, the deeper and consequently less obvious forces in economic society. The impulses of the moment, the immediate demands of the hour, and the concrete conditions staring us in the face (sometimes blinding us), are not likely to lack attention; hence, to preserve the balance, there is need of a craft of thinkers sufficiently removed from the scene of battle to preserve the wider outlook, mindful of the lessons of the past, jealous for the rights of the future, insistent upon the less visible but not less potent factors to be considered. This is why economics frequently appears "academic" or "artificial" to the practical man; the impression arises from a difference of emphasis which is as salutary as it is inevitable. The academic quality of the economist's work arises sometimes from over-abstract presentation, sometimes from pedantry, but more frequently from his courageous insistence upon the importance of the less tangible truths and the probable future consequences of present action.

The relation of economics and politics.

Economics is one of the many social sciences which deals with human relations arising out of the collective activities of man.

Economics, ethics, and politics exhibit an especially close interrelationship. Politics deals with the fundamental structures through which economic legislation and the regulation of industry must act. Final judgment in practical affairs is a synthesis in which economic, political, and moral considerations must be combined. Economics deals with the individual as he is, and not with an artificially simplified "economic man." On this account it is impossible wholly to dissociate the social sciences from one another, and especially is it impossible to divorce economics completely from ethics and politics. In the consideration of railway rates, for instance, controlling authorities may be required to pass judgment upon what is "just and reasonable," and discover upon investigation that what is ethically fair (and politically expedient) depends largely upon economic considerations. The same is true of the apportionment of taxes, in which ethical, legal, and economic elements are inseparably combined. Commercial policies, restrictive regulations and sumptuary laws have been the very essence and subject-matter of economics from its beginning. In analyzing the progress of the past or the conditions of the present, we are compelled to pass judgment upon the success or failure of many laws and policies which are still in force or under active discussion. Many of these must be endorsed or repudiated either solely or largely upon economic grounds; and the economist cannot refrain from passing such judgments. At the same time, economic analysis must usually be supplemented by the consideration of non-economic factors in outlining expedient policies and practical programs.

The social foundations of the present economic system.

Economics is profoundly influenced by the fundamental institutional conditions typifying modern life. Many of the older economists assumed a knowledge of the basic economic foundations such as property, inheritance, custom, contract, competition, monopoly, vested interests, and other legal and social features of our social order. If these institutions were fixed and frozen in their present form, such treatment might prove satisfactory and we might ignore them as we do the air we breathe. But most of these institutions are in a perpetual state of flux. They are evolutionary in character; and as they undergo change all economic relations resting upon them are correspondingly

modified. The extent and character of private property, for example, and the conditions under which property passes from generation to generation by inheritance, affect all distribution of wealth. Therefore we may not neglect consideration of the influence of changes in these fundamental institutions upon our field of study. Modern economics is institutional in character, and all economic activity is carried on within the legal, customary, and institutional framework of society, of which the following features are the most important.

Private enterprise and state activity. — The conduct of enterprise by individuals according to their own ideas and upon their own responsibility has suffered increasing encroachment by the expansion of governmental activity in America and even more noticeably in some European countries. We are not concerned at this point with the immediate future of this trend, as to its continuance or a possible revulsion against it, except for its bearing on certain necessary modifications of theory which will be noted later. It will suffice to remark that, at least in the United States, the greater proportion of economic activity is still within the domain of private enterprise, and it will remain so unless our present social system is replaced by another. A catalogue of occupations and industries now being "regulated," "supervised," or "restricted" may be impressively arrayed in attempted refutation of this statement, but a careful examination of the degree to which the state actually supplants the individual in each will reveal a surprisingly wide range within which the latter may still move freely. Private enterprise is still relied upon to furnish most of the necessaries and luxuries of living, including the cultivation of the soil, the exploitation of mines, transport and communication, and the various stages of manufacturing and distribution.

The prevalence of private enterprise today, especially in democracies, rests upon the persisting opinion that society benefits most by thus harnessing for productive activity the powerful drive of individual self-interest. In nearly all types of economic endeavor, men are believed to work harder and more effectively at their different tasks when their personal rewards are proportioned closely to their contributions, than they would under a controlled system administered by a central authority, and depending for motivation upon altruism or fear.

The boundary-line between individual and state spheres of activity is vague and incessantly shifting. The scope of each was relatively stable and well-defined during the feudal period in Europe, when the economic influence of national governments was scarcely noticeable by the average peasant. But with the rise of militaristic nationalism and consequent pressure for higher tax revenues, together with the spread of mercantilist philosophy and policies, the economic functions of the state began to expand and to encroach more and more upon the sphere of individual freedom in economic affairs. At the peak of the Mercantile System, private enterprise was compressed within its smallest scope by the numerous regulations and restrictions laid upon it by national governments. Popular revulsion against these interferences caused a gradual and increasingly rapid ebb of state intervention during the latter part of the eighteenth century. The corresponding expansion of individual liberty reached its zenith about the middle of the nineteenth century. Since that time, state regulation has slowly advanced again, and after the World War, at an accelerated pace. At present, the pendulum seems to have swung far toward the extreme of state control, although not yet as far as it had two centuries ago.

The right of private property. — Property is the most important foundation-stone of this system of private enterprise. For our present purpose we may define property as *the legal right to exclusive, although not unlimited, control over valuable things*, to be distinguished from the things themselves. It is also to be distinguished from mere possession: the possessor has the use of the thing for the time being, but unless he owns it also, he is dependent upon the will of the owner for its undisturbed further use. Ownership implies the right of excluding other persons from the employment of a thing. If this exclusive right of control over some valuable thing is asserted simply by the strength of one's right arm, the right of property is not thereby established.

The right of private property is so fundamental in modern life that it is often assumed to be a "natural" right, rather than a creation by man which is maintained by constant vigilance and subject to human modification. When a custom has obtained very widely, and becomes deeply imbedded in social life, there is often such a tendency to regard it as a natural right, and to

consider social modifications of it as conflicting unjustly with inherent individual privilege. This is true of the right of private property, especially in the minds of those who possess large amounts of it. Yet the study of its origin and evolution indicates that it has evolved slowly toward its present status only as a corollary of social progress[1] and by virtue of the community's delegation of its original prerogatives.

> "Turning to the tenure of land in feudal England, one broad principle bore equally on every class, that it must be so administered to suffer no injury from selfishness or carelessness of owners. In fact the duties of property were more considered than its rights. Property was regarded rather as a revenue to be administered in trust, than a fortune to be expended in indulgence." . . .
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> "Land never became private property in that personal sense in which we speak of a thing as our own, to do with as we please. Attempts to use it as a commodity were angrily repressed, the common weal in a high and remarkable degree being presumed to come first with every honest man." [2]

In the savage state of development, there was little desire or need for private property as such — most "goods" were consumed at once, and occasional cherished items of clothing or ornament were retained by their possessors only through superior force or cunning. The property appeared in communal rather than individual guise, relating to sacred relics or territorial preserves belonging to the tribe as a whole. Meanwhile, private property in tools, clothing, and weapons gained slow recognition on the basis of possessors' greater skill or prowess, always subject to the tribe's estimate of general usefulness exhibited in their undisturbed possession.

Private economic life first became dissociated from that of the community with the domestication of animals and the beginning of the agricultural stage of society. The most skillful herdsmen and tillers of the soil were granted private rights to their contributions to the general welfare primarily because it encouraged their best efforts and thus conduced to group welfare.

As it has developed, the institution of private property has very evidently intensified the development of men's less admirable characteristics; yet it has also contributed greatly to the advance-

[1] R. T. Ely, *Property and Contract in Their Relations to the Distribution of Wealth*, Macmillan, 1914, pp. 545–549.

[2] Abbreviated from the *History of England*, by James Anthony Froude.

ment and general elevation of social progress. Evil at times in its manifestations, especially when unchecked by the test of group benefit, property rights have generally added immeasurably to the common welfare and security in the long run. The rights of the individual to sole ownership of various forms of wealth have been recognized and upheld by society chiefly because of the social advantage accruing to itself through individual ownership. It follows logically from the "social utility" theory of property that in cases where the social welfare conflicts with private interests, the latter must give way, as for example in land condemnation proceedings, various restrictions imposed on property utilization, and various forms of taxation attached to private ownership.

The modern state is continually placing new limitations and restrictions on the right of private property. Our cities regulate the height of buildings, prescribing the material from which they are to be made and even the kind of plumbing which is to be installed. Restrictions of the use to which land may be put are increasingly common through zoning and other laws which pertain to public health, safety, and morals. It has long been recognized that a man may not use his property in ways that constitute a "public nuisance." During the past generation restrictions upon use have gone much further and are daily increasing. A part of the city may be zoned for residences and a business structure may not be erected within that district; land may be zoned for reforestation and its use for farming purposes prohibited. The nature and extent of these modifications of private property rights must be controlled by the state in the public interest. To what extent interference with the right may be justified cannot be discussed in specific terms; such a discussion would treat in detail of such problems as municipal ownership, railway regulation, the uses to which land should be put in city and in country, and many others. The point here emphasized is that in dealing with these problems the mere fact that a proposed solution restricts or enlarges the right of private property *cannot in itself be decisive.* It is now recognized in enlightened jurisprudence as well as in economics that property has been established, maintained, and given shape and direction by public authority, and that it must find its limitations in the public welfare.

Contract. — As our economic life becomes increasingly one of social relations, contract necessarily assumes an increasing significance. Without the right of contract it is inconceivable that our modern economic life could continue; it is almost equally as important as the right of private property among our economic institutions, and we are equally dependent upon the state for the maintenance of both. Some sort of contract lies at the basis of all associated economic activity. To assure the smooth progress of such activity, it is necessary that men should be allowed to place themselves under obligations to one another. It is also necessary that they be compelled to abide by the agreements thus made; otherwise, the element of risk in all business activity would be increased to an incredible extent. The state therefore permits the formation of contracts, and then enforces valid contracts by the fullest use of its police power.

With respect to both passive and active aspects of state enforcement of contract, it is quite in accordance with the governing theory of the public interest that the right to enter into contracts or to seek their enforcement is limited strictly by considerations of public policy. For example, it is illegal to make certain types of contract, especially those which embody criminal or immoral purposes; and other types of contract, while permitted to be made, cannot be enforced by law. However, the great majority of contracts are enforceable and constitute an indispensable element in our business life, without which the latter would lapse into chaos.

As we said of the right of property so may we say of the right of contract; it is a social institution established in the interest of society, and finds its limits in considerations of the public welfare.[1] This institution has been slower to develop than the right of private property; and the story of its establishment and growth is an interesting one in any historical treatment of the subject.

Freedom. — The third great legal-economic institution is freedom. The legal liberty to do certain things, such as moving from one part of the country to another, choosing one's own occupation, and acquiring property, is now guaranteed by the state, at least in countries not oppressed by dictatorships.[2] Such

[1] R. T. Ely, *Property and Contract in Their Relations to the Distribution of Wealth*, pp. 615–618.

[2] It is not implied that these rights today are absolute or unrestricted. For example, certain states prohibit the entrance of the destitute from other states; choice of occupation

personal independence, together with the abolition of slavery and of imprisonment for debt, are characteristic features of the present economic orders as distinguished from past conditions. The right to make and to sell what and when one pleases is comparatively recent, in historical perspective. It has often been greatly limited by despotic governments, or taxed heavily when conceded. The nineteenth and twentieth centuries have seen the abolition of an immense number of hampering and vexatious restrictions which were often designed for extortion rather than for the promotion of private enterprise.

Restrictive laws, however, were not and are not the only limitations upon personal freedom. The system of private property itself implies that certain individuals in the community have power to command other people while at work; the lack of an income under our present regime means the lack of a real freedom to do things. The high price of a railway ticket may be quite as effective as would be a legal barrier in obstructing movement from one state to another. Involuntary servitude has been abolished, except as punishment for crime, yet men are often compelled to work by the threat of economic distress, quite as effectively as by means of the slave-driver's whip. Again, the choice of an occupation is free according to law, but we may find that a long and expensive course of training is necessary for entrance upon a given profession, or that union regulations effectively limit the number who can learn a given trade.

In all our discussions of this concept, we may distinguish between what have been called "negative" freedom and "positive" freedom. Mere absence of restraint (negative freedom) is one thing, but the ability actively to exert potentialities in channels best suited to the individual (positive freedom) is a very different thing. Legal restrictions may actually be the means of increasing positive freedom. Thus, a library placed at the disposal of the public without rule or regulation would result in a smaller total utilization of the books than one in which the observance of certain rules is strictly enforced. Laws which limit the power of the strong to oppress and which help to open the gates of opportunity to all must necessarily increase positive freedom. The newer ideal of freedom aims at the development

is often hampered by various regulations of government agencies and trade unions, and limitations upon the production of crops and livestock are now also enforced.

of such social arrangements that sane and complete lives will be possible for the largest number of persons.

Competition. — Our economic society is termed "competitive." The kind of competition which characterizes the present economic order is the all-pervading endeavor to obtain the largest possible amount of wealth in exchange for commodities produced or services rendered. If we except the idlers, the parasites, and the cheats, men are everywhere attempting to discover what other people urgently want, and then to satisfy these wants in the most efficient and profitable manner possible. Moreover, they attempt to give as little as possible of their own products in exchange for the things they themselves desire. Business competition thus has two sides: rivalry in rendering service, and alertness in exacting a return. Each individual takes part in the competitive contest in two ways: first, as a seller of commodities or services, in which case he finds that others are anxious to offer the same commodities or services; and second, as a buyer of the things he wants, in which case he finds that the same things are sought by other people.

In most lines of endeavor many competitors continue to exist side by side indefinitely, each being confronted by the ever-present threat of displacement and economic extinction as a penalty for relaxed efficiency. Heterogeneous as may be the character of competition, now predatory, now friendly rivalry, there is no resting place in the contest unless one secures some special privilege as a shelter. He who is energetic and wins success in a certain line of business must continue to defend himself from a host of imitators who are anxious to snatch the fruits of his leadership. Most of these competitors attain partial success, some more than others, some none at all. These last, the unsuccessful, whether made so by illness, indolence, incompetence, or lack of proper training, either suffer economic demotion or fall by the wayside, to subsist upon public or private charity.

The intensity of the competitive struggle is subject to great variation. At times it may descend to the "cut-throat" stage, where the slashing of prices has for its purpose the elimination of one or more of the contestants. The modern state attempts to place limits upon this rivalry. It makes regulations and acts as an umpire for fair play; it attempts to eliminate fraud and brute force. Libelous and fraudulent statements about a com-

petitor's business are declared illegal, as are efforts to induce his customers or employees to break their contracts with him. Competition designed to drive a rival out of business is illegal, whatever its methods, if it is proven to be prompted by sheer malice or to be part of an effort to establish a monopoly.

Co-operation. — The statement that our age is one of competition is misleading if it conveys the impression that every individual is always struggling against all of his fellows. On the contrary, the achievements of modern industrial civilization would be impossible without a far-reaching co-operation between individuals. We mean here by "co-operation" not the benevolent and conscious type of mutual aid or association which itself constitutes an important characteristic of social relations, but rather the omnipresent unconscious and incessant type displayed by individuals or industrial units in their economic activities. Owners and workers may quarrel bitterly for a time about the terms of hire, but, once agreed, both sides engage in comparatively long periods of combined effort toward the goal of successful conduct of the enterprise. Unconscious co-operative effort permeates the relationships between the different processors of an article passing from the raw material to the finished stage, regardless of the time or distance intervals between the applications of their successive efforts. *The division of labor itself is co-operation on a broad scale.*

Competition determines the conditions under which this co-operation takes place. In the capitalistic society which exists in England and the United States, co-operation is characterized by its automatic operation. We co-operate in following our own interests without being aware that we are co-operating. The people employed in the hotels of New York City, for example, all act in their own interests, but in doing this they act together in rendering services, feeding people, lodging them, and taking care of a variety of their wants. Competition stimulates each in the performance of common service and assigns a place to each. Any form of society that exists or is contemplated (socialism, communism) must find a place for competition. There must be some competitive method in assigning places, rank, and remuneration. However, competition may not operate automatically; as we find it in Russia, for example, it is regulated and planned from above.

Because of the shortcomings of the kind of competitive co-operation which exists in the United States, we have, in recent years, ceased to rely completely on the power of competition to automatically secure co-operation. Until the operation of the Agricultural Adjustment Administration farmers used their own judgment in determining what to plant and how much to plant, with the goal in mind of selling their products at the best price they could obtain. The operation of individual judgments in determining the course of production resulted in large surpluses of farm products. Consequently it was thought wise and in the social interest for Congress and the federal administration to tell the farmers, in some cases, what and how much to produce.

Industry under the National Industrial Recovery Act regulated production, limiting it and fixing prices under which industry should be conducted. There are those who want us to proceed farther and farther in the direction of a planned society which will abandon competition as a means of automatically regulating economic life.

All these various proposals are discussed later in this book. All we want here and now is to contrast the unconscious regulation of our economic activities by competition with the planned regulation which we have already begun in this country and which various groups want to carry so far as to replace the free capitalist society we have known with a regulated society.

Division of labor and exchange. — Finally we may note, as a most significant characteristic of the present economic order, the extent to which it is dominated by the division of labor and exchange. Hardly any civilization seems possible without some industrial specialization, but our own age is peculiar with respect to the extent to which this has been carried. The introduction of machinery and the development of large-scale production have split up the work of men so minutely that the products which they turn out are not only of little immediate use to themselves in most cases, but they are also useless to anyone else until combined with the result of other men's labor, which may have been performed years before or afterwards. Wheat-farming, for example, is a long and complicated process, extending from the miner of ore which is to reappear in a steel plow, to the baker and seller of the bread. This specialization of employment has some far-reaching results:

(1) It implies the exchange of goods. If we are to produce things we do not need, or cannot use ourselves, we must find someone else who does want them and who has things we do desire. Money, banks, and transport agencies could be largely dispensed with if each family produced for itself alone. There would then be few of the present complex problems centering upon the question of the individual's reward for his services.

One of the striking characteristics of this process of exchange is its extensively automatic quality. Men are legally allowed to engage in almost any undertaking that attracts them and yet we take it for granted that somehow things will be produced in the proper proportions. A hundred men are set to work in a factory making nothing but hats, many more than they or their friends can use, but the manager has faith that heads will be found to wear them all. These processes go on visibly before us, but their governing laws are hidden except to the careful investigator. In this respect they are like the laws of physiology. We eat and digest our food, but how many people know how or why digestion takes place?

(2) Specialization of work and exchange of goods necessarily imply mutual dependence. Instead of a number of distinct, self-sufficient units, we have a coherent society within which the individual relies upon many others to complete his own one-sided economic contributions. A strike of street-car employees, a drought or flood, or the destruction of an electric-lighting plant sends a shock of inconvenience throughout the community; a prolonged railway strike is a national misfortune. Indeed, this interdependence is international in scope. England relies on other nations for food in exchange for her manufactured products, and central Europe depends largely on the New World for essential raw materials and foodstuffs. This dependence of nations upon one another was illustrated forcibly by the World War and, more recently, by the trade sanctions against Italy during the Ethiopian conquest, which severed some of the threads of international commerce. When thrown back more largely upon their own resources, the peoples of many countries came to realize for the first time how much more limited and confined their economic life would be, how some of the essentials of comfortable living would either be wholly lacking or obtainable only at extremely high costs, if it were not for international exchange and inter-

national division of labor. The United States is more self-sufficient economically than other nations, but it is nevertheless dependent upon foreign trade for its supplies of many things.

(3) Modern exchanges are effected by and through the medium of money and credit, and this medium colors and modifies the terms or conditions of exchange. We live in a pecuniary society in the study of which it is as misleading to ignore as to exaggerate the ubiquitous role of money. While economic activity relates basically to the production and consumption of material goods and desirable services, that activity, on the surface, is carried on almost entirely in terms of prices and money. The basic endeavor is to obtain the maximum benefit in return for the minimum sacrifice or effort, and to expend the fewest dollars possible upon every purchase. Thus has the pecuniary motive come to play a compelling role in the production, transference, and utilization of all wealth.

Specialization and an amazing complexity of competitive co-operation carried out through monetary exchange, along with the social interdependence which they create, are among the most pervasive and distinctive characteristics of the present economic order. They also determine the essential nature of economics. *It is above all a science of human relations.* This important truth should be noted by those readers who assume that because economics is "practical," it is also altogether concrete and material. On the contrary its subject matter is largely intangible and its conclusions largely abstract. It is the business man, the engineer, the factory inspector, for instance, who are particularly interested in the mechanical and material aspects of factories and machinery. On the other hand, the economist as such is especially concerned with such questions as the influence of factories and machinery upon wages, hours of labor, unemployment, cost of production, prices and profits, in short upon relationships among men as they are affected by the material conditions under which they earn their living.

Principal divisions of economics.

The foregoing considerations explain the order in which the subject is developed hereafter. Part I describes the setting and traces the evolution of the present economic order, ending with a brief sketch of the modern stage. Part II analyzes and develops

the basic principles and theories of production, consumption and exchange of wealth. Part III deals with the principles governing the distribution of that wealth among the different classes of society. The more abstract nature of the body of theory developed in Parts II and III is then supplemented by the more concrete discussion of problems and applications of theory in Part IV, in which the more pressing and current questions of the day are treated. In Part V is developed the background and modern problems of federal, state, and municipal public finance. Part VI deals with the readjustments of the economic structure under non-capitalistic regimes such as the Fascist, Socialist, and Communist. The final section, Part VII, is devoted to a brief survey of the history of economic thought and a summary of its latest developments.

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CHAPTER II

THE EVOLUTION OF ECONOMIC SOCIETY

Scientific studies, within whatever field they are undertaken, are inevitably concerned with the beginnings and the successive stages by which the things of which they treat have arrived at conditions of the present. It is obvious that historical events pertaining to the early evolution of most things falling within the scope of both the natural and the social sciences could not have been precisely recorded. Nevertheless, a logical hypothesis of things as they might have been may be formulated from more or less incomplete and ill-fitted facts of actual observation. The nebular theory, the atomic theory, and the Darwinian theory are examples of very useful hypothetical principles of evolution which were supported by scant means of proof. Today, evidence has been produced which indicates that these hypotheses are neither adequate nor accurate. The fact remains that they have been extremely useful in the development of the natural sciences.

The evolution of economic society had its beginnings in comparatively recent times. In addition to the great majority of occidental and oriental peoples who have attained the advanced economic levels with which we are familiar, there are isolated communities which still occupy every conceivable stage of economic condition from savagery up. Also, historical records supply much material which demonstrates the actual course of economic development in many regions and among many peoples.

Numerous writers have described from varying points of view the different stages through which mankind has passed at arriving at the present state of modern industrial civilization. Sir Henry Maine, interested especially in the legal foundations of society, summed up his conclusions in a "law" of progression from a prevailing condition of status to one of contract. Herbert Spencer found the most significant movement in the evolution from militant to industrial society. Some archeologists and historians look-

ing to the profoundly important factor of weapons and tools have traced a development from the age of stone through the age of bronze to the latest age of iron and steel.

The economist prefers to measure the progress of social evolution in terms of production, exchange, status of labor and the general organization of economic society.

The Economic Stages of Development

Production: man's ascending control over nature. — This classification emphasizes the successive steps taken by men in their quest for greater abundance, observed in their changed modes of existence as based upon major advances in productive techniques. These stages are usually enumerated as (1) the hunting and fishing stage (or the stage of direct appropriation), and traced successively through (2) the pastoral stage; (3) the agricultural stage; (4) the handicraft stage; and (5) the industrial stage.

Exchange: its greater convenience. — The emphasis here is upon improvement in methods devised to facilitate trade and commerce in goods, between men, and the stages signify the successive major alterations in the machinery of exchange from (1) the barter economy to (2) the money economy and to (3) the credit economy.

Status of labor. — This grouping gives weight to the relationship between the social classes, considered by many to be of greater importance than the more mechanical aspects of production and exchange: (1) the laboring classes, not differentiated; (2) slavery and serfdom; (3) free labor, governed by custom; (4) individual contract; and (5) group contract or collective bargaining.

General organization of economic society. — A broader survey, encompassing not only production and exchange but also the general organization of economic society, emphasizes as the most important line of progress the evolution from (1) the independent or household economy through (2) the town or village economy to (3) the national or capitalistic economy of the present era.

These classifications possess the merits and the defects of all sweeping historical generalizations. They are for the most part composite pictures of many different communities, and summaries of average and customary development rather than accurate descriptions of the development of civilization in any one region over any given period. For instance, a certain type of agriculture

(hoe culture) preceded the pastoral stage among many, if not most tribes; and in many parts of the world the inhabitants never passed through the pastoral stage at all. Also, the transitions from one stage to the next were very usually gradual; in most cases the new stage was merely grafted on to the old, but did not replace it. Accordingly the title of any particular stage aims to represent the predominant and not the sole type of economy in that stage. Thus the credit economy has never wholly displaced the money economy; and agriculture — which has now lost its former primacy in the most advanced countries of the world — will probably never cease to be a powerful and important factor in most great nations.

Properly interpreted, however, these classifications fulfill a real service in supplying bird's-eye views of the economic development of man. They emphasize by their brevity and sharp contrasts how far and by what different paths mankind has come to the complex industrial society in which we find ourselves today. The various groupings are complementary and overlapping. In sketching briefly the development of capitalistic economy we shall confine our treatment to conditions in England and the United States.

THE ECONOMIC STAGES

FROM THE STANDPOINT OF PRODUCTION	FROM THE STANDPOINT OF EXCHANGE	FROM THE STANDPOINT OF LABOR	FROM THE STANDPOINT OF THE GENERAL ECONOMIC ORGANIZATION
1. Direct appropriation . .	Conquest and seizure	Laboring class not differentiated Beginning of slavery and serfdom	Tribal and independent economy
2. Pastoral . .	Barter	Slavery and serfdom	Household and neighborhood economy
3. Agricultural .	Barter and money	Serfdom and free labor	Village economy
4. Handicraft .	Money	Free labor governed by custom	Custom work
5. Industrial . .	Credit	Individual contract and group contract	National or capitalistic economy

Stages in the Evolution of Social Organization

Economics is not considered to be primarily a study of the technique of production or exchange, but rather a study of human relations or social phenomena due to the wealth-getting and wealth-using activities of man. Therefore, the most appropriate classification is probably that which traces the development of economic society from the stages of the independent household economy to the broad national or international economy of the capitalistic type prevailing today throughout the greater part of the civilized world. This capitalistic economy was the foundation and an essential part of Western civilization. Since the World War there have evolved new types of economic society — on the one hand, Fascism as seen in Italy, Germany, and elsewhere, and on the other hand, Socialism as a transitory phase of preparation for Communism, of which the most significant illustration is afforded by Russia.

The earlier part of the traditional "production" classification is probably erroneous where it traces the historical sequence from the hunting and fishing stage, through the pastoral stage, and to the agricultural stage. The latter part of that classification is essentially correct from the standpoint of methods of production, and it is used here in conjunction with a wider classification delineating the essential character of the prevailing economy. This broader classification is significant even from the standpoint of production itself. Capitalistic or mass production depends upon the existence of broad markets and a national or international economy. The latter are essential to progress towards specialization or division of labor.

In sketching the development of the capitalistic economy as it existed up to the time of the World War the discussion is confined to conditions in England and the United States, because the history of these countries is assumed to be more familiar to the readers than would be the histories of other countries, and because of the relative clarity with which its evolution may be observed.

A. The independent or household economy.

This type of economic organization, in many different forms and in units of varying size, seems to have been nearly universal in the stage of direct appropriation and throughout the early

pastoral and agricultural stages. Its essential characteristics were isolation and economic self-sufficiency, goods being produced mostly for local consumption and not for sale. The division of labor was marked within the household and upon the estate or plantation, but was limited beyond them by the absence of exchange. Commercial intercourse was limited to the sale of surplus amounts of a few staples, in exchange for a few necessary importations such as salt, iron, and other items not locally obtainable. The role of money was of small importance. Slavery or serfdom predominated, with little "wage" labor. This stage is typified by the Manorial Economy in England, from the time of the Norman Conquest until about the end of the fourteenth century.

The manorial economy in England.

During this period, English life was almost wholly agricultural in tenor. The population for the most part lived in villages, each controlled by a lord of the manor to whom the rest of the inhabitants were bound by the customary feudal rules to render certain assistance, as in the cultivation of his land. The villagers were classified according to the amount of land which they held and the services which they were required to perform. The land of each tenant was not a compact area but was composed usually of strips scattered throughout the three great fields into which much of the arable land was divided for purposes of crop rotation. Some handicraftsmen were also found upon the estate, but they did not hold an important place in the village economy. The manors were largely self-sufficient in their economic life. Each village had its own church, mill, forge, and court of law. Social life was definitely stratified, with a wide gulf between the feudal lords and their tenants or serfs; but within the latter group there were no sharp caste distinctions. Competition as it is known today did not exist, and capital in the modern sense was unknown.

The manorial system underwent important changes, though slowly and almost imperceptibly, in the centuries following the Norman Conquest. These alterations appeared principally as a growth in the number of free tenants, the commutation of customary services into fixed payments in money or "in kind," and the appearance of a class of agricultural laborers dependent on the wages which they received.

B. The village economy.

Under the great feudal lords of England the self-sufficing manorial units in many cases became large and powerful, and some of them acquired mineral rights, ports, and other natural advantages in the exploitation of which it became easy to produce a surplus. The self-sufficing units began to specialize in those things in the production of which they had the greatest natural advantages, just as the American plantation of Colonial days specialized in the production of cotton and tobacco. Some barter or exchange between the household unit and the outside world had always existed, but as the production of surplus products became more systematic they were more regularly exchanged for outside or foreign products. Exchange or contractual relationships developed within the group, and the serfs gradually became wage-earners or traders.

The gild system.

The growth of trade brought with it the merchant gild, the purpose of which was to regulate the conduct of trade and to monopolize it on behalf of the local merchants. Merchant gilds appeared in all the larger towns in England during the twelfth century. But a new class was also developing in towns, consisting of the craftsmen who were engaged in the making of things for sale. As this handicraft system grew in importance, the merchant gild became superseded by the craft gild, which in England attained its fullest development in the first half of the fourteenth century.

Each craft had its gild, which specified in detail how the business should be carried on, how many should be admitted to it, and how the trade should be learned. This growth in specialization accompanied a growth in trade, although commerce was still much restricted in the early part of the handicraft period.

The towns traded mostly with adjacent country areas, there being as yet no national or world markets of any importance. With the use of a general system of exchange the use of money became increasingly important. As the larger towns widened their areas of activity and became more powerful, their interests clashed increasingly with those of the feudal nobility, and they gradually displaced the latter in the economic sphere.

The domestic system.

With the beginning of the modern period the town system gave way to a larger economy. The towns gradually lost their control of trade, while the gild system began to crumble before the encroachments of the domestic or "putting-out" system, which developed in the sixteenth and seventeenth centuries and was a characteristic feature of English industry until the middle of the eighteenth century. As under the gild system, industry was still carried on by hand in a small way, but the functions of merchant and workman became separated. The gild master had sold his products directly to his customers, but under the domestic system the workman became less dependent upon the master. He received the raw material from a middleman, to whom also he delivered the finished product. Much of this work was done outside of the towns, the artisans thus being enabled to devote part of their time to agriculture. Daniel Defoe, in his tour through Great Britain (1724–1726), describes the methods employed as follows:

"(The land) was divided into small inclosures from two acres to six or seven each, seldom more; every three or four pieces of land had an house belonging to them, . . . hardly an house standing out of a speaking distance from another, . . . We could see at every house a tenter, and on almost every tenter a piece of cloth or kersie or shaloon. . . . At every considerable house was a manufactury. . . . Every clothier keeps one horse, at least, to carry his manufactures to the market, and every one generally keeps a cow or two or more for his family. By this means the small pieces of inclosed land about each house are occupied, for they scarce sow corn enough to feed their poultry. . . . The houses are full of lusty fellows, some at the dye-vat, some at the looms, others dressing the cloths; the women or children carding or spinning, being all employed, from the youngest to the oldest."

Agricultural changes.

This period saw many important changes in agricultural customs in England, especially the progress of the "inclosure" process during the Tudor period.

Under the manorial system the lands in the common fields had been the property of a feudal lord, but his rights were not exclusive and were qualified by rights of the tenants. There

existed a kind of partnership of the lord and tenant in the cultivation of the land. "Inclosure" was the term used to designate the dissolution of this partnership, or the separation of rights. After inclosure, the tenant generally had a more compact farm, in two or three sections of land; a farm in one piece was the ideal, but was not generally attained at the time. For this farm, the tenant usually paid a definite money rent. The farmer could make improvements on his own account, which had been impossible while he held scattered strips in great fields.

Inclosures resulted in great agricultural improvements, but at the same time they were frequently attended with hardship for the poorer people. Sometimes the common rights, especially those of common pasturages, were not fully paid for when relinquished, although the rule was that of fair compensation. But the final result was to separate many people from the land; and frequently the payment received by the poorer people was wasted in immediate expenditure, instead of being preserved as capital. The right to pasture a cow had meant a definite connection with the soil; the money received in payment for this right might quickly disappear.

The mercantile system.

The decay of town authority did not mean that industry and commerce were left to the free play of competition. The supervision of the central government replaced that of the towns. This national system of regulation which prevailed in England (and in other countries) from the sixteenth century to the nineteenth has been called the Mercantile System. Its essential purpose was the guidance of economic affairs in such a way as to increase the commercial and military power of the nation as a whole. The Navigation Laws which the reader has encountered in his study of American history were a part of this system. The creation of a "favorable" balance of trade and the maintenance of a large supply of the precious metals were sought, and agriculture was fostered with the aim of promoting the growth of population. The Mercantile System has often been described as consisting chiefly of trade restrictions, but in its essence the system meant the replacing of a local and territorial economic policy by that of the national state.

Interference with internal trade was characteristic of the

Mercantile System. Prices, wages, and rules of apprenticeship were fixed by public authority. The quality of goods was inspected by public officials. Patents of monopoly on the sale of certain commodities, such as gunpowder, matches, and playing cards, were extensively granted by royal authority to favored individuals or companies, ostensibly to foster new industries.

A full account of this stage in English history would deal with (1) the regulation of labor, in a way which was, on the whole, distinctly oppressive, and inspired by the purpose of making labor cheap and laborers subservient; (2) the development of systematic poor relief by civil authority; (3) the encouragement of shipping; (4) encouragement of the immigration of foreign artisans to introduce new industries; (5) the regulation of the grain trade; (6) the establishing of "plantations" in the colonies; (7) the regulation of the coinage; and (8) the development of banking, insurance, and foreign commerce, and the decay of the old notions regarding the sinfulness of interest-taking.

C. The national or capitalistic economy.

In the latter part of the eighteenth century, the preceding methods of production (handicraft and domestic systems) were gradually subordinated to those introduced by the wide changes which accompanied the Industrial Revolution, and especially by the introduction of power manufacturing. The significance of the Industrial Revolution is so great that the remainder of this chapter is devoted to it and its more important consequences and effects. It will be helpful to review briefly the conditions existing before it began, in order better to understand its nature.

England before 1770.

England in the early part of the eighteenth century was nationally largely self-sufficient in its economic life, producing most of its own food and other consumption goods. There had been, of course, a marked expansion of foreign and colonial trade; woolen goods were being exported in quantity in exchange for imports of coffee, wines and spirits, rice, sugar, oil, furs, and yarns.

Although internal specialization and localization of industry had not yet become highly developed, signs of its approach were noticeable in the iron and textile industries. Transport facilities were meager — roads were "most execrably vile," and packhorses remained the common means of freighting goods. Rivers

were the chief water highways, as canal-building had just begun.

Manual fabrication still predominated in industry. Although the workmen under the domestic system did not own the material upon which they worked, yet the tools they used were generally their own property. Manufacturing was commonly combined with agriculture, not only in the textile trades, but in other branches also. For example, at West Bromwich, a chief center of the metal trade, agriculture was still carried on as a subsidiary pursuit by the metal workers. The beginnings of the factory system, however, were to be seen long before the use of power machinery began, for in some cases workmen were employed in large numbers in buildings owned by the employer, who also furnished the tools and mechanical equipment.

The medieval system of common-field tillage was still extensively practiced, a large part of the land being still uninclosed. The soil was poorly cultivated, but important experiments tending toward a "new agriculture" were being made in the second quarter of the eighteenth century by Jethro Tull [1] and "Turnip" Townshend.[2] Approximately one-half of the farm lands were owned and occupied by the various classes of freeholders and copyholders, that is, by land-owning farmers; the other half by serfs and tenants.

The Mercantile System and the old views of the relation of government to industry were still dominant. Detailed and special legislation was assumed to be the means of securing well-ordered trade. But a revolt had begun against this whole system, having its religious and political as well as its economic aspects. In the same year that Thomas Jefferson wrote the Declaration of Independence, asserting that "all men are created equal," Adam Smith published his *Wealth of Nations*, the most influential book on economics ever written. Adam Smith claimed that every individual is continually exerting himself to find out the most advantageous employment for whatever capital and skill he can command. It is his own advantage, indeed, and not that of the society, which he has in view; but the

[1] Jethro Tull was one of the pioneers in scientific agriculture. He discovered new methods of seed selection, and initiated planting in furrows, which was much more economical than the former practice of scattering the seed broadcast.

[2] Lord Townshend developed the practice of planting grass and root crops, which facilitated the feeding of animals during the winter and thus encouraged the development of the livestock industry.

study of his own advantage necessarily leads him to prefer that employment which is also most advantageous to society. "What is the species of domestic industry which his capital can employ, and of which the produce is likely to be of the greatest value, every individual, it is evident, can, in his local situation, judge much better than any statesman or lawgiver can for him." [1]

The Industrial Revolution.

The period of the passage from the handicraft to the factory system in England is generally known as the Industrial Revolution. It has been objected that this term is misleading because the introduction of the modern factory system required many years and represented merely the results of forces which had been long maturing. True, the growth in the division of labor, the technical progress of previous periods, and, most of all, the growth of commerce and the expansion of markets, were each necessary preliminaries to this period of industrial expansion; but there is little danger of overemphasizing the importance or the rapidity of change during the years from 1770 to 1840. The span of a single lifetime is but a short interval to the historian, yet developments within this period swept away methods of production which had been used for centuries, and caused profound modifications in the social structure.

The mechanical inventions. — During the last half of the eighteenth century the progress of invention was exceedingly rapid. Kay's flying shuttle (1738) had facilitated the weaving process to such an extent that it became difficult for the weavers to secure enough yarn from the spinners. About 1767 hand-spinning was improved by Hargreaves' "Jenny"; Arkwright, in 1771, made a practical success of roller-spinning (a method patented long before), using horse-power, and later, water-power; and Crompton combined the two processes in 1779. After 1785 steam power was applied to cotton spinning, and then it was the weaving process that lagged behind the spinning. Cartwright began his experiments in 1784, but his power-loom did not come into general use until early in the nineteenth century.

The improvement in the steam engine made possible great advances in the iron industry, of fundamental importance in the

[1] Adam Smith, *Wealth of Nations*, Macmillan, New York, 1904 (Cannan ed.), Book IV, Chap. 11.

new age of machinery. Improvements in the blast furnace enabled iron-smelters to use coal or coke in place of charcoal, the supplies of which had been rapidly diminishing. As a result of this and other factors, the production of English iron was over seventy-five times as great in 1840 as it had been in 1740.

The need for better transport was met by improved roads, by the building of canals (especially from 1790 to 1805), and by the development of steam locomotion. Cast-iron rails had been used in tramways in coal mines as early as 1738; Trevithick made a locomotive in 1803 that was of practical use; and the Stockton and Darlington Railway was opened in 1825, with a Stephenson locomotive traveling at the rate of fifteen miles an hour. In 1829 the directors of the Liverpool and Manchester Railway arranged a prize contest to determine the practicability of steam locomotion. The success of Stephenson's "Rocket" in meeting the requirements of the contest demonstrated that the new method of locomotion had come to stay.

"A general survey of the growth of new industrial methods in the textile and iron industries marks out three periods of abnormal activity in the evolution of modern industry. The first is 1780–1795, when the fruits of early inventions were ripened by the effective application of steam to the machine industries. The second is 1830 to 1845, when industry, reviving after the European strife, utilized more widely the new inventions, and expanded under the stimulus of steam locomotion. The third is 1856–1866 (circa), when the construction of machinery by machinery became the settled rule of industry." [1]

Agricultural changes. — During the Industrial Revolution there were also important changes in agriculture. Bakewell improved the breeding of sheep and cattle in the second half of the eighteenth century. The inclosure of the common fields proceeded with great rapidity, not for the purpose of sheep-raising, as in the sixteenth century, but to enable more efficient tillage of the soil. Between 1760 and 1850 over seven million acres were inclosed in England. The small land-owning farmer was crowded out, partly because a large capital investment per acre was needed for the new agriculture, partly because "gentlemen farmers" bought them out, and partly because the price of land was greatly increased by the desire of wealthy men to build up

[1] J. A. Hobson, *Evolution of Modern Capitalism*, Scribner's, New York, 1907, p. 89.

family estates.[1] Today most English farmers are tenants. The small farmer, who was frequently a handicraftsman as well under the domestic system, was thus crushed between the new agriculture and the new industry.

Effects of the Industrial Revolution. — In the train of new opportunities and occupations opened up by the Industrial Revolution appeared many new problems which pressed increasingly for solution. Most of these centered about the related development of the factory system and the expansion of markets.

1. *The factory system.* — The home had been gradually displaced by the factory as the typical center of production. Instead of working by themselves or with a few assistants, men congregated in cities, and submitted to a new discipline in the large groups organized for the purpose of factory production. This change brought with it a new division of society into classes. The machine and the workshop, like the raw material and the product, were at no stage in the productive process owned by the men who performed the manual work. The masses became merely wage-earners. Thus there appeared for the first time the wide gulf between capitalist and laboring classes, with interests seemingly irreconcilable in several ways.

2. *The expansion of markets and industrial specialization.* — Restricted local markets were replaced by national and world markets. Improved transport enabled different industries to be localized in regions where raw materials or power were close at hand. But with this greater economic interdependence there came a greater liability to economic fluctuations and disturbances. One advantage of the old slow-going system of manufacture and trade had been its stability. As the area of the market increased, manufacturers found it more difficult to decide what and how much to produce. Trade fluctuations increased in severity with the growth of large-scale production; the changing and enlarging demand became increasingly difficult to forecast; and manu-

[1] "The new system of farming required large holdings, to which a new class of tenant of superior education and intelligence was attracted. It was on these holdings that capital could be expended to the greatest advantage, that meat and corn could be grown in the largest quantities, that most use could be made of those mechanical aids which cheapened production. Costly improvements could not be carried out by small hand-to-mouth occupiers, even if their obstinate adherence to antiquated methods would have allowed them to contemplate the possibility of change." — Rowland E. Prothero (Lord Ernle), *English Farming, Past and Present*, Longmans, Green and Co., New York, 1919 (2d ed.) p. 215.

facturing processes were constantly being disturbed by the introduction of new improvements in machinery and methods.

Evils of the transitional period. — The condition of the English working class in the latter part of the eighteenth and early nineteenth centuries was probably worse than in any other period in the history of the country. It is difficult to estimate the extent to which this may be attributed to the introduction of the factory system, but the latter may safely be said to have been a major factor. (Of course, there is evidence that the condition of *child* workers under the domestic or putting-out system had been often worse than in the factories, their parents proving the harder taskmasters.)

> "The evils and horrors of the industrial revolution are often vaguely ascribed to the 'transition' stage brought about by the development of machinery and the consequent 'upheaval.' But the more we look into the matter, the more convinced we become that the factory system and machinery merely took what they found, and that the lines on which the industrial revolution actually worked itself out cannot be explained by the progress of material civilization alone; rather, the disregard of child-life, the greed of child-labor, and the maladministration of the poor law had, during the eighteenth century, and probably much farther back still, been preparing the human material that was to be so mercilessly exploited."[1]

Whatever the causes, the facts revealed regarding the conditions in English mines and factories of this period are shocking. Cruelty to apprenticed children, excessive hours, and insanitary conditions of work were common. The evils were worst in the smaller factories, the owners of which were hard-pressed by relentless competition. Outside of the factories, those who attempted to continue work in their homes suffered even more severely from irregular employment and low earnings.

Competition and *laissez-faire*. — Adam Smith advocated a greater degree of personal economic liberty. He asserted that as a general rule every man, if allowed to do as he saw fit, would sooner or later do that for which he was best fitted, and would consequently work where he could get the best wages. Every man would buy what suited him best, and, after some experiments, manufacturers would make what was thus shown to be called for. If one line of business proved more profitable than another, more

[1] Hutchins and Harrison, *A History of Factory Legislation*, P. S. King, London, 1926, p. 13.

men would enter it, and by their competition force a reduction of prices. If tradesmen cheated, customers would go elsewhere, and cheating would not pay. Everywhere men would look out for their own interests and would make the bargains most advantageous to themselves. This system of balanced self-interests resulting from free competition, he claimed, was the best regulator possible, infinitely better than that provided by the old-time laws which only hampered the development of industry. If the policy of industrial freedom were adopted, he prophesied that there would be a great increase in the production of wealth, and a more satisfactory standard of living for most individuals.

While Adam Smith made significant exceptions to the general rule of *laissez-faire*, many of his followers, less careful and less scholarly, were reluctant to qualify their advocacy of the system of *laissez-faire;* and that doctrine gained popular favor during the Industrial Revolution. Not that a wholesale repeal of the old mercantilistic laws occurred — such things never happen in England, and are difficult of accomplishment anywhere — but there is a quiet and effective way of changing laws by changing men's ideas regarding them and leaving them unenforced. A law that has been long observed has often to be long dead before people gain the courage to repeal it. Thus the law requiring seven years' apprenticeship before one could enter certain trades died quietly during the eighteenth century, and when, in the midst of labor troubles early in the nineteenth century, some workmen rediscovered the old law and prosecuted employers for violations of it, it was first suspended and then repealed, as it was obviously ill-adapted to the new conditions of industry. So, little by little, the old laws were repealed or forgotten, and men were left free to bargain and trade largely as they pleased.

The policy of *laissez-faire* was very generally accepted by the economic writers who followed Adam Smith, and was clearly reflected in the attitude of statesmen. The universal free play of competition came to be the prevailing ideal in this first phase of the industrial stage. It was in keeping with this spirit that England became a free-trade nation in that period, the last step toward this end being taken when the "corn laws" or grain tariffs were repealed in 1846.

The reaction against the passive policy. — By 1850 the abandonment of mercantilistic ideas was complete in England,

but long before this date a new system of legislation had been initiated for the purpose of controlling industry, although under entirely different motivation than had been the mercantilistic regulations. Some of the results of unrestrained competition in the new factory industries could not be tolerated, and compelled, first sympathy, and later legislative efforts to alleviate their evil effects upon the working people. Some of the main lines along which modern industrial regulation has developed will now be considered.

1. *The quality of goods.* — In repealing the laws regulating the inspection of wares it had been urged that "cheating would not pay" and would cure itself. Indeed, it was said that the very inspection of wares by the government was the cause of fraud; for, the government brand being often applied carelessly, men bought poor goods because of the brand guaranty which they would have rejected upon more careful examination. It was asserted that the abolition of the laws would result in buyers' more attentive examination of the quality of goods. These hopes were not realized, however. Given the requisite knowledge of materials, and the desire to use it, consumers *might* be expected to attend effectively to their own interests, but they seldom do. Who can appraise the quality of baking powder, or ground spices, or patent medicines, or many other things that may easily be misrepresented when offered for sale? The average buyer's knowledge is certainly quite inadequate for this purpose, if not entirely worthless. Such has been the experience of the English people and, more recently, of the people of the United States, and laws now provide for inspection of many kinds of food, drugs, and other goods by government officials. The notion that men will always ruin their business prospects if they cheat, and so will be deterred from cheating, has been utterly exploded by English experience. A reputation for honesty is undoubtedly a source of strength to many business houses; but many a man has perpetrated audacious frauds upon the public for years, and retired with a fortune when his cheating began to be known. The inspection of goods by the state is a principle now fully recognized as proper and justifiable, controversy being confined to the problems of degree and extent of its application.

2. *The protection of labor.* — As a result of a series of epidemics of infectious fevers, public attention was called to the condition

of the apprenticed children in cotton factories. In 1796 the Manchester Board of Health reported upon the unsanitary conditions under which the children worked, pointing out that "the untimely labor of the night, and the protracted labor of the day, with respect to children, not only tends to diminish future expectations as to the general sum of life and industry by impairing the strength and destroying the vital stamina of the rising generation, but it too often gives encouragement to idleness, extravagance, and profligacy in the parents, who, contrary to the order of nature, subsist by the oppression of their offspring." In 1802 the first "factory act" was passed for the purpose of protecting the health and morals of pauper children in cotton factories. The apprentices were to work not more than twelve hours by day, and after 1804 not at all by night. After more agitation, in which Robert Owen took a prominent part, a second step was taken in 1819. This act prohibited children under nine years of age from working in cotton mills, and persons under sixteen were not to be employed more than twelve hours per day. In 1833 regulations governing conditions of work for children and young persons in all textile factories were enacted, and special inspectors were charged with their enforcement.

The controversy concerning labor legislation became more bitter. After a report by an investigating committee revealed the shameful conditions existing in the mines, an act was passed in 1842 prohibiting the employment of women and children underground. In 1844 women were included in the protective factory legislation, and the half-time system for children was enacted. The Ten Hours' Act of 1847 further limited the working day, and other protective legislation in 1864 and 1867 regulated industrial establishments generally. The Shop Acts of 1912 and 1913 provided codes governing the hours of employment and holidays in retail establishments, applying to men as well as women. In 1908 eight hours was made a day's work for coal miners, and in 1917 this maximum was reduced to seven hours. More recently, the "rationalization" of the British mining industry, as codified in the Coal Mines Act of 1930, provided for a uniform seven-hour day throughout the industry after July, 1932.

No part of the new legislation marked a more definite departure from *laissez-faire* principles than that which established a minimum wage. The object of such legislation was at first merely

the protection of the standard of living of the workers in the so-called "sweated industries," such as the making of clothing. Here the workers were poorly organized, weak in bargaining power, and very often were paid much less than a "living wage." In 1909 Parliament provided for the establishment of Trade Boards, each composed of an equal number of employers' and workers' representatives, with power to fix the minimum rates of wages to be paid within a trade. In 1912 a similar system was established for coal mining, which was not considered a "sweated industry." Finally, in 1918, at a time when prices and the cost of living were unusually high, the Minister of Labor was given power to bring under the operation of the Trade Boards Act of 1909 any trade for which he thought wage regulation was needed. Trade Boards were thus established in many industries just as a prolonged period of industrial depression was setting in, and when the general tendency of both wages and the cost of living was downward; so that in some instances the attempts of the Boards to bolster up the rate of wages only made it more difficult for employers to continue producing and for workers to hold their jobs. A very able Departmental Committee reported in 1921, "There is substance in the allegation that the operations of some of the Boards have contributed to the volume of trade depression and unemployment." The same committee recommended that the Trade Boards system be applied only to trades in which wages are exceptionally low. In the "sweated industries" the principle of the minimum wage has clearly justified itself. Applied indiscriminately, however, English experience indicates that it may easily do more harm than good.

Another important type of regulation necessitated by the extensive use of machinery relates to the liability of employers in cases of accidents to their workmen. Under the common law a workman had been entitled to damages when injured as a result of negligence of his employers, but he was expected to assume the "ordinary risks" of the business. When the injury was caused by the workman's own negligence or by the negligence of a fellow-workman the employer was not held responsible. The Employers' Liability Act of 1880 gave the workman the right to compensation in certain cases where the injury was caused by the negligence of other employees, and in the Workmen's Compensation Act of 1897, a radical departure was made from the phi-

losophy of previous legislation. By it, the employer was made liable for damages even when there had been no negligence on his own part, and even when the accident had been due to the neglect of the injured workman himself, except only in cases of "serious and willful misconduct." In England this principle now applies also to agriculture, shipping, mercantile and domestic employments, while certain trade diseases have also been classified as accidents. In 1933, nearly 7,000,000 workers were included under this protective legislation. The transition from "employers' liability" to "workmen's compensation" was thus a change in more than name. The law of employers' liability had aimed merely at justice between workman and employer. Workmen's compensation statutes were based upon a broader social principle, involving recognition that industrial accidents are part of the price to be paid for the use of modern methods of production; that the worker and his family are ill-equipped to bear the burden of lost earning power resulting from such accidents; and that the duty of providing adequate compensation falls upon society at large, which may properly use the employer as its responsible agent for this purpose.

A newer and enlarged development of the principle of compensation is found in social insurance, which recognizes and extends the principle of social responsibility, but combines with it an insistence upon the equal importance of the development of habits of individual thrift and self-help. The National Insurance Act of 1911 provided for compulsory insurance against sickness and unemployment. The cost of providing "out-of-work" benefits are apportioned among workmen, their employers, and the government. At first, compulsory insurance against unemployment was restricted to certain occupations especially subject to seasonal and cyclical fluctuations, such as the building trades, but in 1920, in a period of severe post-war industrial depression, the system was extended to substantially all trades except agriculture and domestic service, and in 1929 it was further strengthened and enlarged in scope.

Another type of social legislation is that providing for old age insurance, which is becoming more closely associated with unemployment insurance. Old age pensions were first introduced in 1908, and have been gradually extended to apply to any resident of the United Kingdom over 70 years of age who is without other

means of support. In 1925 the Widows', Orphans', and Old Age Contributory Pensions Act provided for a fund made up by employees to insure the widows and orphans of laborers, and to give old age pensions to all over 65 years. Along the same line of relief for the families of workmen, amendments to the unemployment insurance acts in 1925 and 1932 gave extra allowances to dependents.

Social insurance imposes a real burden upon industry and the State, payment for unemployment alone having amounted to £118,000,000 in 1932, nearly half of which came from the Treasury. Opinion in England is divided as to the effects of unemployment insurance. The "dole," as it is generally called, has been criticized as a pauperizing influence which has a demoralizing effect on the working classes. Others regard the provision of social insurance in general, and of unemployment insurance in particular, as an essential function of the modern State. It is generally agreed that the situation in England during the post-war industrial depressions would have been intolerable for working men and their families, without some provision for the relief of the unemployed; and few employers there are now opposed to the principle of unemployment insurance.

3. *Labor organization.* — Modifications in the working of free competition have been effected also by the voluntary organizations of the workers, not only through their influence upon legislation, but also in their direct dealings with employers. The gilds, which played so important a role in the history of the Middle Ages, have been mentioned above. These, however, were not similar to our modern trade unions. They were unions of masters and skilled craftsmen, with interests and aims not at all identical with those of the wage-earners of today.

Combinations of English wage-earners were to be seen long before the beginning of the Industrial Revolution, but none became especially prominent until the nineteenth century; they were discouraged and crippled by legislative restrictions which culminated in a most comprehensive law passed in 1800. This law declared illegal "all agreements between journeymen and workmen for obtaining advances of wages, reductions of hours of labour, or any other changes in the conditions of work." Many workers suffered prosecution and severe punishment under this law, but finally Parliament perceived that it was an error,

and repealed it and other restrictive measures in 1824. After this date trade unions grew in size and numbers at an astonishing rate, despite persisting remnants of legal persecution. These remaining restrictions were especially marked in judicial decisions based upon the then-prevailing legal opinion that unions were "agreements in restraint of trade."

In 1871, a law was passed which declared that the purposes and actions of trade unions were not to be deemed unlawful as being in the restraint of trade, and in 1875 the legal status of trade unions received further recognition by the provision that acts which were "not punishable as crimes when done by one person" should not be indictable as conspiracy "when done by two or more in furtherance of trade disputes." Finally, in 1906, the courts were forbidden to entertain actions for damages against trade unions, and in the same year peaceful picketing was legalized.

While English policy is still favorable to trade unions and collective bargaining, the tendency since the World War has been to curb certain excesses of labor agitation and activities. This is due to the disastrous effects of the general strike of 1926, and to other activities of labor leaders with extreme tendencies. As a result, the Act of 1927 prohibited general or "illegal" strikes, which were defined as those designed to exert pressure upon the government, or in general those whose purposes exceeded the furtherance of ordinary labor-employer disputes. This act also enabled injunctions to be granted against the use of trade union funds for illegal strikes; but in practice the reactionary features of this bill have not been rigorously applied so as to hamper seriously the English trade union movement, especially as the same act placed employers' associations on the same basis as trade unions with respect to methods of warfare. Total membership in over one thousand British unions is about 4,500,000.

4. *The extension of government enterprise.* — The reaction against *laissez-faire* policy is further shown by a growth in the sphere of industry directly managed by the government. We find municipalities operating street railways and furnishing water, gas, and electric light. Municipal enterprise also includes in various places markets, docks, dwellings, baths, race courses, oyster fisheries, slaughterhouses, milk depots, employment bureaus, theaters, and many other lines of activity. The national

government conducts an ever-growing number of activities, such as the postal services, some types of banking, control of all forms of transport and communication, and many forms of insurance and poor relief.

Economic Evolution under Political Democracy

In this chapter a brief sketch has been given of England's attempt to deal with the new set of forces engendered by the Industrial Revolution of 1770–1840. An immense increase in production took place, due in part to competition, but more to the division and specialization of labor and to machinery. However, the distribution of this wealth was so uneven that poverty grew rapidly, even faster than wealth, and the laboring population sank gradually into deeper distress and degradation. The partial benevolence of employers who wished to mitigate this state of the workers was, as a rule, neither welcomed nor tolerated by the competition which had made itself law. Not until this benevolence was formulated, generalized, and enforced by disinterested legislation was the situation appreciably improved. When we hear the principle of "a fair field and no favor" and "no State intervention" advocated by a man strong in the consciousness of personal advantage, we must remember that he is a century behind the times, and that he has neither read nor profited by one of the most doleful chapters in human history. After a trial of free competition and non-interference as thorough as could well be made, the English nation has undeniably returned to the principle of governmental activity — a principle which recognizes as a proper function of the State the protection of its citizens and the furtherance of their material and social well-being, by every law and every activity which offers promise of contributing to that end. All such activity of the State contributing to material and social well-being has also increased freedom as a positive and constructive force; it has promoted the growth of individual powers and enlarged the scope of activity of the average citizen. It has not tended to slavery, as Herbert Spencer long ago maintained that it would; the trend has rather been in the direction of the sort of liberty that is really worth-while: namely, liberty as a power of development and of contribution to the common good. The older legislation restricted the individual; the newer legislation enlarges and equalizes opportunities. It preserves

and fosters competition and individual enterprise by ridding them of some of their unwholesome accompaniments.

These features of economic evolution in England developed, it will be observed, under a government basically democratic in form and spirit, and therefore most flexible in yielding to changes in public sentiment. In a later chapter will be discussed in detail the readjustments and rationalizations in economic development under the other principal modern types of government, the Fascist and Communist.

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CHAPTER III

THE DISTINCTIVE CHARACTERISTICS OF AMERICAN ECONOMIC DEVELOPMENT

The Stages of Economic Evolution in America

The transference of European civilization to America, a process which began nominally at an earlier date but really at about the beginning of the seventeenth century, injected into a primitive wilderness the Old World techniques, customs, and institutions as they had been developed up to that time. In the subsequent struggle with the virgin territories of the New World, industrial development passed swiftly through most of the stages more slowly experienced previously in Europe, and finally outstripped in point of progress that of the older civilization. The evolution of industrial society took place more rapidly, fully, and perfectly in America than it ever had in any European nation, with the possible exception of Germany's spectacular advance from 1871 to 1914. In the New World, industrial evolution escaped the necessity of following many of the tortuous routes traversed by older nations, and instead was able to profit materially by their errors. Broadly, American industrial history presents a compressed and relatively simplified example of economic society's upward climb.

The stages in American productive evolution appeared in the form of successive waves, advancing irregularly from east to west. Thus, but several generations ago, the frontier country was occupied by trappers and hunters; behind them lay great stretches of country devoted almost entirely to grazing; further east, agriculture predominated; east of the Mississippi, commercial activity appeared on a large scale; manufacturing was concentrated heavily in the North Central states and New England; and financial control and the largest industrial units centered along the Atlantic seaboard.

In the next chapter will be sketched the general phases of this development. In this chapter the sketch will be prefaced by a description of the chief peculiarities of American economic evolution, important phases of which have seemed to be indigenous to this country but not to European countries.

The distinctive characteristics of American economic history fall into two general subdivisions, those springing primarily from the social factor, such as race, source, trends, and conflicts of our population components; and those attributable to the physical nature of the territory to which these people originally came. It would be impossible to evaluate accurately the respective proportions of influence exerted by these factors, if only because of their complicated interaction; but it is evident to all that perhaps the major background of our modern economic problems have their roots in these distinctive characteristics of American history, rather than in those of its characteristics which correspond fairly closely to the experience of older countries.

The Human Factor in American Economic Development

An interesting, if fruitless, speculation would be that centering upon the probable trend of American history, had it been initiated and governed by Spanish, French, or Mediterranean peoples instead of by the English. To mention such a possibility throws into sharp relief the tremendous later influence of such accidents as the choice of landing-places by early European explorers, the quality of intellect of Old World rulers, the soundness of advice offered to them on colonial affairs, and the original type differences between settlers of the various nationalities. In the latter phenomenon is found a clue to the dominant influence of the English-speaking peoples in the seizure and successful retention of most of North America. It is generally agreed that the pertinacity and aggressiveness of early English colonists were the deciding factors in their wresting the continent from the roving and scattered French, and the extinction of other rivals for supremacy in the New World.

A. Characteristics of the American people.

Although the land frontier vanished about 1890, the pioneer work of "winning a continent from nature and subduing it to

the uses of man" imprinted itself indelibly upon the early American character. In the beginning, the dangers and hardships of the frontier acted as a powerful selective determinant in molding the character of our earlier immigrants, giving us an unusually restless, mobile, and enterprising people. The process of settlement which followed emphasized these qualities and added others of a kindred nature. The settler, following the trapper and the trader into the wilderness, was forced to depend upon himself for protection and subsistence. He expected little aid from the government, was impatient of legal restraints, and was skeptical of their potentialities, either for good or for evil. The process of settlement merely confirmed the American in that excessive individualism which has made him independent and resourceful, but which has also rendered him partial to the spoils system, tolerant of "lynch law" and labor violence, and indifferent to waste and weakness in the administration of his government.

At the same time the great natural wealth of our land has led many to regard nature rather than thrift as the source of wealth, to exploit rather than create. As a people, Americans have been optimistic but careless, generous but wasteful, buoyant but boastful. Industrially, they have risen eagerly to their exceptional opportunities, playing the commercial game at times with excessive energy and devotion; but they have often emphasized quantity rather than quality, product rather than finish. They "lead the world" in the use of labor-saving machinery, but waste human and natural resources, a natural consequence of circumstance and custom in their peculiar evolution.

With the passing of the frontier, and with the changing character of later immigration, portents of a change in the national spirit have appeared. The average American of today cannot match his forefathers in shrewd and rugged independence, nor, apparently, does he desire to do so, as phases of relief and other problems have indicated in recent years. As a nation, the United States has matured, with consequent apparent loss of youthful vigor.

B. Population and the standard of living.

Growth of population. — The mere fact of growth in numbers of the American people has been as striking as it is familiar. In 1640 there were about 25,000 persons, including Indians, in

British North America; about 260,000 at the end of the seventeenth century, according to Bancroft; according to the same authority the million mark was reached in 1743; and in 1790 the first federal census showed a population of 3,930,000 in the United States alone. During the next hundred years, the population doubled about every twenty-five years, and although the rate of increase declined after the Civil War and was lower in the decade from 1910 to 1920 than it had ever been before, the rate of growth is still remarkable, having been 13,740,000 in that decade. The population of the continental United States in 1920 was 105,711,000; in 1930, 122,775,000, an increase of 17,064,000; and in 1937, it was estimated at 129,328,000.

Despite a large increase, the population of this country has not multiplied more rapidly than have the means of subsistence. This does not mean that everyone receives enough to live in comfort; on the contrary, great masses of people live in poverty. Neither does it mean that society as a whole produces enough to support everyone in comfort, if the wealth produced were equitably or evenly divided. Such a division of the aggregate national income in 1928, a year of unusually high incomes, would have given each individual about $745.[1] In normal and subnormal years, the average income is much smaller; therefore, abundance for all has yet to be achieved. However, with respect to the trend over long periods, say during the last century and a half, there can be no doubt that wages and real incomes have risen in this country, as compared with other countries.

The dismal predictions of overpopulation which were so common in the first half of the nineteenth century have been signally discredited as to their applicability to the American people. The exploitation of national wealth, the improvement of business organization, and the invention of labor-saving machinery have enabled production to more than keep pace with population. There is no danger of a "devastating torrent of children." On the contrary, a more serious problem is found in the steady decline of the birth-rate. According to some eminent authorities, the race is dying at the top. The ablest and most successful

[1] President's Conference on Unemployment (Herbert Hoover, Chairman), *Report of the Committee on Recent Economic Changes*, McGraw-Hill Book Co., New York, 1929. Estimate of A. Copeland, National Bureau of Economic Research, Vol. II, p. 757. The figure is for "disbursed" or "realized income."

people have the smallest families; and this constant sterilization of the ablest stock, in the opinion of such authorities, is second in importance to no other problem which Western civilization is called upon to solve.

According to Dr. O. E. Baker and others, there should also be considered the implications inherent in a stationary or declining total population within the near future. The present birth-rate is insufficient to maintain an increasing population, and this together with the cessation of immigration would probably mean a stationary population about 1950, and a declining population thereafter.

As this change in trend takes place and gradually progresses, our whole industrial and commercial organization will undergo alterations in composition to accommodate the rising average age, the increasing proportion of the aged, and the probable swing toward conservatism in customs and tastes.

In contrast, other authorities maintain that this "race suicide" has been going on for centuries, that it has not in the past, and will not in the future, lower the vitality or general efficiency of the race. These writers view with complacency the ceaseless sterilization of the upper classes, maintaining that the process stimulates the ambition of the abler members of the lower classes by "creating room at the top," and that the non-self-perpetuating character of the upper classes is not a cause for regret. Social heredity and not personal heredity, the preservation of sound morals, wholesome customs, and habits of social helpfulness, together with the opening up of new opportunities, are the important facts according to these writers.

Second only in importance to "race suicide," and intimately connected with it, is the problem created by the "rush to the city." In 1790 only about 33 Americans in every thousand lived in a city of 8,000 inhabitants or more; in 1930 approximately 482 in every thousand lived in a city of comparable size, while in 1935 about 55 per cent of our population was classified as "urban."

The mere facts in this connection are familiar to everyone and need no elaboration. Their importance lies in the fact that the drift to the city is apparently universal, that it has been going on for centuries, and that it greatly complicates and aggravates the social, industrial, and political problems of our time. "Race suicide," for example, is probably more attributable to social

conditions created by city life than to any physical incapacity of the women of this generation to bear children. The evils commonly charged to the factory system are due as much to city crowding as to the factory system itself. Whatever plans of reform for existing evils may be devised or championed, this deep-rooted and persistent force which draws to the city so much of the best talent and ability produced by the rural districts must be taken into account.

The recent reversal in this trend toward urban concentration, since 1930, is probably not permanent, and has occurred to some extent during past depressions. The persisting attractive forces in urbanization have not been dissipated, and will probably reappear.

C. Immigration.

The problem of immigration has been extremely important in recent years, and has always been a matter of concern to the government and citizens of the United States. In fact, it compelled the anxious attention of the English authorities in early colonial days, and of our Revolutionary statesmen. "Governor Thomas Dongan, in 1685, made a report to the King of England full of dreadful forebodings as to the future of the 'Royal Province' of New England unless the tendency to overcrowding were promptly checked." . . . "George Washington and Thomas Jefferson are both recorded as opponents of an unrestricted policy of immigration, and it may be safely asserted that no considerable period has elapsed since their day without producing eloquent and forceful advocates of a rigidly restrictive immigration policy." [1]

The chief causes of the immigration flow, which has colored American economic life to a remarkable degree, have always been the urges for personal betterment in various ways felt by the migrating groups. Religious persecution, unbearable economic conditions, and political tyranny in their former homes have been the motivating factors in immigrant flow into this country. To these repulsive forces may be added the lures of high wages, California gold, free land, and other attractions offered them by successive phases of American development.

The encouragement and favorable reception offered to immi-

[1] Robert Watchorn in *The Outline*, Vol. LXXXVII, p. 900.

grants by America have usually been attributed to the desirability of cheap labor in large quantities for the development of rich natural resources, and the financial and speculative gains from immigration to transport agencies and land dealers during the great expansion of the nineteenth century. Without these floods of the foreign-born, industrial and agricultural expansion would never have attained its highly-developed status, nor would many of the great railway systems have been constructed when they were.

Early immigrants received but little tangible assistance in their attempts to migrate, but, with increased recognition of their desirability for reasons indicated above, there developed many avenues of easier approach sponsored by public and private agencies, so that it became increasingly easy for them to come to America during the nineteenth century.

In the beginning, of course, even the original settlers were "immigrants"; but American self-consciousness did not develop to the point of recognizing the "alien" aspect of the movement until about fifty years ago. From the Revolutionary period until 1825, the annual immigration averaged less than 8,000 persons. From 1825 to 1875 the flow increased to an annual average of about 100,000. The Irish famine of 1845, the California gold discoveries in 1848, and the European political upheavals in 1848 and 1849 were leading factors in a sharp acceleration in immigration, which reached a peak of 428,000 in 1854. Receding thereafter to a low point in 1862 of less than 100,000, the volume of immigration rose again to peaks of 460,000 in 1843, 789,000 in 1882, 1,285,000 in 1907, and 1,220,000 in 1914. Since that date, annual immigration has declined rapidly, and has now practically ceased; in fact, there was an excess of departures over arrivals during the period 1931–1936.

More important by far than the matter of mere numbers of immigrants have been their sources and characteristics. Concerning this problem, the movement may be viewed as divided into two periods, before and after 1880. The immigrants for a century before that date had originated, almost exclusively, in the British Isles, Germany, and Scandinavia, and had constituted a group predominantly similar to and easily assimilable with the native American stock. About 1880, immigration changed in composition, and became predominantly of the

Mediterranean and eastern European type, which, while undeniably possessing many virtues, has never been easily assimilable, economically, racially, or politically. This alteration in composition has added immeasurably to national economic problems in the immediate past.

The chief opposition to permitting freedom of entry has been voiced by native labor, which conceived its standards of living and wage scales to be menaced by "cheap" new labor supplies. The aspect of recent difficulty in assimilation, with consequent danger to American ideals of freedom and democracy, has also engendered frequent agitation for restrictions upon the flow by groups not related to the labor movement.

Within the present decade the policy of restriction has triumphed over the older approval of the "melting-pot" theory, partly as a result of (1) the enormous number entering this country in the first decade of the twentieth century (nearly 8,800,000 as compared with 3,844,000 in the decade 1891–1900), (2) the increasing prominence which immigrants have come to play in the radical labor and political movements here, (3) the growing conviction among thoughtful people that the "open door" does not permanently relieve overpopulation in foreign countries, and (4) very largely because of the change which came over the character or source of our immigration in the last quarter of the nineteenth century.

Some measure of restriction had been practiced for many years. Our laws excluding diseased, criminal, immoral, feeble-minded, and indigent persons had been made stricter from time to time, and their administration had become more efficient. In addition to the exclusion of these undesirable classes, Chinese labor had been excluded since 1882, and in the same year all those "likely to become public charges" were debarred from entry. "Contract laborers" (those entering with contracts for jobs already arranged by American employers) were excluded in 1885 and 1889, largely as a result of the influence of the Knights of Labor. Later enactments in 1891, 1893, and 1907 developed the policy of excluding the unfit (mentally, morally, physically, and economically). The act of 1917 marked the transition from exclusion of the merely undesirable to the general restriction of immigration, at the behest of American labor, alarmed for its competitive status, and of American patriots, uneasy upon the score of ten

million unassimilated aliens within our borders. This act included the famous literacy test, with other fresh obstacles to the influx.

A final major step in the restrictive process was taken in 1921, expressing the background of popular fear of the impending floods of immigrants from war-torn Europe to the relatively prosperous United States, which was heightened by the post-war unemployment already becoming a pressing national problem. The act of 1921 shifted from the previous policy of specific tests and restrictions to an added absolute limit expressed in a total quota figure of 150,000 permissible entries, apportioned on the basis of national origins as determined by the census of 1910. Designed initially as a temporary measure, the principle was permanently embodied in the act of 1924 and later legislation. In 1924, the quota was changed to 2 per cent of the total of each nationality as shown by the 1890 census, a step which favored the northern European countries as against the southeastern; Japanese immigration was forbidden. The basis was changed in 1927 to that afforded by the 1920 census, and in 1929 to that as shown by the "most recent" census.

Although none of these laws contained definite restrictions on immigration from neighboring American countries, there has been a growing inclination to restrict entries from Canada, and especially those from Mexico.

Surveying the whole history of immigration, certain general conclusions may be drawn.

1. In the past, our traditional policy had been "to improve rather than to check immigration," and to hold out the promise of political equality and of economic opportunity to all. Since the World War this policy has been substantially reversed.

2. This country has nevertheless exhibited a marvelous ability to assimilate rapidly people of diverse races, tongues, and religions; to amalgamate them, and to stamp them with the characteristic qualities of the American.

3. It has failed, however, to amalgamate the negro and the oriental; the incidental factors of color and race create especially difficult problems. This makes it undesirable that Japanese, Chinese, or Hindu laborers should settle here in large numbers, particularly in separate "colonies." Despite the high qualities of some of these peoples, it is conceivable that if unrestricted

they might come to this country in sufficient numbers to create a problem similar in character and gravity to the negro problem. Where there is real probability of such a result, exclusion must be practiced even if it is attributed to race prejudices rather than to the clannishness and exclusiveness of the immigrants.

4. The same considerations hold for any class of immigrants, who have been found by experience not to be readily assimilable into American life. The presence of large numbers of persons of some one foreign nationality might create racial antagonism where a smaller number of persons of the same nationality would be received and absorbed into the general population almost without friction. That the "new immigration" described above has given rise to new and more difficult problems of assimilation is proved beyond doubt by the necessity for multiplication in recent years of agencies for educating, distributing, and "Americanizing" immigrants. Social, educational, and religious organizations have busied themselves with different phases of this work. In some cases, undoubtedly, "Americanization" work has been undertaken in a spirit of snobbishness and of intolerant pride in our own institutions, with little respect for the valuable elements in the customs and the traditions of the foreign-born. Yet behind these efforts to Americanize the immigrant lies the fundamental and inescapable fact that the ideals of political democracy and equality of economic opportunity are devoid of meaning except for a fairly homogeneous people, knit together by a common interest in the problems of the local community and of the nation. There is fairly clear evidence that in the period from 1880 to 1920 the country was admitting aliens more rapidly than they could be absorbed into the national life, and that they have accumulated in undistributed pools. Today many of the problems found in cities such as New York and New Orleans are in large part due to the failure of these aliens to become assimilated.

5. Our attitude, undoubtedly, should take into account not only our own interests, but those of the world at large. There is no clear evidence, however, that economic pressure in overcrowded countries is relieved in the long run by emigration. In all too many cases emigration merely makes room for a correspondingly more rapid expansion of the population left at home, and there is little substantiation of the theory that our "open door" would contribute much to the solution of overpopulation in other countries.

D. Slavery.

The early colonial period was marked by a persistent and hampering dearth of hired labor, due to sparse settlement and especially to the independent character of the settlers, who preferred enterprise upon their own accounts to working for wages from others. The savages already here had never become willing or satisfactory workers even when thoroughly subjugated by the whites. As a result, the exploitation of natural resources and the utilization of capital were forced to proceed slowly because of the scarcity of labor.

Initial attempts to supply the shortage finally resolved themselves into two distinct methods, the importation of "indentured servants" and the use of slaves. Some of the former were voluntary, those who had sold themselves and their services to shipping and labor contractors for a fixed period after their arrival, in return for ocean transport and the necessaries of existence. This class was never very large in numbers, and passed very quickly from the "labor" to the "independent" category. Other indentured servants were those who were kidnaped, or released from prison for transportation to the New World. These also melted quickly into the general free population by flight to the frontier or by process of manumission, and afforded no satisfactory solution to the labor problem.

Negro slavery began in this country about 1619, in Virginia. Increasing very slowly until about 1650, and thereafter very rapidly until the Revolutionary period, the negro slave population became a crucial problem in the young republic. Its importance and desirability as a labor force began to decline after the Revolution, because of its increasingly evident loss in economic usefulness. Slavery was almost a dead issue until it was revived and emphasized by the invention of the cotton gin in 1793, which made cotton the basic Southern crop and necessitated large supplies of cheap field labor. The slavery question thereafter overshadowed most of the other political issues, and culminated in the Civil War, of which it was the primary cause.

The economic aspect of the negro problem today arises largely from the ignorance and economic weakness of the negroes, and the exploitation to which these characteristics render them vulnerable; from their concentration in certain Southern and urban districts; from their dependence upon credit advances; from

their inability readily to take up diversified farming; and from the social pressure which restricts them to a relatively small number of occupations outside of farming districts.

This state of affairs is due in some degree to the economic inertia and certain racial traits of the negroes themselves. Yet considering the circumstances attendant upon their introduction into this country, it would be more surprising if they were *not* economically backward. But yesterday a slave, it is inevitable that the negro should be forced to traverse in the forward path the intermediate steps of serfdom, peonage, and tenancy before becoming a farm operator and owner. No class can be metamorphosed in a day from the status of slavery to that of free contract, by legislative enactment alone. Present conditions are also due in part to discrimination against the negro. Trade unions, for example, have generally been disinclined to receive negroes as members with the same status as white workmen; and many occupations are closed against them for no better reason than that of color.

Some improvement of their relative status has been observed during the last thirty years, partly through the assistance of philanthropists, but chiefly through the efforts of their own leaders. General and industrial educational opportunities for this group have been thrown open with increasing benefits to them; and the Northern and urban trends of negro population have resulted in some improvement in their diversification of occupations and consequent economic progress. Although this improvement was interrupted by the depression of 1929–1933, which was felt most severely by the social stratum of which the negro comprises a large proportion, it is to be hoped that the future will see further progress in these directions.

The Geographical Factor in American Economic Development

Although comparatively the passive factor in shaping our evolution, the physical nature of the American continent has also exerted a most powerful controlling influence upon that development, because of the human tendency to select the easiest alternative in struggles with environmental obstacles. Thus, the coastal contour, the location of waterways, the location and character of the Appalachians, and similar physical facts all had a visible bear-

ing upon early settlement, the character of industry and commerce, and the general direction of the streams of economic effort.

We shall not attempt to enter upon a discussion in detail of this theme, but confine our remarks under this head to three of its features, distinctive and important in American economics and politics.

A. Natural resources and their utilization.

Following closely in importance upon national characteristics in the control of American economic development have been the natural environment and enormous material resources of our country. In a compact area four-fifths as large as all Europe, and exceeded in area only by Russia, China, Canada, and Australia, the United States is endowed with nearly every variety of soil, minerals, and climate. Its coast-line is well-indented with fine harbors, especially in the east, and good internal waterways reach far inland to nearly every major section. Originally vast areas were covered by magnificent forests; and its water-power resources are such as to permit world leadership in actual horsepower development. In point of physical resources, the United States is the most nearly self-sufficient nation in the world today. In area, fertility, and climatic range, American agriculture is so rich and diversified as to be capable of supplying practically every known important farm product except the tropical varieties, and in abundance more than equal to domestic needs for them. The same is true of mineral and timber resources, with only a few exceptions.

The very extent and richness of its natural heritage has apparently induced until recent years a prodigality in its utilization without parallel in other countries. Denudation of forest lands, followed by soil erosion on a vast scale, is now a serious problem. Anxiety becomes more definitely expressed every year respecting our vanishing mineral reserves, especially of oil and coal. Fortunately for future generations, however, the agitation for conservation of these resources initiated by Theodore Roosevelt appears to give promise of checking at last the waste so rampant during the nineteenth century.

B. The public domain.

Of the 2,972,582 square miles of territory in the continental United States, about three-fourths belonged to the federal govern-

ment at one time or another, and was scattered throughout all portions of the country except the original thirteen states, Texas, and parts of Kentucky and Tennessee. This great empire, unsettled until about a century ago, with its minerals, water power, and forests, has had a profound effect on the economic development of the nation. Just *how* the fact of national ownership of these resources has affected development is not so clear. The government from first to last has pursued no definite policy respecting its disposal, unless we consider as a policy the customary purpose of quick disposal to settlers without regard to revenue derived from it. From the Revolutionary period until the passage of the Homestead Act in 1862, most of the public lands were sold for an average of not more than $1.25 an acre.

For a full century after the first important land act in 1785, land was not only cheap and abundant, but of a character well-adapted to the agricultural use to which the farmers were accustomed. For this reason it seemed both natural and inevitable that the sons and daughters of the farmers, and also great numbers of immigrants coming from the countryside of western Europe, should prefer to settle on the agricultural frontier of the United States. It was a lure of the kind and quality to attract people whose lives had been bound closely to the soil. There was always the hope that this magnificent land, as found throughout the Mississippi Valley, would have a substantial future value. A hope or belief of this sort was bound to have a retarding effect on the early industrial and urban development of the country. It has been often said that the laborers were more independent and more self-respecting because of the opportunity of settling on free, or almost free, land. This may have been the case, yet few laborers, such as the usual type of city workers or mine laborer, availed themselves of the opportunity of going west and becoming farmers.

The existence of the public domain and the manner in which it was made available to settlers were of primary importance in delaying for a generation or more the development of factories such as would have sprung up had the cheap lands of the West not been available. There was a great increase of population, but the West absorbed it. But so far as the independence of labor is concerned, it has been much greater since the disappearance of the desirable free land than it had been. While laborers

were relatively few and widely scattered, their organization into effective fighting groups was well-nigh impossible. Later the power of labor became a reality; yet, instead of holding over the heads of the public a threat of leaving the job for free land, as they are alleged to have done from 1800 to 1890, labor has developed a strength quite beyond anything attained by it during the period of free land, through its ability to limit its numbers, and through its power to strike.

From the standpoint of agriculture itself, the existence of the great public domain has been of doubtful advantage. Unquestionably, many farm families were settled on land suited to their needs. These families and their descendants have mostly remained on the land, to the advantage of themselves and the industry. On the other hand, the vaunted distribution of land among farmers, on the theory of widespread ownership of land with its many advantages, seems not to have worked out as was hoped. The land was widely distributed in the first instance, but it failed to remain in the hands of the recipients and their heirs as contemplated. For instance, in Illinois, more than 30 per cent of the farms were operated by tenants in 1880, only eighteen years after the passage of the Homestead Act, while in Iowa, a newer state, almost a quarter of the farms were so operated. No matter how land is once distributed, the subsequent ownership will shape itself according to the forces in operation.

The settlement of the Middle West at a rate exceeding the requirements of the country, and even those of the world markets, resulted in a period of distress for farmers in the older sections of this country, in England, and in other parts of Europe. Neither did the pioneer farmer himself prosper in any marked degree. The land which he obtained for little or nothing was not a farm. In making a farm out of it, clearing, breaking, fencing, and building had to be done, at a great expenditure of labor and money, the latter being so scarce as to delay the making of needed improvements for a generation or so. The farms in most cases eventually became valuable, but not until long after the period of free land.

The public domain has not altogether disappeared, although titles to most of it has passed into private hands. Literally, the national parks, national monuments, state parks, and other

state lands are a type of public domain. Even county parks and county-owned and town-owned land, of which there is a rapidly growing amount due to tax delinquency, is in a sense public domain. However, "public domain" usually means the land belonging to the federal government.

It is frequently proposed that the rest of the public land be given to the states in which it lies. In any event, the remaining public lands, some 200,000,000 acres in the continental United States, is of negligible value except for grazing purposes. Dry farming may be practiced on a small part of it, and irrigated farming on a still smaller part.

Land is still easy of access from the standpoint of the tenant, and plenty of it is for sale, but free land no longer offers an outlet for a restless population. "Winning a continent from the wilderness" had a romantic lure which was a great factor in developing the American character, but it was never a boon to agriculture as a whole, after the development of facilities for growing and transporting an excess of food products from the frontier to the centers of population. Some grew rich from the increases in the value of land during the years of pioneering, but in general the rewards were small and hard-earned.

C. Sectionalism.

The widely-divergent physical characteristics of the various regions which comprise the American nation have confronted its inhabitants with basic grounds for intersectional strife, as well as having provided them with an unsurpassed range of opportunities for the extraction of wealth from Nature. Until about 1890, this strife appeared in its bitterest manifestations along the line of the ever-receding frontier of settlement, and also along the Mason-Dixon line. While all of these difficulties have appeared in the guise of social and group animosities, they originally proceeded primarily from the natural and geographical aspects of the country, rather than from social differences among the inhabitants.

From early Colonial days, the settlement and development of the Atlantic coastal territory and the westward movement have been accompanied by clashes of interest between the first-settled or conservative areas and the new and undeveloped or radical fringes. The East, from the earliest period to the present time,

has generally stood for the preservation of property and capital, high industrial tariffs, "hard money," and related aims; the Western fringe for personal freedom, "rugged individualism," inflation, and the like. As the tide of settlement moved westward, the newly settled areas have gradually altered their points of view in the direction of greater conservatism, and in degree roughly in proportion to the elapsed period of time since initial developments began within them.

The second great sectional fissure has been that dividing the interests of the North and South. Here again, and even more prominently, the physiography of the regions has played a deciding role. The Northern settlers, hemmed in between the coast and the Appalachians, and debarred from profitable farming by the relatively poor soil, turned naturally to ocean commerce, fishing, lumbering, and manufacturing. In the South, the rich soil and favorable land contours were conducive rather to a continuation of the European feudal system which took the form of plantation culture. The initial gap between Northern and Southern cultures widened rapidly with the more intensive development of both, culminated in the Civil War, and even yet has not entirely vanished.

Thus the problems of sectional differences have taken the form of the contemporaneous existence of successively varying industrial stages, from East to West, and a basic difference of cultures and land tenures between North and South. We may safely ascribe nearly all of our major political-economic struggles, in some degree at least, to these sectional divisions: the tariff, slavery, silver, greenback, immigration, and many other issues.

With the passing of the land frontier toward the close of the nineteenth century, and with the increasing degree of industrialization of the South and the Middle West, these lines of cleavage have lost most of their original significance. Today, sectional struggles have become transformed in part into issues which spring more directly from class interests and prejudices than from natural regional characteristics, although those arising from the latter have not entirely disappeared. Their guise is still similar to that of the last century — we have the debtor-creditor, silver, inflation-deflation questions; the agricultural-manufacturing discord; the "big business" and labor disputes; and many others, echoes of earlier days. But the basic lines of

cleavage today are to be found in the less tangible lines of division between class and class, or class and mass, and not between fairly clearly-defined geographical areas.

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CHAPTER IV

THE EVOLUTION OF AMERICAN INDUSTRY

In the preceding chapter, attention was confined to certain fundamental and peculiarly American conditions which have influenced the economic development of this country. They form the essential background and setting of the picture. When the details are filled in, however, the general effect is very similar to that produced by the description of English industrial development given in Chapter II. There are many incidental differences, of course, but in general the United States has fallen heir to many of the problems and maladjustments of European industry.

The Colonial Period: Mercantilism

In accordance with mercantilist views of colonial relationships, English statesmen of that period looked upon a colony as a community whose function was to supply raw materials for the industries of the mother country, purchase its manufactured goods from the mother country, and transact all other trade possible through the mother country. Pursuing this general policy, England gave bounties for the production in America of raw materials such as flax, indigo, naval stores, barrel staves, and the like, but restricted manufacturing proper by prohibiting, for instance, the erection of mills for slitting or rolling iron, and furnaces for making steel. Colonial commerce was also fettered in a variety of ways. As for labor in the New England colonies, laws were repeatedly passed prohibiting idleness, fixing the hours of labor, and prescribing rates of wages, with appropriate penalties for workmen who took, or employers who paid, more than the legal rate. In the Boston Town Records of 1635, for instance, is found this resolution: "That Mr. William Hutchinson, Mr. William Colborne and Mr. William Breton shall sett pryces upon all cattel, comodities, victuals and labourers and Workmen's Wages and that noe other prises or rates shal be given or taken." But the restrictive laws, in general, failed dismally. They were

severe, but poorly enforced; nor could they prevail for long against the colonists' independence and the natural opportunities for easy evasion in the new country.

English colonial policy of this period was not malicious so much as it was mistaken. The important points to be borne in mind are that it did not seriously hamper the development of American industry in general, and that it did strengthen and stimulate in the American people that spirit of individualism which the industrial opportunities of the New World and the frontier conditions of the time combined to create. As a consequence the new nation was pledged to the doctrine of individual liberty, and its Constitution contained specific guarantees of personal freedom not only in matters political, but in industrial and social relationships as well.

The Revolutionary Period

Just prior to the outbreak of the Revolutionary War, American industry was still in a primitive stage, in which the extractive industries were relatively the most advanced. Large quantities of lumber and timber products were exported to Europe. The fisheries were prosperous, and shipbuilding had reached a really remarkable stage of development; in 1775 "nearly one-third of the tonnage afloat under the British flag had been built in American dockyards." Agriculture, however, was carried on in the most wasteful and unscientific way, owing to the cheapness and fertility of the soil; and manufacturing was still in the "household" stage. In the middle and New England colonies, spinning and weaving and the manufacture of shoes and food products were carried on within the home. The typical farm household of this period constituted almost an independent economic unit, raising or making what its occupants consumed, and buying little save salt and a few necessary iron implements. Of manufacturing for sale and export there was little worthy of mention. The absence of adequate means of transport was largely responsible for this state of affairs, as the roads were little more than widened Indian trails. Years later, when conditions were considerably improved, the roads were still so poor that "Madison spent a week going from New York to Boston by stage, while the cost of cartage of a cord of wood for a distance of twelve miles was three dollars."

The Industrial Revolution in America

The Industrial Revolution in America was relatively sudden and its consequences momentous. The Revolutionary War, by interrupting trade with Europe, had thrown the American people upon their own resources. Goods previously imported had suddenly to be manufactured at home, and a large number of new industries sprang up within a short period. The idea became prevalent that the new nation must make itself independent of the Old World industrially as well as politically. State governments endeavored to foster the new industries by protective tariffs, and this policy was later continued in a moderate form by the federal tariff act of July 4, 1789. Prizes were offered by various societies, and even by certain state governments, for the introduction of the machines and methods which were revolutionizing industry in England. Attracted by one of these offers, Samuel Slater, "the father of American manufactures," who had been apprenticed to an English manufacturer of cotton machinery and was particularly familiar with Arkwright's machines and processes, came to this country in 1789, and in the following year started the first American cotton factory at Pawtucket, Rhode Island.

The factory system really secured its foothold in America in the period from 1806 to 1815. The Embargo and Non-Intercourse Acts of 1807 and the War of 1812–1814 suppressed trade with Europe and compelled America to do its own manufacturing. Large amounts of capital previously employed in trade and shipping were diverted into manufacturing. Its growth during this period of isolation was extraordinary: in 1804 only four cotton mills were in operation, but "in 1807 there were fifteen cotton mills running 8000 spindles and producing 300,000 pounds of cotton yarn annually. In 1811 there were eighty-seven mills operating 80,000 spindles, producing 2,880,000 pounds of yarn per year and employing 4000 men, women, and children. In 1815, 500,000 spindles gave employment to 76,000 persons, with a pay-roll of $15,000,000 per year." [1] When resumption of peace with Great Britain subjected the new American industries to the fierce competition of the older English manufacturers, many failures and much suffering ensued, as a consequence

[1] Katherine Coman, *Industrial History of the United States*, The Macmillan Co., New York, 1912, p. 184.

of which increased protection was granted in the tariff acts of 1816, 1824, and 1828. A little later, in the Middle Atlantic and New England States, the period of factory production had fully arrived. A separate class of wage earners was appearing, who were especially partial to new arguments concerning wages in the tariff discussions. Workingmen's parties were organized; strikes and trade unions multiplied, and the latter were combined into municipal and state federations. In the thirties and forties radical reformers linked the "white slaves" of the Northern factories with the negro slaves of the South, and worked for the abolition of both "wage and chattel slavery." The factory town and the city slum became recognized economic conditions, and the evils of the latter were multiplied by the heavy immigration after 1845. Before the middle of the nineteenth century the American Industrial Revolution was in full sway, and the economic triumph of modern capitalism was assured in this country.

The Industrial Revolution produced far less suffering and want in the United States than in England. The evils attributable to the Industrial Revolution in England had been of two kinds. One arose from the rapidity and magnitude of the industrial change itself; the other was due not to the change but to the system under which the new industry was conducted, the system of capitalistic industry working in a regime of practically unregulated competition. In the United States the evils resulting from transition alone were slight. Manufacturing industries were scarcely started when the spinning jenny, the power loom, and the steam engine were introduced, so almost from the beginning the factory system seemed the natural one. Thus, the change which in England was a revolution was in America a comparatively peaceful evolution, a process of construction with little destruction. For a time even those evils inherent in the system itself were mitigated and disguised by the immense natural wealth of this country, the ease with which land could be obtained and the unusual mobility of the workers which permitted them to take quick advantage of the unusual opportunities open to them.

These ameliorating agencies served, however, only to check and delay, not to destroy, the evils implicit in the new industrial system. Extremes of wealth and poverty and the bitter alienation of social classes have subsequently become so marked as

to arouse the apprehension of all thoughtful men. Labor riots necessitating military interference testify to the fact that we have not escaped the friction that inevitably accompanies the spread of machine production.

The development of agriculture.

The presence and power of economic forces which softened the asperities of the new industrial system in America are revealed notably in the history of American agriculture. In England, it will be remembered, the changes in agriculture intensified the abuses of the Industrial Revolution, led to the consolidation of small farms into large landed estates, and placed the conduct of farm operations in the hands of tenants. None of these things transpired in the United States. The great area of unoccupied land served as an outlet for rapidly-growing population, so that between 1850 and 1900 the number, acreage, and output of American farms increased more rapidly than did the population; during this period over half a billion acres were brought under cultivation. Farms were not consolidated, but instead were further broken up. Even today more than half of the farms are operated by their owners, and until the 1920 census more persons were reported to be employed in agriculture than in any other branch of industry.

Between 1850 and 1900 the proportion of all "breadwinners" engaged in agriculture fell from 63 to 36 per cent; in 1920, it was 26 per cent, and in 1935, about 25 per cent. Great improvement in agricultural methods and machinery made it possible for this relatively smaller farm population to satisfy the demand for agricultural produce even more completely at the end than in the middle of the nineteenth century, with a surplus for export. The machine power introduced into farming more than replaced those persons and their descendants who abandoned agriculture.

As the country matured, some of the agricultural conditions which had accompanied the Industrial Revolution in England appeared also in America. The twentieth century ushered in a new era in American agricultural development. With the introduction of improved methods, which required increasing capital expenditures, the costs of acquiring and maintaining a farm have greatly increased. The result has been a lower rate of growth in the number of farms in operation, and a propor-

tional increase in the number operated by tenants rather than by owners. Between 1900 and 1920 the number and acreage of farms increased far less rapidly than the population, and between 1920 and 1930 actually decreased absolutely from 6,448,343 to 6,288,648 in number, while the "capital structure" necessary for each was rising steadily. The average value of a farm trebled from 1900 to 1930, rising from $2,895 to $7,614. The number of farm tenants continued to increase slightly during this period, while that of owners declined in 1930 to 58 per cent as compared with 65 per cent in 1900. These trends were reversed during the five year period following 1930. The number of farms increased to 6,812,350 in 1935; the average farm value decreased to $4,825. The number of farms operated by owners increased nine per cent. The total improved farm acreage has steadily increased from 508,073,007 acres in 1920 to 986,550,328 acres in 1930 and to 1,030,814,370 acres in 1935.

Manufactures.

In agriculture, the passage of time did not bring about as highly-capitalized a form of production as in manufacturing. The typical farm represents a comparatively small investment and is tilled by its owner; there is no sharp distinction between employers and employees; and passage from the wage-earning to the farmer-employer class is still common. In manufactures, practically all these conditions have been reversed since the end of the eighteenth century, and it is the tone of the manufacturing industry rather than that of agriculture which represents the keynote of modern economic development, because agriculture is constantly decreasing while manufacturing and allied industries are constantly increasing in relative importance. In 1790, 87.5 per cent of the working population were employed in agriculture, and the manufactured products of the country were valued at only $20,000,000. Half a century later, in 1840, 77.5 per cent were employed in agriculture, 16.5 per cent in trades and manufactures alone, and the products of the manufacturing industries were valued at $483,000,000. Fifty years later, in 1890, 35.7 per cent were in agriculture, and 24.4 per cent in manufacturing and mechanical pursuits. In 1930, 21.4 per cent were in agriculture and 28.9 per cent in manufacturing and

mechanical pursuits, while in 1929 the value of manufactured products had reached the enormous sum of $70,435,000,000.

The change in character of industry has been even more striking than its growth and expansion. In the first place, capital and machinery, particularly the distinctively American automatic machinery with its interchangeability of parts, have become increasingly prominent. In 1850, for instance, $559 worth of capital was invested for each wage-earner, while in 1919 the average amount of capital per wage-earner was $4,935,[1] and has increased steadily if less rapidly since that time. In the second place, the organization of industry has changed, so that individual ownership and ordinary partnership are being replaced by the corporate form. At the beginning of the nineteenth century, corporations were very uncommon in the manufacturing industries, although they were not unknown in commerce and banking. Today incorporated companies dominate nearly all lines of industry except agriculture, retailing, and personal service.

This change in organization has been a powerful factor in destroying the former personal relationship between the owners of capital and the wage-earners who man their plants, and has thus helped to widen the breach between capital and labor. It has also contributed greatly to the concentration of industrial control. Law and custom in this country have very generally combined to make the small stockholder in the larger corporations a virtual nonentity in so far as practical participation in the management of the corporation is concerned. Incorporation, then, instead of introducing a greater measure of real industrial co-operation, and thus democratizing industry, has too often turned out to be an ingenious device by which energetic promoters borrow or secure the spare savings of the community on the most flexible terms and with a minimum of responsibility. Bonus and other plans to spread the ownership of stock among employees and customers developed rapidly prior to 1929, but they were confined to a comparatively narrow field. In general, the corporation has worked toward the concentration of industrial control.

[1] Owing to variations in the definition of "capital" and other changes, the statistical comparisons made in this and the preceding paragraph can be accepted only as revealing broad tendencies and not as accurate measurements.

Other forces, moreover, have been working toward industrial concentration, the most powerful of which, perhaps, has been competition itself. In the nineteenth century the competition among rival manufacturers was bitter and practically unrestricted. Tied down to their large investments of fixed capital, they were compelled to stand and fight without quarter. In every such war the number of combatants tends to decrease; as old rivals are killed off, the successful acquire greater skill and greater power in the conflict. With the passage of time greater and better equipment is required to afford any hope of a successful struggle; and some of the contestants, learning prudence from the battle, combine to increase their fighting power. The inevitable result, whether through simple survival of the fittest or through combination, is a marked increase in the size and importance of the industrial unit.

This trend is not altogether in the direction of increasing size and shrinkage in number of units. The size of the average establishment decreases frequently when the industry suffers a decline, and small establishments such as automobile repair shops multiply rapidly in some lines for other reasons. But these counter movements are comparatively unimportant, and census statistics understate rather than overstate the growth of large-scale business. The consolidation and integration of industry and related questions are discussed at greater length in Chapter XXVI.

Transport and railways.

The industrial concentration mentioned above does not necessarily lessen competition at all. It merely puts the business into the hands of increasingly powerful rivals among whom competition may be all the more bitter because of their size and power. In the principal transport industries experience has demonstrated the prevalence of another principle: competition has failed to protect the consumer, and the progress of consolidation has operated to emphasize the monopolistic character of the industry.

The history of transport in this country since the Revolution falls into three stages. The "turnpike period" extends from 1790, the year in which the first turnpike was constructed, until 1816, when steam navigation upon the Ohio River became fairly regular. The second stage, the "river and canal period," ends after the panic of 1837, and is marked particularly by the intro-

duction of steam navigation on the Hudson (1807), the Ohio and Mississippi rivers (1808 to 1817), and the opening of the Erie Canal in 1825. The last stage, the "period of the railway," extends from about 1842 to the present time. In contrasting these periods, it is not meant to suggest that canals were not built before 1790, or that turnpikes are not important at the present time. As a matter of fact, a canal was built in Orange County, New York, as early as 1750; and the last few decades have witnessed the rapid and costly improvement of our highways. These "periods" merely indicate the kind of transport facilities which at different times have figured most prominently in the public eye.

In the development of the railway, certain approximately definite stages may also be distinguished. Between 1830 (when the first important railway was opened — the Baltimore and Ohio) and 1840, the railways were short local lines used in large degree to supplement or "feed" carriers on the rivers and canals. In the next period, 1840 to 1870, many railways were built, and the process began of "linear consolidation" — the linking together of local companies into through trunk lines. By 1869 both the New York Central and the Pennsylvania had effected through connections with Chicago. In the same year, the completion of the Central Pacific and Union Pacific railways linked the Pacific Ocean with the eastern railways, and the continent was spanned.

The period between 1870 and 1890 is marked by three striking developments. First, it was a period of feverish expansion, during which the railway mileage of the country increased from 52,000 to 160,000 miles, or more than 200 per cent. Secondly, the completion of several through routes from the Atlantic seaboard to Chicago brought about a period of destructive competition, which led to discrimination and rebating in through traffic and the overcharging of local or noncompetitive traffic. "Wherever competition appeared, discrimination follows; and in the scramble for business the stronger shippers were favored at the expense of the weaker. Where there was no competition, the public felt that they were being oppressed by a monopoly, to make up for sacrifice rates elsewhere — a feeling which was intensified by the absentee ownership of the western roads." [1]

[1] H. C. Emery, in *The Cambridge Modern History*, The Cambridge University Press, Cambridge, 1907–1925, Vol. VII, p. 706.

Thirdly, this condition of demoralization led to a double reaction. The railways sought to restrain competition by the creation of pools and traffic agreements, while the people sought to protect themselves through legislation and the creation of railway commissions. The Interstate Commerce Commission was established in 1887 as a result of these chaotic conditions.

The period from 1890 until the World War was marked by an unprecedented degree of combination among competing roads, and by a growing belief that the railway industry is inherently monopolistic and must be subjected to public control. Thus, by the time the control of the magnificent railway system of this country (greater in extent than all the railways of Europe combined) had fallen into the hands of a comparatively small number of groups, the people themselves had perfected administrative machinery strong enough, it was hoped, to hold the monopoly in check. Until lately, strong efforts were made to preserve competition in the railway industry, but it has been found that in the main, reliance must be placed upon regulation rather than upon competition. The amendment of the Interstate Commerce Act in 1906, the Transportation Act of 1920, and the Emergency Railroad Transportation Act of 1933 constitute public recognition of the fact that the old problem of private competition versus public regulation has given way to the new problem of public regulation versus public ownership, with apparent emphasis to date upon the former alternative.

It would be almost impossible to exaggerate the part which transport agencies, particularly the railways, have played in the economic development of this country. Ours is a country of "magnificent distances," and because of this fact it was necessary that superior means of communication and transport should have been early introduced, if the country was to be held together. After the Revolutionary War there was real danger that the settlers west of the Alleghenies would be completely alienated, and George Washington was quick to realize this fact. "The Western settlers," he wrote to the governor of Virginia, "stand as it were upon a pivot. The touch of a feather would turn them any way. They have looked down the Mississippi until the Spaniards, very impoliticly, I think for themselves, threw difficulties in their way; and they looked that way for no other reason than because they could glide gently down the stream, without

considering, perhaps, the difficulties of the voyage back again, and the time necessary to perform it in; and because they have no other means of coming to us but by long land transportations and unimproved roads."

This danger was averted by the building of the Cumberland Road, the introduction of steam navigation on the Ohio, and the completion of the Erie Canal. Later the use of the Mississippi and other natural channels of communication gave promise of linking the Middle West more closely to the South than to the northeastern States, and therefore of giving the South a preponderant influence in the inevitable struggle over slavery. This problem, however, was solved by the railways, which, unlike the rivers, ran east and west rather than north and south. Thus the railway was a strong factor in the preservation of the Union. Since the Civil War, western settlement has followed the railway. It has been the great pioneering agency of the last half century. The rapid settlement of the West was due, in the main, to the striking progress of railway transport in the latter part of the nineteenth century.

In the development of our transport facilities the states have been from the very first the active partners of private enterprise. Not only have they built roads, canals, and railways themselves, but they have subsidized with prodigal liberality the private companies which engaged in similar enterprises. Of the total state debts — $170,800,000 in all — contracted prior to 1838, $60,200,000 were chargeable to canals, $42,870,000 to railways, $52,600,000 to banks, $6,500,000 to roads, and $8,500,000 to miscellaneous purposes. After the panic of 1837 there was little direct construction of internal improvements by government agencies, but the national, state, and local governments vied with one another in assisting private companies by exemptions from taxation and by grants of land, money, and credit. How much these subsidies amounted to we do not know, but the aggregate must have been enormous, judging from the statistics of land grants. "During the twenty-one years between 1850 and 1871, at which time land grants were discontinued, more than 159,000,000 acres were placed at the disposal of railroad corporations by the federal government and 55,000,000 by the state governments."[1]

[1] E. L. Bogart, *Economic History of the American People*, Longmans, Green and Co., New York, 1935, p. 614.

In their origin and genesis, therefore, as well as in their essential nature, the railways are quasi-public institutions.

The labor movement.

Capitalistic industry has shown a tendency to pass from a period of cut-throat rivalry to a period of combination amounting in many cases to monopoly. A similar phenomenon is discernible in the labor movement. Before 1820 only a few trades were unionized. Between 1825 and the panic of 1837, however, unions multiplied rapidly, and efforts were made to unite the scattered "locals" of separate trades into broader national unions, and to confederate the unions of different trades into municipal and district federations. These efforts were only partially successful, however, and it was not until after 1860 that permanent national unions were established. Not until the organization of the Knights of Labor in 1869 was a fairly permanent national federation created. The Knights of Labor reached the zenith of its power about 1886. After the panic of 1893, its place was gradually taken by the American Federation of Labor. The American Federation of Labor is a "union of unions," including within its ranks practically all of the "organized" labor in the United States, with the important exceptions of the four Railroad Brotherhoods, the Communist unions, and the Industrial Workers of the World. At the end of the nineteenth century the membership of the American Federation of Labor numbered about 250,000. By 1920 it had grown to an enrollment peak of 4,000,000, but suffered severely from the depression of 1921, dropping off to 2,800,000 in 1926, rising slightly during the boom years until 1930, then falling to about 2,100,000 in 1933. Membership in 1936 exceeded 3,500,000, comprising 32,625 local unions.[1]

There are at least four periods distinguishable in the history of American trade-unionism; the *germinal* period, 1789–1827, the *revolutionary* period, 1825–1860, so-called because of the close connection in this period between trade-unionism and movements for political and economic reforms; the period of *nationalization and federation*, 1860–1897; and the period of *collective bargaining*, 1898 to the present time. We speak of the present period as the period of collective bargaining because of the rapid expansion

[1] Cf. below (p. 777) for a discussion of the split between the American Federation of Labor and the industrial unions.

of unionism, and the establishment of many new national or district systems of collective bargaining after the industrial depressions of 1893–1897 and 1929–1933, systems which have finally received government recognition in the Wagner Labor Disputes Act of 1935; and because it is only in recent years that employers and the general public have recognized that the unions are here to stay, and must be regarded as a permanent institution with which employers of labor must bargain, whether they like it or not.

During the World War, unions in the United States made larger gains than in any other comparable period. Labor was scarce, and, for a while, the need of it was imperative. Monetary inflation in the war and post-war periods led to a rapid rise of profits, prices, and the cost of living. Labor was in a position to bargain effectively for the maintenance and even for the betterment of its own relative position. The federal government, forced by the urgent necessities of the war, led the way in recognizing the right of labor to organize and in dealing on its own account with the representatives of labor organizations. The American Federation of Labor, for the time being, was brought into close co-operation with the government. Agreements were entered into by its constituent unions, covering the conditions of employment on government work. The taking over of the railways by the government opened the way for an advance of unionism among all grades of railway workers. The War Labor Board exerted pressure upon private employers to recognize the right of labor to organize and to bargain collectively. Beginning with the Adamson Law of 1916, establishing a basic eight-hour day for train operatives, the government put its influence on the side of shorter working hours and higher wages.

Whether as a result of war experience or of more fundamental forces, the American labor movement shows marked differences since the war. The avowed aim of the trade union before the war was a complete combination of the workers in a given occupation or industry. This policy, aggressively pursued, engendered a counter movement among employers, which expressed itself concretely in the widespread organization of *employers' associations* with equally aggressive aims and policies. They organized along the same lines as trade unions and fought them with their own weapons, matching the lockout against the strike, the black

list against the boycott, and the open shop against the closed shop.

Employers have also turned their energies toward the development of employee representation plans, "company unions" and "shop councils." The trade unions on their part insist that industry shall assume some real responsibility for unemployment, and that wages shall be increased with the improvements in productivity of labor. These and related topics will be treated at greater length in Chapter XXXIV.

State regulation of industry.

The growing interference of the State in the conflict between capital and labor leads naturally to the general subject of the State in relation to industry. When the American colonies were planted, mercantilism was the dominant political philosophy; but mercantilism gave way in the eighteenth century to a philosophy of individualism, under the combined influence of the reaction against the restrictive policies of the British government and the natural antipathy of a frontier community to legal restraint. The triumph of individualism as a philosophical system came at the critical period when state and federal constitutions were in the making, and it thus became embodied in the organic law of the nation, giving constitutional sanction in very general terms to the theory of *laissez-faire*, and establishing constitutional freedom of contract, in accordance with which adult men were left "free" to work as long as they "pleased" (or were compelled), for whatever wages they were "pleased" (or forced) to accept. Under the influence of these doctrines the courts at first felt obliged on constitutional grounds to annul such wholesome regulations as laws prohibiting payment of wages in store orders, and statutes limiting the hours of labor of men in bakeshops and other exhausting occupations.

The free-trade and individualistic tendencies of the Revolutionary period gave way gradually to a constantly-growing program of state interference. The doctrine of *laissez-faire* was never adopted here in its entirety, and we have moved farther and farther away from it with the passing of succeeding generations. State interference began with the adoption of a tariff act in 1789, "for the support of the government, for the discharge of the debts of the United States, and the encouragement and

protection of manufactures"; reached almost a maximum in the Embargo Act of 1807; showed itself in the policy of internal improvements and government aid to turnpike, canal, and railway companies; brought us the great mass of labor and factory legislation which has been adopted by so many states since the Civil War; led in turn to the Interstate Commerce Act of 1887, the Sherman Anti-trust Act of 1890, the National Meat Inspection and Pure Food Laws; the Clayton Anti-trust and Federal Trade Commission Acts of 1914, the Transportation Act of 1920, and the Railway Labor Act of 1926; and much of the "New Deal" legislation relating to the regulation of banking, securities and security exchanges, labor relations, and other fields of economic activity.

The general character of the constitutional sanction of *laissez-faire* noted above has been supposed by many to have been *the* American theory; in reality, *laissez-faire* has never prevailed in the United States. In some sectors, it has never been applied, in others only nominally. Federal and state legislatures seldom hesitated to interfere with the workings of "free competition" on behalf of agriculture and industry in early days, and more recently on behalf of labor and other politically powerful groups; while the courts today, with some important exceptions, are revealing the effects of the "liberal" tendencies of the Supreme Court, as initiated in the dissenting opinions of the late Justice Holmes and supported by Justices Brandeis, Cardozo, and Stone. There are, of course, many recessions yet to be observed in this tendency toward the modification of *laissez-faire;* but in contrast with the spirit of legislation and adjudication of earlier periods its existence stands clearly revealed today.

Excessive competition among laborers, which forced them to accept work under conditions destructive of physique and morals, led to the factory acts, prohibition of child labor, and limitation of the hours of labor of women; excessive competition leading to the adulteration of products and their manufacture under insanitary conditions necessitated the meat inspection and pure food laws; the excesses of competition among corporations, leading to combination and oppressive monopoly, brought us the anti-trust acts and regulation by state and national commissions. The rapid adoption of workmen's compensation laws by the state governments in recent years is evidence that we have entered a

period in which state interference and control is recognized as socially desirable in some fields. Whether the individualistic character of industrial society endures or disappears, individualists and socialists alike are now agreed that the state must interfere at times. As a prominent English statesman expressed it, "We are all socialists now," although he merely meant by this statement that the passive theory of government had been wholly discredited.

Up to the present time state interference has had as its principal aim the improvement and preservation of competition. The conscientious manufacturer who would not poison consumers for the sake of swelling his profits, the high-minded employer who would not "sweat" women and children merely to reduce his cost of production, the delicately scrupulous shipper who would not undermine a rival by forcing a common carrier to pay him rebates, have all suffered as much from the abuses of competition as has the general public itself. Industry under the competitive regime is a rough game played for high stakes, and if it is to be played fairly, there must be intelligent rules of the game and an umpire powerful enough to enforce them upon all contestants alike. If the manufacturers of Massachusetts are prohibited from employing children under fourteen years of age while those of South Carolina are not, competition becomes unfair, and the victory goes to the contestant guilty of the greatest number of fouls.

State interference has had as its principal object the maintenance of competition upon a higher and more wholesome basis. But this has not been its sole objective. The regulation of railway and public utility companies aims not to bolster up or preserve competition among such companies, but to introduce regulated monopoly as a substitute for competition. It is possible that in certain lines of industry regulated monopoly may prove on the whole more beneficial than regulated competition. Whether it is desirable, whether in the long run it will be possible, to maintain a competitive as distinguished from a socialistic regime of industrial society, may be said to be the supreme economic problem of the twentieth century.

(*References follow Chapter V.*)

CHAPTER V

THE NEW INDUSTRIAL REVOLUTION: 1900–1936

The period of the Industrial Revolution in England (from 1770 to 1840) has been discussed in Chapter II. It was remarked in that chapter that the changes of this period swept away methods of production that had been used for centuries, and caused profound modifications in the social structure. Mention was made of the mechanical inventions, such as the flying shuttle, Hargreaves' "Jenny," the application of steam power to spinning, and the power loom of Cartwright. Changes in agriculture and the growth of the factory system, with their consequences, were discussed, and were followed by a brief survey of the attempt to deal with the new forces by legislative developments, labor organization and regulation.

Effects of the new technology.

The changes which have come since 1900, as a result of new inventions and processes, have been most disturbing, and have produced as sweeping changes in the general economic philosophy and attitude toward government and legislation as those which took place between 1770 and 1840. As Professor Ernest L. Bogart has remarked: "The new technology, based upon the use of electricity, the internal combustion engine, the radio, and the airplane, is inaugurating economic and social changes even more momentous than those introduced by the invention of the steam engine one hundred and fifty years ago." [1] Still more significant is the fact that the changes have come in one-half that period of time, because social and individual adjustments are made especially difficult by the rapidity of change. As Adam Smith and his successors pointed out, economic forces are always at work, independent of governmental agencies and conscious reform efforts, which tend to remove or offset the evil effects of inno-

[1] E. L. Bogart, *Economic History of the American People*, Longmans, Green and Co., New York, 1935, p. 731.

vations. This observation appears to apply fairly well to long-run effects, and to society in general; but it seldom holds true for the short-run, and for the particular groups of individuals immediately affected. Thus the railways eventually gave employment to thousands, where the stagecoach sustained but a few; but the social benefit derived by the transition was of small consolation to the owners and workers in the supplanted industry. *Now, the shorter the period within which marked changes in production appear, the less smoothly and more painfully these "natural" or "self-adjusting" economic forces appear to operate, and the more difficult it becomes to make the readjustments essential for continued prosperity and employment.* If the changes which have taken place since 1900 had been spread over a period of 70 years instead of 35, our economic problems today would be far easier of solution.

Innovations in transport and communication.

Considering in detail some of the more important innovations of the twentieth century, most of which may be grouped generally under the headings of transport and communication, we may assign a leading place to the development of the internal combustion engine, with its derivatives, the automobile, the motor truck, and the airplane. Motor transport has played a major role in the troubles of the farmer. In 1900, horses and other draft animals consumed the agricultural produce of some 25 million acres of land, or about 7 per cent of the cultivated land in the United States; the motor transport industry of today consumes mineral, not agricultural products almost entirely, and thus has virtually eliminated an important segment of the farmer's market.[1] Again, the competition of the motor truck is generally recognized to have been one of the chief causes of railway embarrassment and bankruptcies in the last decade, and thus to have contributed materially to the losses of investors in railway stocks and bonds. The capital losses of the railways, and indirectly of savings banks, insurance companies, and other financial institutions, which had invested in their securities has run into the billions, and has caused widespread impoverishment to their owners and creditors.

The rapid and spectacular development of aviation in late years, while it has not yet challenged the security of the older

[1] R. T. Ely and G. Wehrwein, *Outlines of Land Economics*, The Macmillan Co., New York, Chap. VI, p. 67.

transport agencies, provides us with an excellent example of the trend toward high-speed tempo in travel, communication, and freight movement. Expected future expansion in this field may exert a depressing influence upon existing urban land values, and therefore upon many holders of mortgages and other real estate securities. Urban land occupies only $\frac{1}{16}$th of 1 per cent of the land area of the United States, yet accounts for about 30 per cent of total land value.[1] The effect of faster and more convenient transport, as embodied in the airplane and the automobile, will be to increase by leaps and bounds the potential supply of urban land, without any similar increase in the demand for its use. There is some reason for apprehension, as expressed in H. G. Wells' forecast of the gradual disappearance of urban land values, on account of the improvements in aviation.

While the development in the use of the internal combustion engine is probably unsurpassed in significance among the factors enabling the spread of power and manufactures, a related and almost equally important development has been the improvement in methods of power transmission over high-tension wires and through pipe-lines. The use of water power and steam which characterized the first Industrial Revolution localized and centralized very largely the production of that period. Today, the ability to develop power and transmit it for increasingly greater distances has a scattering and decentralizing effect upon industrial location, and it is just in its early stages.

> "Since electricity is by now available almost everywhere, the coal regions are largely ceasing to attract industry, a tendency which would be even more marked if coal were not also changing from a fuel to a raw material. The availability of power resources, which for long had been a prime consideration, is thus becoming almost negligible as a factor in location; this is perhaps the most far-reaching change which has thus far taken place in the geographical distribution of industry." [2]

Closely allied with the evolution of physical transport and power are the rapid strides made in the field of communication. Since 1900, the telephone has entered nearly all American homes of those above the lower income groups; and even the latter are not debarred from its benefits, because of the accessibility of the

[1] *Ibid.*, p. 159.

[2] Hermann Schumacher, "Location of Industry," in *Encyclopaedia of the Social Sciences*, The Macmillan Co., New York, January 1933, Vol. IX, p. 587.

pay-station telephone. The acceleration and widened radius of communication afforded by the increase in number and intensity of use of telephones has more than kept pace with other forces, all tending to "shrink" economic distances and areas.

The rise of the radio from its status as a scientific toy in 1920, through the luxury class to its present ranking among the necessaries for millions of homes, gives promise of being one of the most significant phenomena, in its social and political implications. Plato and Aristotle visualized the ideal state as one small enough to permit all citizens to be reached by one voice. The radio enables all interested listeners within the largest countries to hear the addresses of kings, presidents, and dictators; while within the near future television may furnish us also with visual exposition by important personages. Tomorrow, great speeches and spectacles may be seen and heard by a world-wide audience.

The older and better-established agencies of news dissemination have retained their importance and improved the quality of their service, having absorbed the initial threat of radio and transformed the latter into a supplementary rather than a directly competitive source of public information. The gathering of local and world-wide news and its presentation to readers by the newspapers and news-reels has attained a high level of efficiency, enabling a vast majority of the people to familiarize themselves with important events wherever they occur and within an incredibly short interval of time. The power of the press has increased with the extension of its ability to serve in this way, both as a medium for free expression of opinion in some countries, and as a tool for controlled propaganda in others; and because of this influence it must be accorded commensurate consideration in any sketch of current economic development.

Adjustments in the machinery of finance.

The machinery of finance, correlating and pervading the other sectors of progress, has not lagged behind in the matter of refinement in method; rather has it been first to use and develop many of the newer devices referred to above. Important inventions nowadays require, for most effective utilization, large amounts of capital; and despite temporary inactivity on the part of bond houses and stock exchanges during the depression, signs are not

lacking of their ability and efficiency in gathering such large blocks of capital on short notice.

Despite the present wariness of the small investor, induced by the shattering of his hopes in 1929 and later years, it is evident that the day has passed when trading in bonds and stocks is confined to the wealthy few. Since the pre-war period, investment and speculation have entered a more democratic phase, in which the individual contributions of the many have eclipsed in importance the influence of the smaller group. Probably initiated by the widespread distribution of Liberty and Victory bonds during the war years, the financial initiation of small investors has progressed steadily, with the aid and encouragement of "New Era" bond and stock salesmen.

Acceleration in physical production.

In the field of physical production, we find an interesting illustration of the accelerating tempo of industry, in the figures of iron and steel production. Long considered the basic indicator of industrial activity, these data clearly support the general statement that industrial production in the United States has been increasing at a sharply rising rate, such that in many lines post-war volume alone exceeds in quantity the total volume of production in all the years before the war. This does not apply, of course, to all items of physical production; but it does apply to many leading components of that total. For example, the production of pig iron in the United States in the twenty years from 1916 to 1935 exceeds in tonnage the total production in the hundred years from 1815 to 1915. A similar conclusion may be drawn from steel production data, which have replaced pig-iron production statistics as the most significant measure of physical production. The cumulative total of steel produced since 1918 exceeds that of the preceding century. Experts believe this to be true also of the use of copper, petroleum, and other important products.

Since iron (especially in the form of steel) provides the structural basis of industrial civilization, this sharply rising trend in its utilization affords us an excellent measure of the rapidly increased rate of use of such related fundamentals as machine tools, mechanical inventions, and plant construction.

Some striking parallels are to be seen between the periods of the industrial revolutions of the eighteenth and twentieth cen-

turies. The first period was interrupted by the Napoleonic Wars, with their devastating effects in England and to a lesser degree in this country. Production was speeded up to meet war needs, only to collapse in the succeeding primary and secondary post-war depressions of 1819–1821 and 1826–1830. In the midst of the twentieth-century period, there was the World War, with similar aftermaths of depression from 1920–1921 and 1929–1933. Striking differences between the two eras are also evident, consisting chiefly of the greater intensity, amplitude, and universality of the destructive results of modern warfare; and the shrinkage of nations within themselves in desperate efforts to attain economic self-sufficiency, with the attendant disruption of foreign trade. Unlike the developments in national economies following the Napoleonic Wars, those which have followed the Great War appear to have necessitated not only readjustment and slow recovery, but also to have permanently blocked or shifted many channels of industrial and agricultural enterprise. Thus, Secretary Wallace has estimated that some forty millions of acres will have to be withdrawn from cultivation in the United States on account of vanished foreign demand for our farm products, an estimate deemed most conservative by many.

Much has been said by recent writers on economic and social topics concerning the fact of change, but its significance and rapidity have not received adequate attention, at least as an independent phenomenon. If changes in technology and ways of living take place very slowly, as in China and India for many centuries, and in Japan before the advent of Admiral Perry, there is an almost "static" society. There are rigid lines of demarcation between the classes of the community, with comparatively little disturbance in established social relationships. Contentment and misery, wealth and poverty, are found side by side, just as they are found in a dynamic society, but the contrasts are taken for granted by most, and do not result in recurrent upheavals and readjustments. The prevailing philosophy appears to be acceptance of the state of life to which one has been assigned by the higher powers, and fatalistic inertia merges into actual antipathy to innovation.

In a dynamic and ever-changing environment, the reverse is true. The peasant may become President, the office-boy a captain of industry. Class distinctions lose much of their force,

and the less fortunate groups in the economic scale become more articulate and more assertive. As the tempo of change increases, social and economic disturbances occur more frequently and violently. Thus, a given improvement in industrial technique, if introduced and fully utilized in a short period, will disrupt the economic organization, and bring in its train attempted reprisals of the dispossessed groups, whereas its slower adoption would perhaps have made possible their easy assimilation in other lines. If great changes take place within a 35-year period, instead of a 70-year period, resulting dislocation and confusion is not only twice, but many times as great. This observation leads us to what is here formulated as the "economic law of change."

The economic law of change.

Since man first learned to use the external forces of nature for his own ends, as power applied through machinery, changes in production and physical distribution have taken place with greater rapidity than have those changes in habits, customs, and institutions, which gradually bring about the necessary adjustments of human relations to economic realities. As a general rule, the more rapidly the technological advances are made, the greater are the maladjustments in economic relationships, and the greater is the resulting economic misery. The spontaneous forces relied upon by the older economists to re-establish harmony of interests do operate under modern conditions, but necessarily too slowly for happy solution of our difficulties. It is psychologically impossible for habits and customs to be altered with sufficient celerity, and consequently new institutions have to be created to correct maladjustments.

These institutions must be scientifically and carefully planned for best results — although unfortunately not all of them meet these requirements — and a certain degree of constant social control must also be established and maintained. In this way only can we pass safely from stage to stage of technological development.

Closely connected with the problems presented by this rapidity of change, and its chief outstanding result, is obsolescence, an economic concept of prime importance almost entirely neglected in the past except by accountants. In this connection, we refer not to the ordinary use of the term as in accounting or specialty

merchandising, but rather to its broader conception, including the invisible loss in value of commodities and services, machines and men, processes and locations, because of the (usually unconscious) destructive influence exerted externally by newer developments in allied and alien fields. Each and every invention or improvement in ways of doing things, not only in the strictly economic sphere but in all theaters of human enterprise and activity, immediately sets up a disturbance of greater or lesser magnitude affecting many other fields besides its own. While its ultimate specific effects may be quite unpredictable at the moment of inception, there can be no doubt of the importance of this factor as an ever-present and increasingly obvious element in every part of our economic life. Property developments, business organizations, and even whole consumption-goods industries can no longer count upon fairly well-defined future existences; careful accounting for physical depreciation is often rendered futile by the intangible progress of obsolescence, and buildings, machinery, and personal skills often must be abandoned long before the ends of their originally estimated periods of economic usefulness.

Countless illustrations of the influence of obsolescence may be cited: the well-publicized troubles of the railways in connection with compulsory maintenance of service on non-paying stretches of track; the decline of the New England textile industry; the tyrannical and expensive role of fashion in personal attire, especially for women; the decay of urban "blighted areas" and the decline of others such as New York's Times Square district; and many others which the reader may supply readily from his own experience and observation.

Still more important to the individual in many walks of life is the rate of declining demand for professional and laboriously-acquired personal skills and craftsmanship. It is no longer desirable for a person to expend much time and money in the acquisition of a highly-specialized education, fitting him well for a particular niche in economic life. Except in certain persisting fields, he may find too often that the niche has been obliterated by the shifting sands of fashion or the steady encroachment of mechanical displacement. Herein may be found the explanation of the present trend away from specialization back to broader and more extensive training in fundamentals in modern education

— at first glance an apparent paradox in the face of the advancing complexity of the "Machine Age." The individual must have more than one string to his bow for economic survival today, and finds flexibility and adjustability of more personal value than narrow perfection and polished fitness for a single pursuit; the residuum of "unemployables" which will still remain on our relief rolls if and when permanent prosperity returns will be found to consist largely of specialists and experts for whose peculiar services and long experience no further demand exists. Tragic though such cases may be, such bulwarks as trade-unionism, political pressure-groups, and the like, are but temporary obstacles before the tide of change.

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PART II

PRODUCTION, UTILIZATION, AND EXCHANGE

CHAPTER VI

FUNDAMENTAL CONCEPTS

Introduction.

Passing from the preceding sketch of the historical and evolutionary setting of the field of economics, we proceed at this point to a survey of its fundamental principles and theoretical structure. As the reader pursues the development of these principles, he will find himself dealing with familiar materials already embodied in his everyday experiences, although perhaps enunciated with more care and abstraction. He will find also that the scrutiny of these principles and their interrelationships will reveal to him new meanings and fuller significance as he proceeds.

As a necessary preliminary to the enunciation and explanation of these principles, some attention must be accorded the definition and description of the terms and concepts to be used freely in later discussion. Complete mastery of these terms and of their content and meanings is most desirable as a sound foundation for study, since perhaps a majority of the heated controversies over economic problems may be finally resolved into differences of definitions as used by parties to the disputes. In other ways also the importance of definitions and concepts can hardly be exaggerated. The progress and the problems, the achievements and the mistakes of a science are recorded in its more important concepts and terms. Properly understood, they reflect both the history and the essence of the principles of the science.

The technical terms or labels applied to these concepts occupy an anomalous position in economics; they are at once important and unimportant. When, as occasionally happens, they chance to be embodied in statutes of law, they assume great practical importance. Thus, the political history of the United States was materially altered when, in 1895, the Supreme Court, reversing previous decisions by a majority of one vote, held that a federal income tax is in practical effect a "direct tax." And

since the War, legal cases involving hundreds of millions of dollars of federal taxes have turned, either for or against the taxpayer, upon subtle differences of opinion about the meaning of the words "income" and "capital." Yet neither the practical importance conferred upon these terms by occasional legal use, nor the rapid if irregular advance of economic science, has brought about uniform definition or use of the basic technical terms. A hundred years ago economics or "political economy" as it was then called seemed on the verge of accepting a set of standard terms with meanings varying appreciably from those attached to them in popular speech. That movement towards the adoption of a technical nomenclature still gives to some economic terms a twist or connotation not found in popular speech. On the other hand, popular speech, including both accounting and legal terminology, has contributed little to the standardization of economic nomenclature. It has, instead, inclined to the practice of redefining terms to meet current convenience in applying them to the changing variety of business concepts and conditions. Economists have perhaps erred in trying to adjust their scientific phraseology to the contemporary vogue of changing business speech. As a leading critic pointed out recently, "anyone with scientific training who happens to look into what is called economic science must be struck by the great confusion in regard to fundamental concepts prevailing in that discipline. He will find terms used in an extremely loose way, and he will gradually perceive the appalling fact that there is in economics no such thing as a universally accepted terminology, not even in respect to first elements." [1]

In this chapter we shall attempt to define and explain most of the basic concepts mentioned in succeeding chapters, in such terms as will permit the avoidance of confusion, and provide suitable preparation for the consideration of principles and problems discussed in subsequent chapters.

Traditional terms.

In deference to the traditional terminology used extensively in the past, and still persisting in many books in which several terms are given meaning or emphasis which does not coincide

[1] Gustav Cassel, *On Quantitative Thinking in Economics*, Oxford University Press, London, 1935, pp. 5–6.

with popular usage, we may review first the more important definitions in this class before proceeding to other more careful definitions.

For many years most economic treatises recognized four main divisions of the field, dealing respectively with the Production, Consumption, Exchange, and Distribution of Wealth. From this usage all four terms have come to have a special economic meaning. *Production* means the creation of new or additional utilities, goods, or "values" (the words being here used as equivalents), and includes the processes of transport and marketing as well as those of agriculture, manufacture, and mining. *Consumption* means the use or using up of utilities, for "just as man can produce only utilities, so he can consume nothing more." [1] *Exchange* means the voluntary transfer of wealth or the rendering of personal service in return for other wealth, money, or its equivalent. The term "exchange" is repeatedly used in such phrases as "the exchange economy" in order to contrast the modern system of production for the market with older self-sufficing systems in which each man produced or labored primarily for himself, his family, or his clan. *Distribution* is used in a special technical sense, having no connection with physical transport and marketing, but meaning the division of the product of industry among the various *factors of production.* In actual life the factors or agents of production are almost infinite in number, but to simplify the analysis of production the economist has grouped them in four categories or classes: *labor, land, capital,* and the *enterpriser* or *entrepreneur.* The last, a particularly elusive term, is applied to the ultimate owners of business enterprises, those who make the final decisions and assume the risks involved in such decisions. Corresponding to these four factors are the four basic *shares* in the distribution of the product: *wages, rent, interest,* and *profits.*

With these preliminary explanations, we pass to a group of concepts and terms which require more careful analysis and definition at this stage.

Goods.

The most logical starting-point for the science of economics is found in human wants and in the fact that they are infinite.

[1] A. Marshall, *Principles of Economics,* The Macmillan Co., London, 1920, 8th ed., Vol. I, p. 64.

Satisfy man's primary needs and he seeks luxuries and conveniences. Provide luxuries and conveniences and he will find use for more of them. Commodities and services that satisfy human wants are called goods. It is a term which covers a wide range, including not only the commodities and services produced by man, but land and natural resources as well. Goods include slaves but not free men, partly because we insist in our speech upon emphasizing the vital distinction between man "the end" and goods the "means of ministering to his satisfactions," and partly because free human beings are not exchangeable — a fact which debars them from inclusion with goods in a science which deals so widely with exchange.

We consider next that quality of goods which enables them to satisfy wants.

Utility.

To understand the term "utility" as used in economics, two important facts must be borne in mind. First, utility is the power to satisfy wants, regardless of the kind of wants. Opium has utility as do bread or books, for all three satisfy wants. Economic wants may be serious, frivolous, or positively harmful, but the means of satisfying these wants all possess utility in the economic sense. Second, utility is not a physical or immutable quality of things. Some wants are almost wholly satisfied by services which are performed by physicians, teachers, lawyers, etc. Goods are of interest in the natural sciences chiefly because of their physical properties; but they have no significance in economics unless their properties are the means of satisfying the wants of man.

Therefore, we may define utility as *that quality of a commodity or service which enables it to satisfy human wants,* regardless of their moral or intellectual implications.

Free goods and economic goods.

Wants are very unlike in character. For instance, we seldom even think about our wants for air and water, because of their availability in abundance and without our exertion. Therefore, we seldom ponder our absolute dependence upon them, or the fact that they satisfy our most vital needs. They are *free goods, which exist in quantities sufficient to supply all wants for them without the need for preliminary exertion or economy in their use.*

There exist several categories of free goods, but the list is quickly exhausted; and when it is contrasted with the list of human wants, its relative insignificance is at once recognized. The satisfaction of most of our wants is dependent upon the provision of goods which are not freely obtainable. In contrast with "free goods" these are termed *economic goods — those which exist in quantities less than sufficient to satisfy all wants for them.* We must ordinarily *economize* in their use, because they are not freely obtainable. Usually they are obtained only by exertion, *but it is really their scarcity* compared with the human wants which they have the power to satisfy, and not the fact that they have cost labor, that makes them economic goods. No definite line of separation may be drawn between the categories of free and economic goods. Both groups really represent the extremes of one classification — that of all goods capable of satisfying human wants — and are differentiated only by their relative degrees of scarcity. Furthermore, many goods shift from free to economic categories and vice versa; for example, water for drinking purposes today usually costs something to obtain.

The measurement of economic goods and wealth.

Economic goods and wealth are quantitative concepts susceptible of more or less accurate measurement, depending upon the choice of the characteristic to be measured. For instance, coal has volume, weight, thermal capacity, utility, and market price, among many other physical, chemical, and economic qualities, each of which may be reduced to a common denominator and measured with varying degrees of satisfactory accuracy. Each of these qualities has economic significance; but the distinctive economic measurement is that of the quantity of *utility* possessed by the good in question. Utility is the essential common attribute of all goods, viewed from the economic standpoint.

Articles of wealth are like free goods in that they possess utility, but are unlike free goods in that they are scarce. The distinguishing characteristic of an article of wealth is thus its combined attributes of scarcity and utility.

The simplest and most common approach to the mechanical estimation of the quantity of utility possessed by goods or wealth is that which is expressed in terms of price — *the amount of money*

for which they will be exchanged at a given time and place. The measurement of wealth in terms of money has attained predominance chiefly because of its superior practicability. Goods acquire well-defined evaluations in the daily processes of purchase and sale, which have not yet been superseded by a more universal and convenient method of appraisal. A better measure of utility is theoretically to be desired in view of some of the limitations upon the monetary method, but practical difficulties stand in the way of such a development.

For many purposes we need to supplement mere money measurements and to get nearer to the actual meaning of wealth in terms of welfare and essential comfort. The most practical method of doing this is to measure in terms of the physical quantities of goods rather than in money.

Characteristics of wealth.

We assemble at this point certain considerations relating to the character and measurement of wealth which are particularly important in later mention of the concept. These considerations may be briefly summarized in the statement that *wealth is not synonymous with economic or material social welfare.* Even for the individual, wealth does not necessarily mean happiness — although it is seldom surrendered on that account. Socially, goods and wealth which are utilized for the satisfaction of debased or perverted desires are without question thereby subtracted from the total potential well-being of society. On the other hand, many credit factors on the social balance sheet, very necessary to the general welfare, are not thought of as constituting parts of the stock of wealth — the health, morals, and morale of the people; their physical, mental, and educational standards; their capacity for self-government, their initiative, and the like. Most important of all is the consideration that growing scarcity may increase wealth, whereas it frequently does not make for welfare. If a prosperous competitive business is converted into a monopoly by stealth and illegal devices, its owners' wealth may possibly be increased, but the welfare of the community may be adversely affected. When a free good is transformed into wealth on account of scarcity due to the pressure of population, to the growth of demand as contrasted with available supply, or to other causes, the welfare of the community may be impaired.

Consumption and production goods.

According to our definition above, all goods, free or economic, yield satisfactions to human beings. Considered from the standpoint of degrees of immediate satisfaction, they may be ranged between the extremes of direct and immediate use and consumption, and of indirect and deferred satisfaction derived from them. Again, we can draw no sharp line of distinction between these categories; but, especially in accordance with ordinary usage, we may easily distinguish the two great groups of goods — (1) *consumption goods as those which satisfy directly and at once the desires of those who possess and use them, and which may be partially or wholly destroyed in the process of enjoyment,* and (2) *production goods as those which contribute indirectly to final satisfactions by facilitating the production of consumption goods, but which are not themselves ordinarily used for the direct satisfaction of wants.*

As a group, production goods are usually more durable than consumption goods; they are ordinarily more bulky and costly than the latter; and they differ in other general characteristics — but none of these facts affords a safe test for the proper classification of particular items. The basic distinction between production and consumption goods lies in their relative approach toward the status of capacity to satisfy a final want of the user or consumer. Any particular commodity which has attained the *form* and reached the *place* at the proper *time* for final use may properly be classified as a consumption good, as for example, the pleasure automobile in the driver's possession, the food on the table, the shoes on the wearer's feet.[1] All other goods, including (*a*) those which assist in the production of consumption goods, and (*b*) goods destined for consumption but which have not yet assumed the necessary place, form, and time utilities to permit them to meet and satisfy the user's wants, may therefore be classified as production goods.

Capital.

Since men first discovered the superior productivity to be gained by the use of tools, the productive process has been increasingly characterized by the use of capital as a supplementary

[1] Marshall points out that flour, when already in the house of the consumer for the purpose of cake-making, can be regarded as a consumers' good, "while not only the flour, but the cake itself is treated as a producers' good when in the hand of the confectioner." — *Principles of Economics*, Vol. I, p. 64, note 3.

aid to human labor in the extraction of want-satisfying goods from Nature. Every advance in the development of the productive process has necessitated, or has been based upon, a corresponding increase in the supply of capital; and modern production is absolutely dependent upon its continued existence in suitable quantity.

Capital may be defined as *that part of wealth which is used in the further production of goods intended to satisfy future wants,* including our varied natural resources and man-made wealth so set aside. Its general function is to enable the final volume of production to be increased. It differs from wealth, a more inclusive concept, in that its segregation for the purpose of future production implies abstinence from present consumption by its owners, a characteristic which ordinarily compels payment for its use.

We may distinguish between two general types of capital on the basis of relative durability in form — *fixed capital,* composed of durable goods such as land, buildings, and machinery, which change form and enter the final product chiefly through depreciation and obsolescence, and which require more or less outlay for maintenance or replacement; and *circulating capital,* consisting of material goods moving through or used up within the productive process, such as raw materials, goods-in-process, or finished goods in the hands of manufacturers, wholesalers, or retailers.

The term "capital" covers land, when so used as to satisfy the definition of capital adopted above. Many economists distinguish land from capital on the ground that its distinctive features (comparative indestructibility and the fact that land, as "standing room" is a gift of Nature) are so fundamental that they should be emphasized by different terms. But business and legal phraseology have not recognized this difference in practice; on the contrary, the funds tied up in land are usually regarded by the business man and legislator as a primary form of capital. The owner of land may refrain from using it for his own satisfaction, may devote it to production and the indirect or future satisfaction of human wants, or he may render it practically worthless. Land thus satisfies the definition of capital as given above. The features or qualities which distinguish land from other categories or forms of capital are important; but they can be recognized

as completely when land is treated as a special category of capital as when it is excluded from capital. The persistent refusal of law and business to recognize the distinction which some economists have made between land and capital reflects the truth that land and other forms of capital are in many fundamentals essentially alike. These resemblances are in the aggregate more important than the differences. (The necessity of including land in the category of capital is more fully discussed in Chapter XXII.)

Income.

Capital, in the sense of a *stock* of economic goods existing at a given moment, is commonly differentiated from income, which is defined as a *flow* of economic goods throughout a given period of time. Although both terms deal with wealth, the distinction is necessary for purposes somewhat similar to the accountant's need for both balance sheet and profit and loss statement.

Income, like wealth, may be viewed in several lights — income in the form of goods, income in terms of satisfaction, income in the form of money. We shall use the word income, where not otherwise indicated in the context, in the first sense: as a flow of economic goods and services. The second alternative, that of *subjective* or *psychic* income, would be preferable in many cases if it were susceptible of quantitative measurement. The third, that of monetary income, is very commonly used. Each in turn is best adapted to use in the discussion of different problems, though care must be taken not to confuse them, since different conclusions may be reached depending upon the particular sense in which "income" is used. For instance, a man working under an affable and generous superior receives a much higher psychic income than another with a stingy and tyrannical superior, even if their monetary incomes be equal. Again, the more fortunate worker may have advantages in spending his money wages because of a more favorable locality, enabling him to acquire more psychic satisfactions for the same monetary income.

In connection with the concept and definition of income, the following considerations should be held in mind:

1. Income commonly means receipts which, through the process of exchange, are measured or are measurable in money. It is a pecuniary term and means cash or the equivalent of cash. If a mother teaches her own children, there is no trustworthy

money measure of this service; and it does not constitute income either to her family or to the community in which they live. But if she teaches in a school, both her income and the community income are increased by the compensation which she receives. The household services of wives and mothers working at home do not produce pecuniary income, but if they go out to work for wages, and with such wages hire housekeepers and servants, both the wages they receive and the wages they pay constitute income.

The word "income," like the word "wealth," has no necessary connotation of welfare. A racketeer may acquire a large income. Because income takes no account of personal services which people perform for themselves and little account of the services which they perform for others without compensation in cash or the equivalent of cash, estimates of so-called "social income" are precarious and doubtful magnitudes. They would be swelled enormously if, for instance, money estimates were placed on the domestic work performed without pay by wives and mothers. On these and other non-economic services, of priceless importance, no certain money value can be placed. Ordinarily the social income of two communities, for instance, can be compared intelligently only on the assumption that in each approximately the same proportion of the total goods and services pass through, and are measured by, the processes of exchange.

It is idle to attack the concept of income as inconsistent because it does not fulfill the function of measuring real services or welfare, for which it is not intended. It is probably true etymologically and it is certainly true of prevailing current usage that income is a pecuniary term which implies measurement through exchange. *Its reality and consistency are those of money measurability.* When, if ever, we can measure welfare and service as readily as we can measure wealth and income, the latter concepts will doubtless yield their dominant importance to higher and better concepts.

2. The word "income" connotes a residue — *net receipts.* From gross receipts certain fundamental costs (chiefly the "operating expenses") incurred in obtaining those receipts must be deducted before *gross income* appears. From gross income, overhead costs, general expenses, general losses, and certain other deductions must be made to compute *net income.* While the

exact order for deducting certain of the costs and expenses varies from business to business, and while there is no uniformity in practice with respect to some of the more doubtful items, it is generally agreed that gross receipts is a more inclusive term than gross income, and gross income more inclusive than net income. When a good is sold, its cost of production or acquisition must be subtracted from gross receipts or sales price before gross income appears. In general, only money costs and expenses are recognized in computing income. From the standpoint of welfare and service, this is inconsistent. The explanation is "measurability." The terms "income" and "expense" must be used in practical affairs where measurability is a more important consideration than psychological or ethical consistency. The hangman is not allowed, in computing his income for purposes of taxation, to make any deduction for the "psychic cost and expense" incident to his unpleasant vocation. These costs are real, but as they are not measured or measurable through exchange, they do not reduce income.

3. Certain non-monetary costs are so important that they have come to be recognized indirectly. Thus, the federal income tax regulations allow a special credit or reduction on so-called "earned income," which is defined in the income tax law as "wages, salaries, professional fees, and other amounts received as compensation for personal services actually rendered." Business income is derived in part from property and in part from personal service, and largely because of difficulty in distinguishing precisely between earned and unearned income, the discount or credit for earned income is usually limited to relatively small amounts.

The terms "earned" and "unearned" are misleading in many of their implications, and it has been suggested that they be replaced by the terms "service income" and "property income." Although the two classes of income cannot in practice be separated or measured with precision, the difference between them is real and important. It arises largely from our inability, in estimating service income, to take full account of the expense of rearing and educating the human being for his work in the world. The exhaustion of "human capital" is not treated as an expense in computing net income, whereas the exhaustion of ordinary capital is so treated, particularly in this country.

Pecuniary economics.

In beginning the study of economics, the student is likely to be impressed by the dominating influence that money and prices exert upon economic life and the concepts of economic science.

The economist is not concerned wholly with pecuniary measurements. He constantly tries to delve beneath the money "surface" and to think in terms of material welfare. He is baffled by the difficulties of the problem and his present judgments about material welfare must necessarily be rough and inexact. Economics has naturally been developed most highly in that field where the distinction between wealth and welfare is least important, as in the treatment of money and banking, trade, prices, and allied subjects in the field of exchange. But economics is not merely a study of exchange; in recent years real progress has been made in overcoming some of the limitations of the money measure. If that problem is ever successfully solved, both economic science and economic life in general will be materially altered for the better.

Meanwhile, we must not lose sight of the present fact that both economic life and economic science have in large degree been molded by considerations relating to the practicability of measurement. We pay so much attention to "pecuniary wealth" because we can deal with it quantitatively. If we could obtain some consensus of opinion about moral and esthetic values, real welfare and service, which even approximated in precision and objectivity the measurements of exchange value obtained from the market place, human life would soon cease to be so commercial. Practicability of measurement is a major consideration. Money, notwithstanding all its inconsistencies and limitations, has assumed a position of dominating importance largely because it represents that subtle form of utility or value which, at any given time, can be measured through the process of exchange.

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Diminishing utility.

The starting-point of the explanation of value is the consideration of the essentials of consumption — human wants and their satisfactions. Two factors at once emerge prominently: the *infinite expansibility of wants in number and variety*, and the *satiability of any particular one of them.* As man has progressed from savagery to civilization, the variety of things he desires or considers necessary to his existence and comfort has increased greatly. His interests become more varied, his capacity to enjoy becomes greater, and he lives a fuller and more complex existence. There have indeed been those who would have us "return to nature" and live the simple life, but normally this expansion of human desires with the passing of time appears to be an enduring and dynamic characteristic of the race.

When a specific want is considered by itself, the reverse is true, at least for short periods. Nerves weary of a repeated stimulus, and any attempt to continue indefinitely the enjoyment of the same sensation results in satiety. A popular song stales after a number of repetitions. An apple has differing degrees of utility for anyone, varying from the highest degree, if its owner is on the point of starvation, to distaste, if many of them have just been eaten. *The intensity of desire for additional units of a commodity decreases as successive units of it are acquired.* This "law of diminishing utility," as it is called, rests upon a broader basis of human experience than the mere glutting of the appetite for a particular kind of food, or the growing weariness of nerves under the repetition of a particular stimulus. Most commodities serve a multitude of different needs and purposes, which vary greatly in importance.

On the other hand, with the passing of time the recurrent use of a particular commodity often cultivates a person's taste for it, so that an increased supply is more urgently desired than before. Thus familiarity with good books may increase pleasure in them, and so may intensify the desire to enjoy more of them. And bad habits, like good ones, are prone to "grow on one," as, for example, the use of habit-forming drugs. But these facts do not contradict the law of diminishing utility, which relates only to the consumer as he is at a given time, with whatever possessions, habits, desires, and aversions are his at that time. Men change and their wants change, and the character of a man's consumption

is an important factor in changing his wants; but in this chapter men are considered as potential buyers or sellers of goods *in a given market at a given time*, and for men so considered the law of diminishing utility expresses a fundamental tendency of real significance. Furthermore, the variance of uses and purposes noted above is subject to a tendency which will be considered later in this chapter under "opportunity costs," which serves to level this variance so that the concept of *one value under a given set of circumstances* is still applicable.

Marginal utility.

To say that a commodity possesses utility is indefinite, meaning merely that it is capable of satisfying some want, perhaps important, perhaps unimportant. For any one person different units of the same commodity may possess very different degrees of utility. The utility of the final or marginal unit of a person's stock of a given commodity is called the marginal utility of that commodity to that person. If, for example, a boy has six apples, the marginal utility of apples to him is the utility (or want-satisfying capacity) of the sixth apple. This does not mean the utility of any particular apple, but does mean (if the apples are all alike) the utility dependent on the possession of *any one* apple of his stock of six. This amount of utility will be less than if he had fewer apples, and more than if he had a larger number. So with a householder who has a stock of ten tons of coal for his winter's supply. The tenth ton (any one ton of the ten) is the marginal ton; and the utility it adds is the marginal utility of coal to the householder. Marginal utility is thus determined by the intensity of the want dependent for its satisfaction upon the possession of any one unit of a commodity in a given stock of it. The larger one's supply of a commodity, the smaller in general will be the importance attached to the possession of any one unit of the supply.

It should be noted that this explanation is concerned with marginal utility from a subjective or individual standpoint. The marginal utilities here mentioned become arrayed again in considering the marginal utility of a commodity to the entire mass of individuals (demand side of a market), when we look for the total marginal utility that is represented in the complete series of individual marginal utilities.

Some writers prefer to define marginal utility as the utility of an additional unit of a commodity rather than as the utility of the last unit of one's present stock. In applications of the calculus to economic analysis it is convenient to think of the successive units of increments in the supply of a commodity as indefinitely small. In this case the difference between the "last unit" and an "additional unit" becomes negligible. But for many purposes it is more convenient to think of the size of successive increments as being that of the ordinary units in which goods are customarily bought and sold. In such cases whether the "last unit" or the "additional unit" should be considered the marginal unit depends upon whether the individual concerned is viewed as a possible seller or a possible buyer. If the boy with the apples is weighing the desirability of having yet another apple in addition to his supply of six against that of some peanuts he would have to part with in exchange for it, the marginal utility of apples to him may properly be said to be the utility of the additional apple, for this is the basis of its subjective importance for the purpose in hand. But if he is contemplating the exchange of an apple for additional peanuts, the marginal utility of apples to him depends upon the importance of any one of his six apples. It is always accurate to identify marginal utility with the utility of the last unit of a stock, if we remember that in some cases it means the last unit of an existing stock and in other cases the last unit of a possibly increased stock.

Marginal utility illustrated.

A clearer notion of marginal utility may be obtained by reference to Fig. 1, using for illustration the consumption of water, which has numerous uses of varying degrees of importance. Portions of the base line have been marked off to represent different quantities of water available for man's use. The first quantity, *ab*, is just sufficient for drinking purposes. Suppose this were all the water to be had; there would then be no question of sprinkling lawns or even of bathing under such circumstances

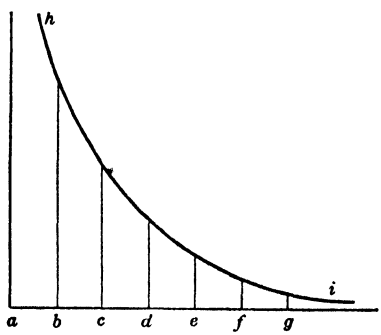


FIG. 1

of scarcity. In this case, the utility of water will be measured by the extent of the service which it renders; since this is the preservation of life, it can be measured only in degrees.

What will be the importance of a portion of water added after the supply needed for maintenance of life? As the additional portion is not needed for drinking but for an inferior purpose, the marginal utility of water will now depend upon the urgency of this less important want. Suppose there are thirty units of water available; this would suffice for all wants, including the sprinkling of lawns and the streets. Users are willing to pay something for more water for such purposes, but how much? As much as when they had only enough to drink? By no means. The next-ranking want on the list is comparatively unimportant, and the increased supply is appraised accordingly. With still more units of supply all wants become satisfied, and the marginal utility of water rapidly approaches zero. As the amount of water is thus increased, the utility falls according to the curved line *bi*, until finally it touches the base line, where the marginal utility of water vanishes.

The margin of consumption.

Consumers continually balance the satisfactions to be obtained from two or more possible purchases. Frequently the process is more or less unconscious, and they simply buy the thing desired more than other things. This process tends to keep different unsatisfied wants in a state of approximately equal intensity. Expenditures are so apportioned that purchasing power will go as far as possible; that is, so that it will provide those things that have the strongest present appeal to buyers. Every person thus has a *margin of consumption*, which is measured by the utility obtained in return for the final or marginal dollar expended for any one of the things that he consumes. If he unwisely spends too much for any one thing, his more important unsatisfied wants for other things press upon him urgently, and he tries to restore balance of equilibrium in his expenditures, or to "bring his margin of consumption into alignment." An individual's margin of consumption depends primarily on his income, but also on his tastes and habits, and upon the relative emphasis which he places upon his present and his future wants.

Future wants.

Not all of the goods for which people strive are wanted for present consumption. They know that they will have needs next month or next year, and attempt to make some preparation for them. These more remote needs appeal to them less vividly than if they were present needs. Nevertheless, a present importance is attached to them, and they are graded among present needs; they enter into calculations when money is spent, and thus modify the margins of consumption. The more adequately we provide for the future, the more we are forced to curtail present consumption. Providing for the future by *saving*, thus compels us to draw in and restrict, *i.e.* to *raise*, our present margin of consumption. Most people have sufficient foresight to make some such preparation for the future. It is easy to foresee certain imperative needs to be encountered by self or by family. These will occasionally bulk even larger in present estimation than some of the less important wants of the moment. While a certain amount of saving would be done without payment, it is a matter of human experience that if saving is to be carried beyond a certain point, it must be given some special premium or compensation. The price paid for saving is *interest*. This enters into our balancing of the future against the present. If 3 per cent interest on savings can be obtained, a dollar's worth of present goods is considered to be evenly balanced today against a dollar and three cents' worth that will become available for consumption a year from today.

Subjective value.

The balancing of prospective purchases or satisfactions which maintains the margin of consumption leads to the concept of *subjective value*. The subjective value of a good is not a definitely measurable quality like weight or extension. It is largely psychological, as the word "subjective" implies, and may differ for different persons. It is, moreover, *relative*. The subjective valuation of things always implies the choosing of certain ones rather than others. In other words, it involves a determination of their comparative importance for one's own purposes. More formally stated, *the subjective value of a good to any person is that person's own estimate of the importance of possessing that good as compared with the importance of possessing other goods.*

But things are not evaluated in the abstract, or in indefinite quantities. In buying coal or sugar or oranges we need not confront the alternatives of doing entirely without such commodities or of acquiring a large supply. If we decide to buy at all, we may buy as little as we please. Choices, in practice resolve themselves into questions of *more or less*. Even in the case of an indivisible good — an automobile, for example — one may choose between having more or less of certain desirable qualities, such as size, power, or attractive finish. Whether the importance attached to the possession of an additional unit of a certain good is greater or less than the importance attached to an additional unit of some other good will depend largely upon the extent to which wants for each of the goods in question are satisfied without the possession of the additional unit. Which good has the higher marginal utility? Subjective value thus involves a balancing or comparison of marginal utilities. In fact, we may say that *the subjective value of a good is the expression of its relative marginal utility.* We have still to consider the massing of these subjective marginal utilities as a preliminary to understanding of value as power in exchange.

The subjective value of a stock of goods.

The analysis of marginal utility tells nothing about the total subjective value of one's whole stock of a certain good. It refers solely to the present subjective value of an additional unit, or the sacrifice that would be occasioned by the loss of a unit. To ascertain the total subjective value of a stock of a commodity, the whole stock must be treated as one large unit, and the amount of satisfaction to be lost if it were taken away must be sought. By this test all air would be found to have an immeasurable total utility, at the same time that the marginal utility of an additional cubic foot would be nothing. Thus subjective value is personal value in use or utility under a condition of *scarcity*, or such limitation of the supply that not all wants can be satisfied.

Sacrifice and cost.

While we are still concerned with the individual or subjective aspects of value we shall develop a principle pertaining to the subjective concept which also constitutes a definite part of value as power in exchange. Subjective value must be influenced by the material cost, time, and effort undergone in producing or

acquiring the good. "The backbone of the science of economics is the balancing of value against cost."[1]

The enjoyment resulting from consumption has to be contrasted with the discomfort inherent in production. Enjoyment diminishes progressively with the continued consumption of a particular good, but the work or inconvenience of producing it becomes more pronounced as the necessary labor is continued. Using the illustration of a man picking berries, the diminishing utility of the berries to him may be represented by the solid line *ab* in Fig. 2, and the increasing irksomeness of picking them by the line *cd*. He would not pick more than *Ox*, because the *x*th berry costs him just as much trouble or annoyance as it yields him pleasure, and any further continuance of gathering fruit would result in an excess of pain. The degree of utility represented by *mx*, then, expresses, at the moment that the *x*th berry is picked and eaten, both the marginal utility and the marginal disutility, or marginal pain or sacrifice.

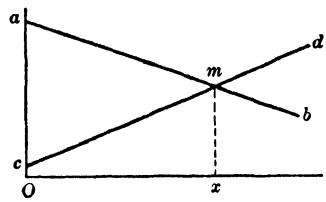


FIG. 2

Each of us has frequently made such comparisons, balancing the utility of further consumption against the disutility of further production. Many persons who work eight hours a day could increase their incomes by working ten hours,[2] but the additional discomfort in their estimation would exceed the enjoyment of the additional fruits of their labor. To be sure, much of our economic activity proceeds unconsciously. We accept a position, comparing its advantages and its disadvantages in a general way with those of other openings, but once we enter upon the work, we accept the daily grind as inevitable. In spending our income we think not of the sacrifices it has cost us but simply of extracting the maximum of satisfaction from it. But we never quite escape from the necessity of balancing costs and efforts against utilities.

Cost of production, expense of production, and opportunity cost. "Cost of production" has been mentioned in the sense of *subjective cost* of irksome labor or reluctant waiting. The term also

[1] J. M. Clark, *The Economics of Overhead Costs*, University of Chicago Press, Chicago, 1923, p. 17.

[2] It is assumed that he is unrestricted by trade union rules, factory, legislative, or other control. A farmer owning his farm and acting as his own boss is a good example.

refers commonly to the *expenses of production*, or money outlay for labor, materials, and other items. Thirdly, it is used in the sense of *opportunity cost*. Suppose that a person is confronted by the alternative of engaging in either of two occupations. He may become a lawyer or he may become a merchant, but he cannot be both. If he chooses to be a lawyer, he sacrifices his opportunity of being a merchant. Cost in this sense is also termed "alternative cost," or "displacement cost."

In the actual conduct of life opportunity costs and direct costs are usually intermingled. The increasing irksomeness of berry-picking, for example, might have been caused in large measure by the pressure of other demands upon the man's time. We haven't enough time to do all the things we should like to do, and so we have to apportion our time according to our estimates of the relative importance of alternative uses. Taking "leisure" as a collective name for all of the non-economic uses of time (other than productive or income-producing purposes), an independent worker will tend to continue at his task up to the point (or margin) at which leisure attracts him as much as the further products of or income from his exertion. As in the expenditure of money, so in the expenditure of time and effort: we tend to carry our expenditures to margins where utilities gained and utilities sacrificed or foregone are equal.

(*References follow Chapter XIII.*)

CHAPTER X

VALUE AND EXCHANGE

The analysis of *Value in Exchange* is of much greater significance than that of *Value in Use*, to the latter of which the discussion in Chapter IX was confined. There we considered the development of individual tendencies that influence subjective value, which brings us only to the threshold of the subject. These tendencies become bases for the further development of value as power of exchange.

Importance of the exchange economy.

If every family produced all the goods needed to supply the wants of its members, most of the problems which confront economic science today would not exist. But most of the world's workers are contributing their services either directly or indirectly toward the satisfaction of the wants of others. One's economic well-being today depends primarily on two things: the money income which can be obtained from others in return for one's services or for the use of one's land or capital, and the want-satisfying goods and services that can be bought with this money income. The federal census of 1930 showed that over 61 per cent of the male and about 18 per cent of the female population were employed in income-producing occupations; and this number does not include those landlords and capitalists whose income was derived entirely from their investments. The work of the housewife and the services of friendship also embody utility just as do material income-producing activities, but they are not reported in the same terms. The production of wealth is mostly "for the market," and wants are satisfied largely by goods obtained from the market. In the vast interlocking system of modern economic life most goods move from those who produce them to those who obtain and use them through the processes of exchange and consumption.

The meaning and significance of price.

It rarely happens nowadays that goods are directly exchanged for other goods. Goods are usually sold for money, and the seller uses the money in the purchase of other goods. *The amount of money for which a unit of a given commodity exchanges is the price of that commodity.* Since prices vary, when we wish to name the actual price of any commodity we must specify the price in a given market at a given time, and, if we wish to be exact, the credit and other terms under which it is sold.

From this simple and familiar concept of price there has been developed the more abstract and general concept of *exchange value.* If a hat sells for two dollars, a pair of shoes for four dollars, and a pocket knife for fifty cents, we say that the exchange value of the hat is half that of the pair of shoes and four times that of the knife. It thus comes about that we *impute or attribute exchange values to goods in accordance with their relative potency in exchange,* as shown by the prices at which they sell. In this way values come to be thought of as *magnitudes.* Just as weight and volume are physical magnitudes by which we express the relative heaviness and the relative bulk of different objects, so exchange values are economic magnitudes or, more specifically, exchange magnitudes.

Exchange value is a relative or comparative magnitude, and there is no practical way of expressing or measuring the exchange value of a good or service except in terms of its command through price over other goods or services. We can say in the above illustration (1) that the value of a pair of shoes is that of eight knives or (2) that the value of the shoes is to the value of a knife as eight is to one. The exchange value of any good can be thus expressed either by stating the quantity of other goods that can be obtained for it or by stating its ratio of exchange with other goods. Price is an expression of exchange value in terms of money. To say that the price of a pair of shoes is six dollars amounts to saying that the value of the pair of shoes is six times the value of a dollar. The first of these forms of statement is to be preferred, since the money price of a thing describes a single concrete fact. The exchange value of a thing is a more abstract concept. A moment's reflection will show that the exchange value of a commodity depends not only upon its own price, but upon the prices of all other commodities.

The marginal utility of money.

When prices are employed as measurements of value, a unit is being used which at first glance appears to possess the ideal virtue of being a uniform common denominator. In the objective sense, this is true; but individually and subjectively, a dollar means little or much to different people, and to the same person at different times or under varying circumstances. Money, like all commodities and services, has its own "marginal utility," which diminishes for its holder as the amount at his command increases. A number of important corollaries flow from this occasionally neglected truth. For instance, it explains why gambling is economically unsound even when honestly conducted. One hundred dollars lost deprives the gambler of more utility than he derives from winnings of one hundred dollars, although this may be modified by an allowance for the pleasure derived from gambling. For the same reason insurance (if cheaply and efficiently provided) rests upon a sound economic basis. One hundred dollars received on an occasion of heavy loss brings to the insured more utility than he sacrificed in one hundred dollars of premiums paid out in small installments in times of comparative prosperity.

Whether we shall ever be able to measure the variation of marginal utility between typical families from time to time or place to place is doubtful. There is undoubtedly a great scientific and practical need for such measurements; and no valid objection arises from the fact that the total utilities are immeasurable and incommensurable. At the origin, wants and want satisfactions are incommensurable; but at the margin they are not incommensurable. This has been brought out in connection with the margin of consumption, where it was seen that dollars tend to be rationed among the different commodities or expenditures in such a way that the utilities derived from the marginal purchases in each line are approximately equal. To any individual at any given time, the dollar affords a practical unit of marginal utility or subjective value. In tax and other legislation we are forced to ignore the gap which may exist between average individuals on this score. This problem has to be dealt with in one way or another, but it certainly can be handled better on the basis of systematic scientific study than on the basis of guess-work, as it often is.

The free competitive market.

We enter here upon an analysis of the essential economic forces which contribute to the nature of value and mold the power of exchange which it represents. In its practical details the subject is infinitely complex. We can present only general principles, leaving the reader to make allowances and modification for the "friction of the market," the varying terms of sale, unusual trade customs and pricing practices, which in particular markets at particular times are often important and sometimes controlling. The first problem is to penetrate the maze of distracting detail and to bare the underlying forces at work. We accordingly postpone for later treatment the consideration of the effects of monopoly and restraint of trade. It is conceivable that prices might be influenced or regulated by public authority, as some of them were during the World War and under the New Deal. Prices of important commodities could also be controlled by monopolists. It is possible to imagine a condition of society in which custom should have such power that prices, once established, would seldom be changed. Yet another possibility is a regime of perfect competition in which every man would be left free to buy and sell as he pleased at such prices as he could get. All of these different factors of price-making are partially in simultaneous operation today. The first three, public authority, monopoly, and custom are important factors in determining the prices at which goods are actually exchanged today; but the dominant factor is still the force of free competition in the market.

In this connection we mean by "the market," not any particular location where things are bought and sold, but *the general field within which forces of demand and supply operate to determine the price of a particular commodity.* For many perishable, bulky, or immovable commodities the market is distinctly local; for great staple commodities such as wheat and cotton the market is world-wide. The prices of wheat at Chicago, Winnipeg, Liverpool, and New York are so linked together that it is impossible for them to differ widely for any considerable time by more than the expense of transport between these centers, and the costs imposed by tariffs and other trade restrictions. So-called "international securities," such as government bonds and the stocks and bonds of some large corporations afford an even better

example of goods for which there is a world market and a world price. In the great wholesale markets of today "the physical goods are not actually brought to the market place, but only the title, or, at least, the legal control of the goods is transferred from seller to buyer. The physical designation of the goods is made accurate by the three stipulations: a standardized product, a specified place of delivery, and a specified time of delivery. Then the physical control of the goods goes along in the hands of the agents, laborers, railway employees and so on, who actually handle the goods. . . ." [1]

The perfect market would be free, *i.e.* free from monopoly, trade and government restrictions, or collusive agreements between buyers and sellers. It would be easily accessible to buyers and sellers either in person or through their brokers or authorized agents; and it would be public in the sense that all interested parties would have prompt knowledge of the prices which were being paid by others. These conditions are ideal only, and are seldom, if ever, satisfied; they are most nearly approximated on the great stock and produce exchanges.

Demand and supply.

On the market it has become axiomatic to say that prices are determined by supply and demand. Rightly interpreted, this terse formula is a sound and useful starting point for the analysis of prices. It is only a starting point, however, to the study of the nature and controlling circumstances of supply and demand. Also, the word "determined" must be properly interpreted. Most economic functions are at the same time cause and effect, determined on the one hand and determining on the other. Producers do not usually throw a "supply" of goods unreservedly on the market, accepting any price that can be obtained for them; nor do consumers generally demand definite amounts of goods, without reference to the prices asked for them. Supply and demand do determine prices; but *prices also are among the factors determining supply and demand.*

The nature of demand.

The study of demand is, to a great extent, a study of buyers' impulses and actions. In the case of consumers' goods, it is

[1] John R. Commons, "Delivered Price Practice in the Steel Market," *The American Economic Review* (1924), Vol. XIV, p. 518.

largely controlled by factors already discussed in connection with diminishing utility, the margin of consumption, and household budgets. In general, consumers' demand is mainly a resultant of the combined subjective valuations of different consumers as modified by the amount of purchasing power at their disposal:

1. Mere *desire* for a commodity is not demand for it. The desire of the poor man for the counterpart of his wealthy neighbor's automobile is in no sense demand. *Effective demand* is sometimes defined as desire coupled with the ability to pay. This definition may be accepted if it is clearly understood that desire must be more than a vague preference or wish: it must be *intense* enough to lead to purchase if funds are available.

2. Effective demand may be viewed in its physical aspects as the rate of consumption of physical goods by consumers, or in its pecuniary aspects as a flow of purchasing power into the market from the consumers towards goods.

3. Total demand is conditioned by the amount of money income received by consumers. Statistical investigations reveal a close correspondence, for instance, between the money incomes of factory workers and the sales of department stores.

4. Since the majority of consumers are those with small incomes, it follows that the lower the price of a particular good, the larger will be the number of consumers who are able to buy it and, with some exceptions, the larger will be the consumption of that good.

5. While wants in general are insatiable, any particular want can be satiated at a particular time. In real life, however, there are relatively few wants that are quickly or completely satiated. For the most part, consumers continue to buy a certain good until the want for an additional amount of it is exceeded by the want for some other good. Each of us, by buying the things he wants more than he wants other things, tends to keep the subjective values of the last or marginal dollar's worth of all different kinds of goods he consumes equal to one another.

6. As tastes and purposes change the scheme of expenditures is altered accordingly, but even if desires were constant, changes in price would in themselves effect continual alterations in the proportions of the different things that make up the total of purchases. The various dollar's worths become larger or smaller and acquire larger or smaller subjective values. If the price of

a commodity decreases to such an extent that an additional dollar's worth gains a subjective value greater than that of a dollar's worth of other good, it will normally be purchased. If the price rises, expenditures for this particular commodity are normally curtailed, and quantities of it may even be sold by possessors, under some circumstances as in the case of the householder who has bought a large supply of coal at ten dollars a ton, and who is willing to sell part of it when the price rises to fifteen dollars.

7. These considerations are of great importance in regard to the purchase of those commodities which are subject to styles, fancy, whims, and vagaries of consumers. When women relinquished the custom of using fancy braids upon their dresses, the decline in sales of these braids could not be wholly counteracted by decreases in the price. Similarly, the sales of wagons and carriages have fallen off greatly in the last twenty-five years despite reductions in price. The American people seem to be more receptive to new ideas than the populations of the older European civilization. But even with this modification it is still quite true that subjective valuations of consumers usually change only gradually after intensive advertising.

The demand curve.

For the purpose of rendering more definite the effects of these various factors which govern demand, let us consider the hypothetical case of a city which uses firewood as a luxury.[1] In Fig. 1, the quantity of wood available for sale is indicated along the base line, while the vertical scale portrays the different prices at which the wood might be sold on the city market.

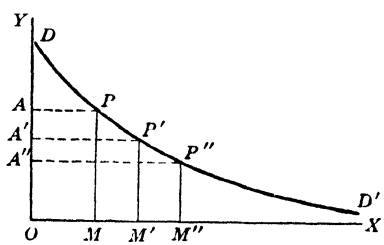


FIG. 1

Supposing the price (P) to be set at $16 a cord, 100 cords would be purchased, and others who desired it but were unable to pay so high a price would be forced either to do without fuel or to use cheaper substitutes for it. If the price (P') fell to $10, some of these poorer consumers would be able to buy, while some of the former buyers would buy larger

[1] The demand for wood at present in cities is highly elastic, as it is largely in demand as a luxury good, and is sold frequently by the pound.

quantities of wood, and a total of 1,000 cords would be sold. At a price of (P'') $8, 2,000 cords would be taken. In brief, each successive decline in price would encourage larger purchases, by permitting the entry into the area of "effective demand" successively larger numbers of buyers.

This "demand schedule" thus represents the relationship which customarily exists between prices and quantities of a good exchanged; and more definitely, represents the quantities of a given good which will be sold at each of all possible prices.

This curve by no means provides the complete key to the general aspects of demand, but merely reduces to more comprehensible terms the effects of some of the tendencies which influence demand. Further qualifications and refinements of the problem will be added as we proceed.

The elasticity of demand.

In the above illustration there is an apparent flexibility or elasticity in the demand for wood. In the families of poor or moderate means, wood would be used sparingly while its price was high, but more freely when its price fell. In this case the demand for wood might be termed "elastic," or varying freely with its price.

Every commodity or service has its own characteristic degree of elasticity; the demand for some goods is highly elastic, while for others there may be practically no noticeable variation in demand because of price changes. It is not possible to draw a clear line of demarcation between elastic and inelastic demand. *Elastic demand is a prominent tendency for purchases of goods to follow prices, increasing with declining price and decreasing with rising price. Inelastic demand is that tendency for purchases of some goods to be made in constant amount regardless of prices.* In the wood illustration above a perfect inelasticity would be represented by a straight vertical demand line at the point of the number of cords of wood needed, indicating the absence of influence due to different prices.

It is also true that the elasticity of demand differs for different portions of the demand curve for any given commodity. The demand for bread, for example, would probably be much more elastic at very high prices than at very low prices. The demand for salt, on the contrary, would probably be less elastic at prices

so high that it would be used only as a food than at prices low enough to permit its use for various industrial purposes. In general, the following propositions respecting elasticity of demand may be stated:

1. The demand for necessaries is usually less elastic than the demand for luxuries.
2. The demand for commodities whose use is habitual is less elastic than the demand for commodities purchased irregularly.
3. The more numerous and adequate the substitutes for a particular commodity, the more elastic will be the demand for it.
4. The demand of persons with large incomes is less elastic than that of persons in poor or moderate circumstances.
5. A corollary of the fourth proposition is that the higher the general level of well-being in a community, the less elastic will be the demand for most commodities.

These propositions relate only to the character of the demand for a particular commodity. There is no reason why the demand of wealthy persons for all goods in general should be more or less elastic than that of poorer persons. But because the consumption of the wealthy person is more varied and more extensive, he will be able to pay higher prices for a given commodity without necessarily reducing his consumption of any other commodity.

The elasticity of the demand for a commodity may be determined by observing the effect of changes in its price upon the total amount buyers will pay for all units purchased of it. What may be called *"unitary elasticity of demand" obtains when an increase or decrease in its price per unit changes the quantity sold just enough so that its aggregate sales price is unchanged.* When the total selling price of a commodity increases as its price per unit decreases, the demand for it may properly be termed elastic.

The rectangles in Fig. 1 represent the aggregate prices paid respectively for the wood purchased at prices per cord of $16, $10, and $8, under the assumption that the demand for wood is elastic. In the illustration, therefore, the rectangle representing the total amount paid for wood at $8 per cord is larger than the one for the amount paid for the wood sold at $10 per cord, and the total payment for $8 wood exceeds that for $16 wood. In actual amounts the $16 wood will sell for a total of $1,600, the $10 for $10,000, and the $8 wood will total $16,000.

Ignoring price gradations between the two levels, when the price of wood drops from $16 to $10, there will have to be a net

withdrawal of $8,400 from total expenditures that had been made for other things; 900 cords sold will draw $9,000 from purchasers who would not buy at $16, while the 100 cords that were bought at both prices will bring but $1,000 instead of $1,600, so that $600 thereform will be released for purchases of other things. Similarly, the sale of wood at $8 a cord will attract from other expenditures a total of $6,000 more than if it were sold at $10.

On the other hand, in cases where demand is not very elastic and approaches inelasticity, price cuts would not result in a larger share of common expenditures being so attracted to the commodity in question; in fact, the aggregate price obtained for it might be successively lessened by each lower price set.

Recurring to the illustration above, in which lower prices for wood attracted larger total shares of expenditure to it, it is evident that other commodities will thereby lose the same amount of sales in the aggregate, which in turn means a diminished total consumption of articles other than wood. Still, this is a net gain, and not a loss, since it takes place only because the additional outlay upon the cheaper wood satisfies more intense wants than other things which were previously being purchased with the money: larger "dollar's worths" have been substituted for smaller.

Besides serving as an illustration of demand elasticity, this discussion also indicates a more important corollary — the interaction of each and every commodity price upon all others, collectively and individually. No one commodity's price can be effectively analyzed without consideration of the general price fabric of which it is a part, a fabric upon which its own price changes exert some influence, and from which the price changes of all other goods exert a very great influence upon its price.

Consumers' surplus.

Attention was called in the chapter on Consumption to the great theoretical and practical importance of the surplus of comfort or satisfaction which economic progress has brought to the consumer. Attempts have been made to identify this surplus in the case of particular commodities and to measure it. For instance, let us refer to Fig. 1 and assume that the market price ($M'P'$) of the wood is $10 and the quantity purchased 1,000 cords. Among these buyers are a number who would buy 100

cords at the higher price (*MP*) of $16 if necessary, and a larger number who would buy between 100 and 1,000 cords at prices between $16 and $10. Yet all of these buyers are acquiring the wood at $10 a cord, less than they would be willing to pay to obtain it. They are enjoying "consumers' surplus" — *a surplus of utility over cost.* At a price of $8 (*M"P"*) per cord, this surplus would be considerably larger, consisting of the area upon the chart bounded by the vertical axis, the $8 co-ordinate, and the portion of the demand curve above that co-ordinate.

While useful for illustrative purposes, the explanation above does not include many modifying qualifications which must also be considered in the daily process of exchange, but which could not be depicted in the chart. Some of these modifications are:

1. The price that would be paid for a small amount of an absolute necessity is indefinitely high. The demand curve therefore cannot be plotted accurately at its beginning, and for this reason it should not meet or intersect the vertical axis at the top.

2. The satisfaction of additional wants which a lower price makes possible may lessen the intensity of the more important wants. A man might be willing to give $10 for a cord of wood in order that at least one room in his house could be provided with open fireplaces during the winter. He might also be willing to give $7 a cord for two cords, so as to heat two rooms; but the heating of the second room might render the heating of the first room less important to him. He might not be willing, for example, to give $10 plus $7 in order to have the two rooms heated.

3. Utility itself is to a large extent affected by price. So far as purchases satisfy the desire for distinction, or represent what Thorstein Veblen has termed "conspicuous consumption," the lowering in price of a commodity would lessen its utility to buyers. The successful production of perfect imitation diamonds at a low cost would lessen the desire of most people for natural ones. Even if there were complete statistics bearing on the actual relation of prices to demand, consumers' surplus would still be incommensurable. It is real, nevertheless, and is especially significant as one of the differences between real or satisfaction income and money incomes.

4. It should be noted that consumers' surplus relates only to the consumption of a particular commodity taken by itself.

The amount which people are willing to spend in the purchase of any one commodity depends not only on the price of that commodity, but also on the price of the other commodities that make up the total of all purchases. The surpluses which a consumer gets in his different lines of consumption cannot be added together to form a total. A buyer might, for example, be willing to pay as much as $4 for a hat that he can get for $2. And if he pays only $2 for the hat he might be willing to pay as much as $6 for a pair of shoes that can be obtained for $4. But it does not follow that he would be willing to pay $4 for the hat *and* $6 for the shoes, if their market prices were so high.

The nature of supply.

The amount of goods that will be supplied in a given market at a given time depends, like the amount demanded, on the price. "Forced sales," in which goods are offered for any price obtainable, and commodities which cannot be increased in quantity, such as genuine works of art by dead masters, constitute about the only important exceptions to this generalization.

The effect of price on supply varies according to the length of time that is taken into consideration. The work that might be done today in the extension of old factories and the building of new ones would be based on estimates of *future* prices, the present prices of manufactured products being of significance chiefly as indicators of future price trends. The merchant's stock in trade is bought on an estimate of future business conditions; the amount of land the farmer allots respectively to wheat and corn depends on his estimate of the relative prices the two crops will bring after the harvest. Thus the amounts of goods supplied to the market today are limited by the estimates which business men and farmers have made *in the past* of the prices which buyers are willing to pay today. And the amount of capital now available for the production of things to satisfy present wants was partially determined by conditions which existed still further back in the past, and so on in an indefinitely-receding series.

The quantity of goods available for today's market is thus chiefly determined by past estimates of present conditions and by present estimates of future conditions. Every seller has the option of selling at the present price or of waiting for possible

higher future prices — an option limited only by the perishability of his goods and the urgency of his need for money. And the most urgent need for money does not necessarily force an immediate sale if his opinion as to the increased future value of his goods is shared by lenders, for in this case it is usually easy to borrow money on the strength of the prospective value of those goods.

The supply curve.

In the analysis of the conditions of supply existing *in a particular market at a particular time* we may ignore limitations imposed by the forms which productive efforts have taken in the past. At any given time a definite amount of a commodity is available for the market: this forms what may be called the immediate *potential supply*. The proportion of this potential supply that sellers will be willing to release at a particular time depends primarily upon the price they can get, just as the amount which will be purchased depends upon the price that must be paid by buyers. If the price ($M'P'$) of wood in our illustration (Fig. 2) is $10, sellers will be willing to dispose of 1,000 cords. If the price (MP) were as low as $8, however, some sellers would prefer to wait for higher prices, and the available supply would drop to 100 cords. At $16 ($M''P''$), on the other hand, an additional supply of wood would be forthcoming from sellers who were not tempted by the $10 price. In general, the supply curve, which is shown as a broken line in the figure, represents the relations between price and the amount that will be offered for sale in a given market at a given time.

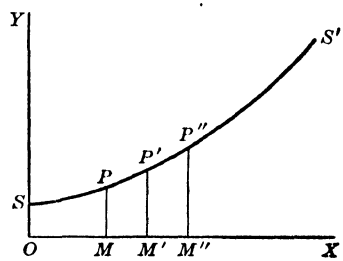


FIG. 2

The determination of price.

The above discussions of the nature of demand and of supply enable us to advance another step in the analysis of the determination of price, by considering the simultaneous operation of the forces of demand and supply. This condition is represented graphically in Fig. 3, where the demand curve and the supply curve are combined in one diagram; the solid curve represents the potential demand in a particular market at a particular time,

and the broken curve represents the potential supply under similar conditions. The price which would be fixed by the free working of competitive forces would be $10, located at the point where the curves intersect, and 1,000 cords of wood would be exchanged. At this point demand and supply are equal. The price cannot be fixed at any other figure, for example at $16, since at this price 2,000 cords would be offered for sale, but only 100 cords would be demanded. Most of the sellers, however, are willing to accept less than $16 if necessary, so that in order to secure their share of business they will bid the price down until an equilibrium is reached at the $10 level. This is what John Stuart Mill meant when he said that "value always adjusts itself in such a manner that the demand is equal to the supply," — a statement which has often been misinterpreted, and consequently unjustifiably criticized.

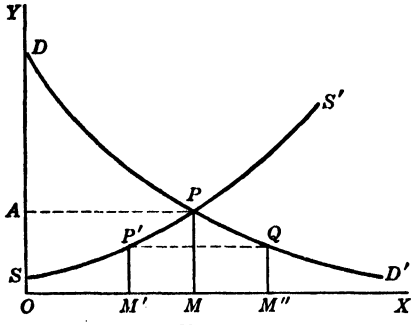


FIG. 3

The prices for which goods are sold in a freely competitive market are thus the combined resultant of the individual or subjective valuations of all who buy and sell in the market. Each buyer or seller individually has little control over the price at which he buys or sells; he can only (1) buy or sell at the price as fixed, (2) refuse to buy or sell at all, or (3) buy or sell more or less than he wishes. Yet each has a small part in that collective supply and demand which makes the price whatever it happens to be.

Producers' surplus.

Just as there is an area beneath the demand curve that represents consumers' surplus (of utility over costs), so there is also an area that represents producers' surplus or sellers' gains. The latter is the difference between actual receipts and the lowest price which sellers would have been willing to take for the quantities sold by them. Intangible and immeasurable, like consumers' surplus, the existence of this element of producers' surplus is equally apparent. It may differ for each seller, and indeed

for each portion of the supply offered by each seller, but it exists for each and for all as a margin of subjective gratification.

This surplus should not be viewed as corresponding to the actual profits of the sellers, or as being in any way a surplus of receipts over and above the expenses of production, because that part of the supply which was *produced* at the smallest expense is not necessarily the part which its owners are willing to *sell* at the lowest price. There is, as will be shown in a later chapter, a relation between the prices of things and the expense of producing them, when a considerable period of time is taken into consideration. At any given time, however, sellers are mainly governed by the relative profitableness of selling at existing prices or of waiting for higher ones.

(*References follow Chapter XIII.*)

CHAPTER XI

VALUES AND PRICES

Prices in the long run. Normal prices.

In the previous chapter the discussion dealt chiefly with the price of goods in a competitive market at a particular time. We will now consider the operation of certain movements and tendencies, which in the long run modify our preliminary analysis of value. The discussion has been confined thus far to reproducible consumers' goods and is still restricted to the competitive prices of consumers' goods. Questions relating to the determination of the prices of producers' and capital goods, of the price of labor, and of the price and rent of land are reserved for later treatment.

The available supply of present goods is limited by conditions set by past industry. The amounts of different kinds of marketable goods ready for present use depend upon the direction of the work of production in the past. But why has production taken one direction rather than another? *What, in the long run, is the relation between supply and price?*

The most important relation is found in the intimate connection between the price of a commodity and the expense of producing it. In the long run *the supply curve tends to become an expense or cost of production curve* (including in the latter, of course, selling or marketing expense). This is the concept of *normal price: The price established in the exchange of goods over a period of time tends to equal the expense of producing the goods.* Demand, naturally, plays its part; price is still a resultant of demand and supply; but assuming any particular demand curve or demand situation, price tends to be most influenced by and to approach in the long run, the expense of production of the marginal producers. (By "expense of production" we mean the total money cost of production, including both fixed and variable expenses.)

Marginal producers.

The statement of tendency can be made more definite by answering the question: *Whose* expense of production is to be considered, that of the low-cost producers or that of the high-cost producers? We must ask this question because it has been shown by a number of recent investigations of producers' expenses and profits that, *as a normal or usual condition of industry*, unit expenses vary over a wide range, while a number of active producers are always found to be losing money. The average group of producers, like a normal community of people, contains its infants and its superannuated, sick and infirm members. These high-cost producers lose money; but they help to augment the supply and thus exert some influence, though not a predominant one, upon market price. The predominant influence is exerted by the "*marginal producers*," *meaning by that term those producers who will withdraw from production or materially reduce their production unless prices in the long run are high enough to cover their expenses of production including minimum or necessary profits.*

The marginal producers do not consist exclusively or even largely of the losers, whose expense of production at any given time is the highest. The losers do not exert the greatest influence on price because they are comparatively insensitive to price. They consist of the new or "infant" industries which are fighting their way up, and which expect losses in the developmental stage; those producers who will go on producing even though their profits might be greater, because of the amenities of being a "business man" which they will accept in place of greater profits; and of the moribund which are constantly dropping out regardless of ordinary price movements, and which will be replaced in turn by a similar group of moribund or decadent concerns. Nor, on the other hand, are the lowest-cost producers mobile and sensitive to price movements, because they usually enjoy some differential advantage in their particular industry which would be lost if they transferred their capital to another line of production. The marginal producers are found principally among those who range, in the order of their unit-costs or expenses, between the lower fifth and the upper tenth. These, as a rule, are the most sensitive and mobile producers, and are often called the "representative firms or concerns."

It is not necessary to locate them with precision, nor accurately to determine the limits or ranges of their unit costs; but it is important to know their general position, since not only a proper understanding of the tendency of normal prices, but the solution of many important practical problems in taxation, tariff adjustment, price, and profit regulation turns upon the costs or expenses of that group of producers who exert the preponderant influence upon prices.

Normal price then approximates the highest unit-expense of production among that group of vigorous "adult" producers who will materially alter their output in response to price-variations. The reason for this is found chiefly in another fundamental tendency or characteristic of the competitive economy in which we live.

The tendency toward equality of advantage in different fields of industry.

The dominant motive that guides farmers and business men in their productive undertakings is the desire for money profits. If it were always an easy matter for business men to transfer their interests and energies from one field of production to another, and if capital and labor could likewise be transferred promptly and freely from one undertaking to another, relative monetary profits in one competitive industry could not be much higher for any length of time than in other competitive industries. Managerial ability, labor, and capital would gravitate always toward those employments which promised the greatest profits. Production in the more lucrative fields would thereby be increased. But, the general conditions of demand being unchanged, usually the increased output would not find buyers except at a lower price, and the reduction of price would be attended by a shrinkage of profits. In the meantime, production would have been curtailed in those employments from which entrepreneurs had withdrawn labor and capital. In this case, the conditions of demand being unchanged, prices would increase, and these industries would in their turn become increasingly lucrative. The final effect would be a continual tendency toward *equality of advantage in the different fields of industry.*

This controlling tendency toward an equal level of advantages in different industrial employments would not necessarily be

accompanied by a tendency toward an equal level of profits *as between different individual firms* in any one industrial field. In fact, we may be quite sure that there would be substantial individual differences. Making full allowance, however, for the continued existence of substantial differences in the earnings of different business firms, it may be concluded that the relation between the price paid for the products of any one industry and the expense of producing those products could not long remain greatly out of line with the general relation between prices and expenses of production existing in other industries.

We have made some assumptions in this discussion that do not correspond exactly to the conditions of actual business. Generally laborers cannot change from one industry to a wholly different one without losing some of the advantages of their specialized skill. Many sorts of capital goods are so highly specialized that they are useless outside of certain industries. The entrepreneur himself is likely to be better equipped in special knowledge and experience for the conduct of one type of business undertaking than for another. Employers can thus rarely move either labor and capital or themselves from one line to another without some loss of efficiency.

All of these and other conditioning circumstances must be taken into account. But, on the other hand, there are always many active business men who are watching for the most inviting opportunities; many concerns are able to discard types of products that become unprofitable and to expand in new and more promising directions; not all labor is highly specialized; there are always some workmen whom the prospect of higher wages will tempt away into other industries and other localities; the members of a number of highly-skilled trades can find employment in any of a large variety of industries; there are capital goods which are not highly specialized; and finally, there is a constant flow of new blood into business and industry just as there is a constant flow of new and free capital in the form of savings that can be invested in the production of whatever forms of capital goods promise the greatest returns. Such factors give substantial meaning and significance to the statement of the tendency toward equalization of advantages in different industrial fields. If the price of wheat exceeds in degree its cost of cultivation by more than the excess of the price of corn

over its expense of production, sensible farmers will raise more wheat and less corn. The result normally will then be higher prices for corn and lower prices for wheat. Changes of precisely the same type are occurring continually in all of the different fields of industrial activity.

In an expanding economic order, competition exercises its leveling effect upon the profitableness of different industries, even if there are comparatively few instances in which particular industries actually *recede*, that is, from which capital and labor are actually withdrawn. The leveling tendency of competition is effected more largely through differences in the *rates of growth* of different industries. An industry may recede as compared with other industries without going backward in an absolute sense. If an industry grows too rapidly, its returns will ultimately decline. Then business men will be attracted to other industries which perhaps have been lagging behind it temporarily.

Minimum or necessary profits included in the expenses of production.

It has been observed that in any continuing industry the opportunities for money-making cannot long remain substantially less attractive than in other fields. We must now take account of a further fact, that industry *as a whole* must in the long run afford profits, or the expectation of profits, high enough to enable and to induce men to establish and to continue business undertakings.

The amount or rate of profits needed to induce men to forego other and possibly surer ways of getting a living and to assume the risks and responsibilities of business enterprise may be called the *minimum* or *necessary* profits. There is, of course, no *fixed* or *definite* rate of minimum or necessary profits. Different types of undertakings are attended with varying degrees of risk; in other respects they possess varying degrees of attractiveness and appeal to different types of men. In most industries the minimum or necessary profits will be larger in prosperous years than in periods of business depression, when available competing opportunities are neither numerous nor attractive. And always the level of necessary profits will vary with the abilities and energies of business men. But despite a lack of uniformity and stability, the necessary profits constitute a fact to be reckoned with. It

is a cost which society must meet to induce men to undertake the risks and responsibilities inseparable from business enterprise. From this point of view, as well as from the point of view of the business man himself, it is virtually an expense of production. Including it among the expenses of production, therefore, we conclude that in the long run the prices of goods cannot diverge appreciably from the total expense of producing them.

The significance of normal price.

Market price constantly tends to approach normal price, but they seldom coincide. The forces that tend to bring market price into line with normal price are slow to operate and hardly ever work with nice precision. Market prices are constantly changing under the influence of short-time factors affecting supply and demand at the moment. The expected future expense of production also exercises a powerful influence. If there is sound reason to believe that the future expense of production will differ materially from the past expense of production, the future expense will exert a stronger influence upon supply than the past expense of production, especially in the case of durable goods. Purchasers and dealers will stock up when higher prices are expected in the future. *This, it should be noted, leads to an apparent exception from the ordinary law of demand, in that rising prices in this case are accompanied by larger purchases.* The paradox is easily dissipated here, however, by consideration of the influence upon demand arising from the expectation of still higher future prices.

The concept of normal price has many important practical uses. If prices move away from expenses in a particular industry and profits mount with no obvious cause, there is reason to suspect some suppression of competition. When the government undertakes to regulate the prices or rates charged by natural or recognized monopolies, it seeks to fix prices at the expense of production, including a reasonable competitive profit. A noticeable reduction in the expense of production is properly regarded as sound evidence of economic progress, because of our belief that, under competitive conditions, it will eventually bring a reduction of prices to the consumer. This maxim, properly interpreted, is not only true, but it is inconceivable that it should be untrue, under competitive conditions. Under a condition

of free enterprise prices cannot remain permanently either above or below the expense of production to those we have defined as "marginal producers."

Normal price illustrated.

The conclusions reached in the preceding discussion of normal price are illustrated graphically in Fig. 1, in which a quantity of goods produced is identified with quantity supplied, and both

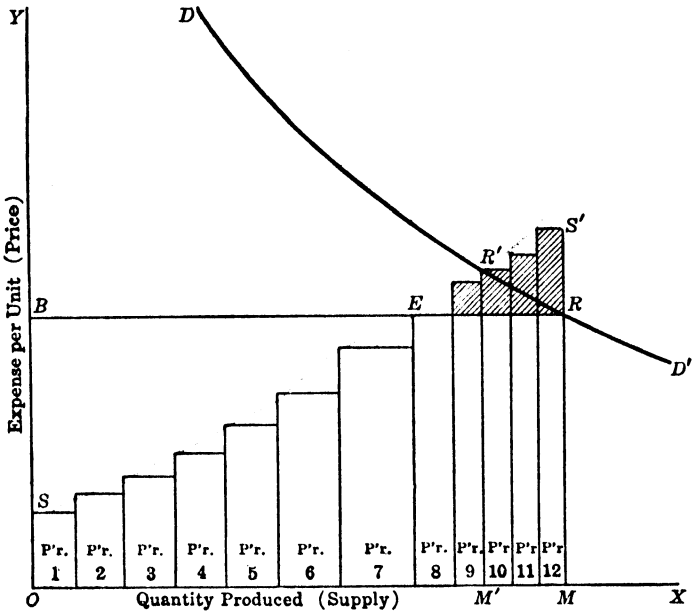


FIG. 1

are measured along the base line, on the assumption that in the long run, under typical or normal conditions, what is produced will be sold. Production in the true economic sense includes selling. Similarly, both the expense of production (complete expense as defined on page 158) and price per unit are measured along the vertical axis. The total production or supply is divided among twelve producers ranged according to their average expense of production. Each rectangle represents the total expense of production to each producer respectively, whose average expense per unit is represented by the height of his rectangle. By connecting the tops of these rectangles with a smooth curve (not shown) we have a normal supply curve SS' which cuts the assumed

normal demand curve approximately at R' where the expense of production per unit is $M'R'$. But this is not normal price. We must also take into account the output of the group of "losers" — producers 9–12. Their contributions swell the total production to OM and bring the normal price to MR. The losers tend to get out of the industry in which they suffer loss into the profit-making classes with the passage of time; but their places are taken by other "losers." Hence there is no effective tendency for the equilibrium price to go to $M'R'$. The hatched area represents the normal loss at which the industry is conducted on the basis of a MR cost per unit. The irregular area SEB represents the normal gross profit in excess of minimum or necessary profits realized by the industry. The difference between the two may be termed the industry's normal net profit.

Qualifications relating to the graphic treatment of supply and demand.

Some of the conclusions drawn with the aid of the charts and diagrams in this and preceding chapters require further modification in view of necessary oversimplification in their construction and underlying assumptions. At this point, therefore, we will outline several qualifications which should be included in the attempted application of these conclusions to everyday problems.

1. In Fig. 1 (Chap. XI) the height of each rectangle shows the average expense per unit to a particular producer, which is applicable to a typical situation in which available supply is balanced against an assumed demand situation. However, unit expense varies inversely with the volume of output for each producer, as a rule, being high for an output which is small compared with capacity, dropping with increasing output, reaching a minimum at some point on the scale, and then rising again as capacity production is neared or reached.

The implication inherent in the diagram is that the producer will expand his production to the point of attainment of his highest efficiency, or that of minimum cost per unit, and then stop; but this is not in accordance with actual practice. In reality, the representative producer will increase his output past this point of lowest unit cost up to the point at which his average

expense of production equals the price which he can obtain for his total output. In other words, the portion of the total supply contributed by each producer contains quantities of product which are not produced at the highest level of efficiency. In times of depression, these producers may even continue to produce for prices which are below their unit costs, in order to avoid greater losses due to dissolution of their organization.

2. The significance of marginal portions of the supply should be further emphasized. Since different units of the supply of a given commodity are interchangeable and indistinguishable from one another, the price and importance of the marginal unit is extended to all units of the supply. For instance, in Fig. 1 of this chapter the marginal price of MR applies to the entire supply. Producers 11 and 12 must accept this price, although it is below their cost of production; producers 1 and 2 receive this price and thereby obtain a handsome profit.

The union of these factors of interchangeability and importance of the marginal unit gives us the key to several paradoxical features observed in our pecuniary exchange economy. For instance, a bumper crop of wheat or cotton frequently sells for a smaller total sum than a much smaller crop, and we can sometimes increase total market price by destruction of part of the supply. These contradictions are easily explained by observation of the swift decline in price per unit, in the case of many commodities with an increased volume of production.

3. Normally, the demand curve slopes downward, the expense or supply curve upward, with very few exceptions. At any given time a higher unit price will be paid for a small quantity than for a large quantity, and the supply is contributed by low-cost, high-cost, and losing producers.

But in the long run, costs may fall, and demand may increase at specified prices. Our diagrams cannot easily be so constructed as to indicate the changing interaction of supply and demand over a time interval.

4. While hypothetical graphs, charts, and diagrams furnish indispensable aid in illustrating the interaction of economic forces, they seldom *prove* anything, and their essentially illustrative character should not be overlooked. For instance, the demand curve is an estimate of quantities which could *probably* be sold in the future, or which could *probably* have been sold in

the past, at varying prices. It is hypothetical only, and can never be anything more, because it is incapable of factual verification. The same limitations apply to supply curves, with slight changes and for slightly different reasons.

(*References follow Chapter XIII.*)

CHAPTER XII

NORMAL PRICE PRINCIPLES

Major factors affecting normal price.

It is desirable at this point to review briefly a few of the more important factors affecting normal price, in order to prevent misunderstanding both of the problem and the conclusions reached. Normal price is subject to a wide range of dynamic forces and trends, each of which exerts a depressing or elevating effect upon unit expense and price. A number of these forces are mentioned below.

1. In the past, population has generally increased fairly steadily. It is still increasing, and may be expected to continue to increase for perhaps another quarter century in this country. This raises the problem of the relationship between volume of production and expense of production — as production increases in order to supply the needs of an expanding population, will expenses and prices rise or fall?

Later, according to leading authorities, we may anticipate a population substantially static in total number, and perhaps later a declining population; in both periods the proportion of the middle-aged and aged is expected to increase in relation to that of the younger groups. At a future date, therefore, fresh problems will inject themselves into the analysis of prices, on account of these factors. How may we expect costs of production and of physical distribution to be altered under the influence of these changing forces?

2. Monetary disturbances must be allowed for. Thus, from 1873 to 1896 the general price level fell, while from 1896 to 1913 the general price level rose. In both periods the change was due partly to monetary forces which, while exceedingly important, disguise and obscure the forces which we especially wish to study at this point. For present purposes we must eliminate the monetary variation, so far as possible, by recomputing ordinary prices and

wages (or their movements) in terms of a unit of constant purchasing power.

3. In the long run, American experience has indicated that wages and salaries tend to increase both in purchasing power and in terms of money, despite noticeable intervals of recession. This higher cost to the employer in time units per worker has not involved a similar addition to the cost per unit of product, because of the steadily increasing efficiency and application of machinery and scientific methods in production. "In 1934, the national income both in terms of money and in terms of purchasing power was greater than at the beginning of the present century; the income per capita of population was also greater, although more than 10,000,000 persons were out of work. In spite of enormous unemployment and the unusually low level of business activity, the output of the productive system in 1934 provided the total population, the employed and the unemployed, a higher standard of living than was available to the much smaller population out of the national production in the relatively prosperous year of 1899." [1]

This suggests also that the long-run trend is toward declining prices of goods to the consumer.

4. Over a period of time, the relative or per unit expense of the marketing process shows a decided tendency to rise. This is due to many factors, of which some of the chief ones are the relative decline in expense of manufacturing, the greater dependence of marketing upon the human factor instead of upon machinery, and the necessary resort to more distant and less fruitful markets compelled by mass production technique.

This tendency will probably become more and more emphasized with the lessening of the rate of population growth.

We have pointed out above a few of the dynamic factors which influence normal price and expense of production. Others may also be mentioned: the exhaustion of natural resources, the progress of science and invention, and the growth of external and internal production economies. All of these and many more combine in varying degrees of significance at different times to yield the resultant of normal price. We wish to emphasize here that normal price is a resultant of many diverse factors and that the

[1] *Machinery, Employment and Purchasing Power*, National Industrial Conference Board, New York, 1935, p. 80.

content of the groups or classes distinguished in the next paragraph vary from time to time. There are different types or norms of industry subject to different laws or price reactions. A particular industry may be in one class during one period and in another class during the succeeding period. But the classes, with their different reactions, persist.

Industries of increasing, decreasing, and constant expense of production.

For convenience, and in view of the different conditions under which the productive industries operate, we may group the latter in three great classes: (1) those in which an increasing volume of production is accompanied in the long run by increasing expenses per unit of product, (2) those in which an increase in the volume of production is accompanied by decreasing expenses per unit of product, and (3) those in which an increase in the volume of production is accompanied by constant expenses per unit of product. Agriculture and the extractive industries have generally been cited as illustrations of industries subject to increasing expense, on the ground that increasing population compels resort to poorer and poorer soil and to poorer and deeper mines, and at the same time leads to the exhaustion of forests. So far as this is true these industries belong within the class of industries that are subject to increasing expense. Large-scale manufacturing is usually regarded as the typical illustration of industries subject to decreasing expense, owing to the well-known economies effected by the constant improvement of methods, inventions, and mass production. Under present business methods it is difficult to segregate industries subject to constant expenses where an increase in output is likely to take the form merely of the multiplication of competing establishments of the same type prevailing when the output was smaller. While such a situation might be found it is most probable that increased output without multiplication of competing units would lead either to increased or decreased unit expenses.

The classification of industries given above is based upon the belief that it conforms to long-run tendencies. It has not been held by the more careful writers that any particular extractive industry must be subject to the law of increasing expense or that in any particular manufacturing industry the condition of

decreasing expense must obtain. It was freely recognized by Ricardo and leading economists since his time that improved methods in agriculture may offset the powerful forces tending in the long run to increase the unit expense of production. It is similarly recognized that increasing expenses for raw materials, rising wages, or other factors may offset the forces which make for reduction of expense in manufacturing.

As a typical illustration of the desirability of this classification of productive industries, a careful study of price trends before the World War revealed that, during a period of generally rising prices, the products of the extractive industries accounted for a majority of the rises in price of individual commodities, and almost none of these declined in price. An examination[1] of the trend of prices between 1896 and 1913, covering 213 commodities, showed that the trend was upward in 185 cases and downward in 28 cases. Of the 28 commodities whose prices moved downward only 4 are found among farm products and foods, while the prices of 50 farm and food products moved upward during this interval. Correcting these price trends by taking into account changes in the general purchasing power of money, 140 prices are shown to have moved downward and only 73 upward between 1896 and 1913. Of the upward trends, on the assumption of constant purchasing power, more than one-half occurred in the two groups of farm and food products. The period 1896–1913 is brief; but the results reached in the above investigation appear to be typical of long-time price movements. Money prices, in the past, have risen in general over long periods. When corrected for changes in the general purchasing power of money, the items naturally fall into a group of rising and a group of falling prices. In the group of rising prices, farm and food products have usually been prominent.

Since 1920, however, a remarkable change has taken place in all parts of the world which have been under the dominating influence of Europe and America. There has been a slowing down in the rate of population growth; but at the same time there has been a marvelous improvement in agricultural production; this has increased 50 per cent more rapidly than population has grown, as clearly shown by Dr. O. E. Baker, Senior Agricul-

[1] F. C. Mills, *The Behavior of Prices*, National Bureau of Economic Research, New York, 1927, pp. 507–511.

tural Economist, United States Department of Agriculture.[1] If the food and raw material furnished by agriculture continue to increase more rapidly than population, we shall probably have a rising margin of cultivation, and population will "press" less heavily upon land and the other sources of subsistence than in the past. A diminishing portion of the population of the world will be devoted to raising the necessary food supplies. The "cost" of food in labor and toil will diminish. The period since 1920 is a short one and past experience should make us careful in our predictions of the future. Possibly, population may again begin to increase more rapidly than the output of agriculture, but we believe not. We think it probable that society will continue to feed itself with increasing ease and that agriculture will afford its products at a relatively decreasing cost.[2]

It should be noted that these observations about cost do not apply to expenses of production or to prices. Expenses and prices are affected by monetary changes, and may go up or down over a period of time in obedience to monetary factors. And apart from monetary considerations, if production increases more rapidly in manufacture and trade than in agriculture, the prices of agricultural products may rise more or fall less than the prices of other goods, without impairing the truth of what has been said about the reduction of agricultural costs. Those who depend for their livelihood upon agriculture suffered keenly by the fall of prices in 1921 and the subsequent agricultural depression, and again in the recent general depression. This condition may be remedied; agricultural prices may rise in comparison with other prices under more than temporary impulse and yet society still finds it possible to procure the necessary food and raw materials with a decreasing proportion of its capital and labor. Agricultural labor and toil may decline while agricultural prices and profits rise. It is obvious that while the classification of industries into those subject to increasing, decreasing, and constant expense is useful, it must be interpreted with care.

[1] "Changes in Production and Consumption of Our Farm Products and the Trend in Population." Addresses before the Agricultural Extension Conference, University of Minnesota, St. Paul, Minn., December 13 and 14, 1928, by Dr. O. E. Baker, Senior Agricultural Economist, Division of Land Economics, United States Department of Agriculture. Reprinted from *The Annals of the American Academy of Political and Social Science*, Philadelphia, March, 1929.

[2] War and nationalism may in the future bring about increasing costs in densely populated countries.

Internal and external economies.

The long-time tendency to increasing expense, due principally to the increasing resistance of each factor of production as it is exploited more intensively, is discussed in later chapters, in connection with diminishing productivity and diminishing returns. We shall here confine our attention to the other relationship between volume and expense of production, that in which an increase in the volume of production lowers expenses and prices. This condition of decreasing expense cannot prevail, of course, except when an increasing volume of output is attended by certain economies. What is the nature of these economies?

Increased output in an industry often calls forth an increase in size of the average plant. Such changes in size are usually, though not always, more economical, particularly in manufacturing. In so far as this proves true, *internal economies* can be achieved, with consequent reductions in expense cuts and possible price declines. They customarily take the form of reduced per unit overhead expenses, increased direct-labor productivity due to installation of larger and better machinery, and other similar improvements. Important as these internal economies undoubtedly are, we must be careful not to exaggerate their significance. In some special fields of manufacture and trade, the average size of individual undertakings is not increasing or, at most, is increasing slowly, despite a rapid growth of the total volume of output. But in nearly all of the industries in which we have any reason to suspect the presence of the rule of decreasing expense, we find that the average establishment has been growing larger.

Vastly more important, however, are the *external economies* in the general organization of a whole industry which result from an increase in its output. These economies take the form, for the most part, of a greater specialization or division of labor *within the industry as a whole.* It becomes profitable to separate the different processes in the operation of the industry. Opportunity is thus given for a more thoroughgoing and more efficient specialization of labor and for the use of highly specialized machinery. Plants themselves become specialized — devoted only to certain steps in production — and these plants may be located at particularly advantageous points. Subordinate industries may be developed, supplying machinery, other equip-

ment, and accessory products. Improved agencies of transport may be developed. In short, a large output makes it possible for an industry to utilize the best and most economical methods of production and to keep pace with the advance of technical knowledge.

Highly mechanized ways of doing things, involving a thoroughgoing subdivision of processes and the use of large amounts of fixed capital in the form of elaborate plants and expensive machinery are advantageous only when the industrial output is large. All these things have played an important part in the progress of most of the great manufacturing industries and in making their products cheaper. Unless some obstacle prevents, these economies are sufficient to make almost any large and growing industry one of decreasing expenses.

On the other hand, checks to the decrease in expenses of large-scale industries have appeared, particularly the increased (relative) expenses of marketing and rising wages, and also the relaxation in the intensity of competition which sometimes accompanies increase in the size of the plant or business unit.

> "The internal economies of large-scale production must be distinguished from external economies, for they lead to consolidation and sometimes to monopoly while the external economies have nothing directly to do with monopoly (except so far as they consist of internal economies in subsidiary industries). The internal economies come to the producer who is responsible for them, while the external economies are largely free gifts made by single producers to industry in general. One raises the question of cutthroat competition and monopoly; the other raises the question of protection or subsidies to stimulate industrial pioneering which is worth more to industry as a whole than the pioneers can ever hope to collect in profits." [1]

The reality of the tendency to decreasing expense.

It has been said the concept of decreasing expense is misleading on a number of grounds; that such a tendency where it is noted is temporary or exceptional and leads quickly to the condition of increasing expense; that it is not a fact but an appearance explained by the relationship between fixed and variable expenses noted below; that if it existed it would culminate in extreme concentration or monopoly.

It is true that increasing expense for increased output may be

[1] J. M. Clark, *The Economics of Overhead Costs*, University of Chicago Press, Chicago, 1923, p. 84.

observed if an industry is considered over a short period of time. When output is suddenly or sharply increased, it may result in an increased expense per unit, despite the fact that there is normally some unused or excess capacity which permits a reduction of fixed expenses per unit when the volume of production is slightly enlarged. But we are speaking of the long run; and from that point of view the facts indicate a different conclusion. The economic history of the past hundred years shows that, in the majority of manufacturing industries, prices fall in the long run when measured in money of constant purchasing power, or in purchasing power over labor or human service. Wages buy more manufactured goods as time passes.

The principal cause of the tendency to decreasing expense is found in the progressive division and specialization of industries. This is a phenomenon not so much of the typical unit of industry or of any one industry, as of increasing specialization of industries taken together. It is assisted of course by invention and new knowledge, and retarded by the exhaustion of some natural resources; but it would probably go on even without invention, because of the economies resulting from the use of roundabout and indirect processes of production, manifesting themselves particularly in newer and more specialized industries. Decreasing expense as a resultant of many partly conflicting factors and forces represents the long-run tendency in a large and important group of industries under competitive conditions.

Fixed and variable expenses.

Thus far we have been considering the ways in which prices are affected by changes in the aggregate volume of production of different industries. We now pass to the consideration of the way in which the expenses of an individual plant or establishment within an industry are affected by an increase in the volume of its output. In almost any establishment, any increase in product will be attended by *some* specific advance increase in expenses: more raw material and more labor will be used, possibly more power; although the increased expenses for labor and power may not be proportionate to the increase in production. Such expenses are called *variable expenses*, and are to be contrasted with *fixed expenses*, which remain approximately the same, no matter what may be the volume produced. The interest on the funds invested

in the factory building and its equipment of machinery is a fixed expense; the expense of management and general office expenses will not usually increase proportionately with an increase in the output of an establishment.

It is often assumed that, wherever only a part of the expenses varies with the amount produced, the establishment must be one in which large-scale production is especially economical. Whether this assumption holds true or not depends upon the scale of production in question. Factories and other plants are built with a certain maximum capacity, and until that maximum capacity is utilized, production may usually be increased without a proportionate increase in total expenditure. But when the maximum is reached, more equipment, and often more buildings, will be needed before there can be a further increase in production. There is *a most efficient size* of plant; an increase in demand beyond the capacity of the most efficient size necessitates either a refusal of new business or a less efficient enlargement of the plant. When business conditions warrant temporarily pushing the output of a plant beyond its normal capacity, the usual result, as every manufacturer knows, is that the increased output is produced uneconomically, at relatively increased expenses of production per unit of output.

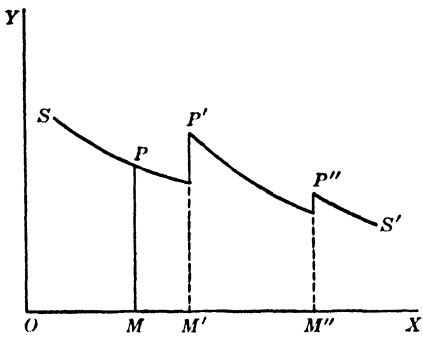


FIG. 1

Many seemingly constant expenditures (such as interest on borrowed money used in construction of the plant) are variable in the long run. Such expenditures increase, but only at considerable intervals of time, as additional investments in fixed capital are made. The conditions of production may be illustrated by Fig. 1, in which the vertical axis scales the average expense per unit of production and the base line represents varying amounts of product. When OM units are produced, the average expense per unit of production is MP. When the production reaches OM' units and again when it reaches OM'' units, fresh investments of large amounts of capital are necessary, and unit ex-

pense rises sharply, as shown in the diagram. Figure 1 shows roughly the variation of average unit expense in an enterprise in which the economies of large-scale production are possible and in which, from the long-time point of view, the unit expense of production declines. If the enterprise were subject to the law of increasing expense, our irregular curve SS' would slope upward from S to S' but would decline within each separate stage of production, such as OM', $M'M''$, etc. The latter situation is illustrated in Fig. 2.

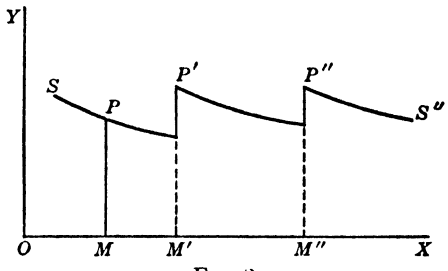


FIG. 2

Some writers criticize the idea embodied in Fig. 2. Why increase the size of the plant, they say, if such increase will result in higher unit expense of production? Why not construct a new plant similar to the first one? The reply is that the entrepreneur may make a greater total profit notwithstanding a smaller profit per unit, and in many cases he has no other option. In such cases he must increase his production to hold his trade, yet he cannot always put up a new plant which will produce as efficiently as the first. The situation is illustrated in public utilities where the plant development must frequently be in the same neighborhood and the producer is compelled by public authority to give the larger service.

The relation of fixed and variable expenses to price.

The fact that, within limits, the expenses of a business undertaking do not increase proportionately as the output increases has an important bearing upon competitive price-making. The proprietors of a business establishment may consider themselves justified in increasing their output, provided the additional output will sell for enough to afford some profit above the actual amount by which it *increases* their expense. If the full capacity of their plant is not already utilized, they will count as profit any additional income they can secure above the necessary increase in variable expenses. If they are producing some staple commodity for the general market, so that they cannot discriminate in the prices at which they sell to different buyers, they will find it

difficult to cut prices on *part* of their output; but if they are producing a variety of goods, making highly specialized products "to order," or selling in two or more widely separated markets, they may often be able to increase their output by accepting prices too low to contribute anything to the payment of their fixed expenses. This is the explanation of the "dumping" of part of a manufacturer's product on a foreign market at a lower price than he charges at home. Railways are able to take advantage of the fact that only part of their expenses vary with their traffic volume, for they do not have to charge a uniform rate per ton per mile, but can classify their rates according to the origin, destination, and nature of the traffic. The rates charged by electric plants are often lower for current used at certain hours of the day when the capacity of the plant is only partly utilized.

If a business establishment is hard-pressed by competition, or if for any other cause, such as a dull season, its sales are small, its proprietors may decide to cut prices on their *whole output* to a point that will cover variable expenses and possibly contribute something toward meeting fixed expenses. Some fixed charges, such as depreciation, interest, rent, insurance, and taxes, will continue almost unchanged even though the output is little or nothing. It will then be sound business policy to make the best of a bad situation by getting what little income can be had *over and above the variable expenses* of production. Much money may have been irrevocably invested in the business, and although it cannot be made to yield the return that had been expected, matters will not be bettered by letting the plant lie idle.

It may be that the prices which the proprietors of the business thus reluctantly decide to accept are still high enough to pay all the expenses of production, fixed and variable, to some competing plants which are better organized or more favorably located. Or some of the competing plants may also find it necessary to accept prices that do not cover their fixed expenses. Other establishments have to reduce prices in order to protect themselves, and a period of cutthroat competition may ensue.

Though at any given time it may be the variable rather than the aggregate expenses of production per unit of product which fix the price at which some or all of the different establishments in an industry are selling their products, in the long run prices have to be high enough to induce the replacement of fixed capital

as it wears out and (in a growing industry) to attract new permanent investments of capital. That is, on the average, prices cover both variable expenses and fixed expenses, — which last are generally variable over a sufficiently long period of time. For most commodities, variable expenses account for by far the larger part of the price. The element represented by fixed expenses is usually much smaller, and that represented by profits is still smaller. Variable expenses thus operate as a constant and definite force, holding prices in the neighborhood of the expenses of production. Producers get as much more than the sum of variable expenses as they can. Sometimes they get very much more; sometimes very little more. But in the long run, if they are to remain in business, and if they are to be able to secure the recurrently necessary supplies of capital, they must get in addition to variable expenses their fixed expenses, plus necessary or minimum profits. When they get very much more, their advantage will soon be equalized and leveled down by the competitive processes we have already described.

Joint expenses of production.

When the production of one commodity is inevitably accompanied by the production of one or more other commodities, it is generally difficult to assign a definite part of the total expense of production to any one of the commodities. It is impossible to separate the expenses of producing tenderloin steaks from the expenses of producing soup-bones, or either of these from the costs of producing hides. Mutton and wool, cotton and cotton-seed, coal-gas and coke, gasoline and fuel-oil, are all familiar examples of commodities produced under conditions of *joint expense*. Modern methods for the utilization of industrial by-products have greatly increased the list of commodities thus produced.

What is the normal price of these jointly-produced commodities? Take first the simplest case: that in which *all* the expenses of producing two commodities are joint expenses. Neither commodity can be said to have a normal price of its own, for neither commodity has specifically assignable expenses of production of its own. But the two commodities, taken together, have what may be called a *collective* normal price. Suppose, for example, that the production of every unit of one commodity is

necessarily accompanied by the production of two units of the other commodity. In order to induce the production of these commodities the price of a unit of the first commodity plus the price of two units of the second commodity must at least cover the joint expense of producing the three units. This joint expense, then, measures the collective normal price of the three units. Just how the several market prices which tend to approximate this collective normal price will be fixed, will depend upon the conditions of demand for each of the commodities.

When, as often happens, two commodities are produced under conditions of *partially* joint expenses, further separate processes being necessary to fit each commodity for the market, the price must in each case cover all the specific or assignable costs. This gives a normal minimum below which the price cannot fall in the long run. But the *joint* expenses must be imputed or apportioned to the two commodities in accordance with some arbitrary rule. Apportionment according to sales (receipts) is perhaps the most general rule, but this makes price determine expenses and leads to other inconsistencies. Tariff-making and other important problems frequently rest upon the determination of the expense of a joint product and it is unfortunate that there can be no standard or best rule for the apportionment of such joint expense.

While the collective normal price is fixed by expense of production, the division of this total, or the prices of the individual products, depends upon demand — upon the marginal utility of each product. The effect of demand upon the prices of joint products is interesting. For instance a sharp increase in the demand for wool, registered in a higher price for wool, is likely to increase the supplies of both wool and mutton, and thus to cause a drop in the price of mutton. The opposite effect would be registered where wool fell from demand, because then the production of mutton would have to stand more on its own feet and would not be carried along by the second demand force.

Joint products are usually thought of as the major products and the by-products. In the case of the meat-packing industry we consider the principal product to be beef for food, and think of hides, bristles, bone meal, glue, horn, etc., as by-products. The petroleum industry affords an excellent example and modern chemistry has demonstrated that great channels of production have heretofore been overlooked in apparent waste materials in

many industrial fields. These developments have lent assistance to great increases in large-scale production, sometimes leading to one large plant and again to the creation of several quite distinct and separate production plants but all within one corporate enterprise.

Joint demand.

The principles of normal price and of joint expenses are not complete without reference to the principle of joint demand, which is opposite to joint expenses. The principle of joint expenses proceeds from the supply side of the market while that of joint demand is attached to the demand side. In joint demand we are concerned with the demand for a certain good which is made up of a number of independent goods. If our wool and mutton illustration could be run back through a moving picture film as is a diver returned from the water to a spring-board, we would have our case. We want a sheep and that demand would reach to the wool market and the mutton market. A more practical illustration may be cited in the instance of the demand for homes.

In 1936 the stagnation in residential construction began to break and new houses were in demand. In general the purchaser thinks only of the completed unit of a house but that single unit of demand reaches into many markets — lumber, masonry, plumbing fixtures, heating equipment, electrical fixtures, and equipment, labor, etc. The implications involved herewith are many, and can only be treated briefly. The house is the combined product in demand, and price changes may be expected for the separate materials and labor used in the construction. If certain of these factors which are being joined are plentiful and others are not so plentiful, it is certain that price increases because of house demand will fall unequally among the different factors going into the house. Supplies of lumber, brick, and cement may quickly meet the demand and price changes will not be as great as in the case of steam heating plants and electrical equipment which may fail to keep step with demand or only do so through increased production expenses.

Let us carry the illustration one step further and segregate three separate types of buildings — single-family homes, multi-family apartments, and office buildings. Center a joint demand

on building materials and labor through single-family homes alone, and what effect is there on the other two types? Assume no construction of the other two, but price increases caused for certain materials or labor through home demand will be spread to the other types for their maintenance and repair. Labor, particularly the skilled and unionized, is sensitive to joint demand, and the impact of demand for one type of construction carries quickly to other types through this source.

But brief reflection will serve to indicate a difference in the long-run effects of joint demand and joint expenses. The effects of joint demand may be sharper but they do not possess the staying power of the effects of joint expenses or supply. It is usually but a short time before the supply of separate products becomes adjusted to conditions created by joint demand and smooths out sharp price reactions first encountered. But turning back to our case where mutton was heavily demanded and thereby pressing down the price of wool because there was not a corresponding increase in demand at the same time for wool, we see that adjustments in supply cannot easily be made because the products of joint expense (wool and mutton) must move together.

(*References follow Chapter XIII.*)

CHAPTER XIII

MONOPOLY PRICE AND OTHER VALUE RESERVATIONS

In the consideration of value thus far we have examined the tendencies which influence its subjective basis or personal background, tracing them from the individual into the field of exchange. There we encountered the concept of price as a monetary *measure* of value, and analyzed the general forces of supply and demand which influence price as a measurement of value in exchange. Passing from the above considerations, viewed as at a cross-section of time, we presented an analysis of value exemplified by normal price under long-run conditions, that is, the tendency which there is for normal price to approximate value. When supply and demand are considered in relation to time aspects, there is a tendency for the supply schedule to coincide with the cost of production schedule or curve; and since the demand curve represents the buying side of the market, the resulting price *tends* to represent value in monetary units. The reader must recall that value is not directly caused by expense or cost of production — the cause of value is *usefulness* — but expense or cost working through time and upon both supply and demand becomes one important factor in the determination of value. We have confined our discussion thus far chiefly to the prices of reproducible consumers goods, and have excluded certain forces and factors so that underlying fundamentals would emerge from the more complex forces which are found in business. We have noted certain exceptions and reservations throughout; it now remains for us to treat a few of them more carefully and completely.

The bargaining range.

Demand and supply factors do not always fix price at a definite point. The price of a horse, of a second-hand automobile, or of a dwelling-house is fixed only approximately by market conditions. There is room for considerable latitude of opinion respecting the

price that should be paid. If the lowest price acceptable to the seller is considerably below the highest price the buyer would be willing to offer, just where the actual price will be finally fixed between these limits will depend either upon chance or upon the relative skill in bargaining of the seller and buyer. In the case of a horse trade, this opportunity for "higgling of the market" has become proverbial. In many other kinds of exchanges as well, the efficient bargainer has opportunities to secure a surplus above his minimum selling price or below his maximum buying price. This is true chiefly in the case of goods which are unstandardized, rather immobile, and for which the market is not very highly organized. In the case of the great commodities of the world market, such as wheat, cotton, and iron, the price is influenced so closely by an organized market that the gains of bargaining are relatively small. *In general, the wider the market, the more widespread the use of the commodity, the greater the ease with which the commodity can be sorted into standard grades, the more accurately will market forces fix a definite price. Goods which cannot be standardized, whether of widespread use or not, each unit of which possesses some unique qualities, give most scope for the variations in the valuations of individual buyers and sellers.* In such cases supply and demand do not fix a price point, but merely set certain limits within which the price must fall.

Non-reproducible consumption goods.

Some writers have segregated and accorded special treatment to goods the supply of which cannot be enlarged by manufacture or fresh productive effort. Great works of art, which are unique and precious, and which cannot be duplicated, fall within this classification. The price of a non-reproducible good has an upper limit fixed by the highest subjective valuation set upon it by any possible buyer. The lower limit will be either (1) the seller's own subjective valuation, or (2) the second highest valuation set by any competing buyer, depending upon which is the higher. Between the upper and lower limits, the exact fixing of the price is a matter of chance or of bargaining skill.

It is highly important to notice both the resemblances and the differences between the prices of non-reproducible goods and monopoly prices discussed immediately below. We pass by slow gradations from non-reproducible goods such as Rembrandt's

paintings, to handicraft and related products which possess a non-reproducible element of artistic individuality, then to goods given a market individuality by trade marks or trade brands, and finally to pure monopoly goods which could technically be produced by many persons but which for one reason or another are produced only by the monopolist. Monopoly goods are not reproduced *by others;* but they *are* regularly reproduced by the monopolist. The principles of normal price apply fully to none of these classes. In the first class, that of non-reproducible goods proper, the "normal" price is simply the highest price that can be obtained for them, as determined only by the intensity of the buyer's demand; the expense of production fixes no limits and plays no part in price determination. In all the other classes, however, as we shall see later in this chapter, the expense of production plays an important though not a dominant role. The price is fixed by the monopolist or producer; but in fixing it he is influenced not only by conditions of demand, but by the varying expenses of production.

Monopoly price.

The chief peculiarity of monopoly price is the power of the monopolist over supply, which gives him the ability to secure surplus returns as profits. In competitive industry the supply is not so controllable by a single producer, and as a result prices tend to be controlled or limited by the expenses of production. The competitive producer cannot increase his profits by limiting the supply.

The monopolist will normally endeavor to fix his output at a point which secures for him the *highest possible net returns.* How can this point be determined? On the one hand the monopolist has to consider the fact that, although he can increase his gross receipts up to a certain point of increasing his output, yet the increase in gross receipts will not be proportionate to the increase in output, for the simple reason that the increased output will not find buyers except at a lower price per unit. On the other hand, an increase in his output will always increase his aggregate expenses of production, although here again the increase in expense may not be proportionate to the increase in output. In particular there are likely to be some permanently fixed expenses which, for the time being, will be the same for a small output as a

large one, and there may be other expenses which will not increase unless the output should be made much larger than would be profitable. Indeed, it may often happen that a large output would increase certain expenses which would otherwise be fixed (such as the cost of the plant) and the monopolist may prefer therefore to produce a relatively small quantity of goods.

The following table shows hypothetically in parallel columns the number of sales of a monopolized good at different prices, the total resulting receipts, the variable expenses, the fixed expenses, the total expenses, and, finally, the net revenue or monopoly profit. For the sake of simplicity it is assumed that all of the fixed expenses are permanently constant, at least for such possible increase of output as the monopolist cares to consider.

Price per Unit	Number Sales	Total Earnings	Variable Expenses per Unit	Total Variable Expenses	Fixed Expenses	Total Expenses	Net Revenue
$.10	600,000	$60,000	$.03	$18,000	$50,000	$68,000	− $8,000
.09	800,000	72,000	.03	24,000	50,000	74,000	− 2,000
.08	1,200,000	96,000	.03	36,000	50,000	86,000	+ 10,000
.07	1,800,000	126,000	.03	54,000	50,000	104,000	+ 22,000
.06	2,500,000	150,000	.03	75,000	50,000	125,000	+ 25,000
.05	3,500,000	175,000	.03	105,000	50,000	155,000	+ 20,000
.04	5,500,000	220,000	.03	165,000	50,000	215,000	+ 5,000

In the case assumed here, the monopoly price will stand at six cents. It would be possible for the monopolist to produce 5,500,000 units, for this would give him a net profit of $5,000. But since he can control the supply, he will limit his output to 2,500,000 units, giving him the maximum net return, $25,000.

The case assumed here is in many ways far simpler than the cases presented by real life. The monopolist in practice may not be able easily to hit upon just the price that will yield the maximum profits. He may approach more closely to it by experimenting a little, but at best he can hardly hope to reach more than an approximate maximum. The monopoly may be one in which the price is fixed by custom or convenience, so that the monopolist can vary only the quality of the commodity or service he sells at the established price. Also the price most profitable for the present may not prove the most profitable price in the long run. The monopolist may choose to forego some of his possible profits this year in order to extend the field of demand

for his product and to lay the foundation of a long-continuing period of profitable production. Furthermore, in view of the possibility of the public regulation or public ownership of his business, he may deem it expedient not to arouse public hostility, and so may decide to sell at a price lower than what would be the most profitable present price. Finally, the monopolist will not ordinarily fix his price so high as to invite dangerous competition from less satisfactory substitutes for his product. This "potential competition" is sometimes a controlling or moderating factor of great practical importance.

The effect of a tax upon monopoly price.

Our illustration also throws light upon the influences of taxation upon monopolies and monopoly price. If a *fixed* tax, say of $5,000 a year, were to be laid upon this monopoly, it would not result in an increase of price. With such a tax, the net revenue at price .08 would be $5,000; at price .07, $17,000; at price .06, $20,000; at price .05, $15,000; at price .04, nothing. Thus price .06 will still be the point of maximum net revenue, and hence the monopoly price. Nor will a tax proportioned to the *profits* or *net revenue* of the monopoly change the price. Suppose, for example, that the monopolist must pay a tax equal to 50 per cent of his net revenue. If the price remained .06, such a tax would reduce the net revenue of the monopoly after taxation to $12,500. But this is still a larger remainder than would be left to the monopolist if he should shift his price to any other figure. In short, a tax on the net revenue of a monopoly does not change or affect the conditions which make one price more profitable than another. Hence, the popular belief is fallacious that a monopolist can generally free himself in whole or in part from the burden of a tax on monopoly profits by increasing the price he charges.

On the other hand, *a variable tax on the product*, as for instance a tax of one cent per unit, would result in this case in raising the monopoly price. In our illustration, such a tax would make the net revenue at the price .08, − $2,000; at the price .07, + $4,000; at the price .06, nothing; at the price .05, − $15,000. Thus, though the monopoly would find its profits greatly curtailed by such a tax, consumers would be compelled to pay one cent more per unit for the monopoly product. The possible advantage which society might draw from the tax would therefore be wholly

or in part offset by the increased cost of the commodity. We may conclude, therefore, that fixed taxes, or taxes on the net revenue of a monopoly, cannot be shifted wholly or in part by a change in price; but taxes laid in proportion to the amount of business, since they contribute an addition to the variable expenses, may be wholly or in part shifted by a change in price.

The relation of demand to monopoly price.

Certain conditions on the side of demand have a decisive influence in determining monopoly price. The most important of these is the degree of elasticity of the demand for the monopoly product. *The more inelastic the demand for the monopolized commodity or service, the higher will be the monopoly price which will yield the greatest net returns.* If a commodity is a necessity of life, or is so habitually consumed that people cling to its use regardless of price changes, its monopoly will be more profitable than if the commodity were one which could easily be foregone by users. This explains why salt and tobacco have often been chosen as fit objects for public fiscal monopolies. The more adequate the substitutes for a commodity, the smaller will be the opportunity for the profits which a monopoly of that commodity will give. Finally, the higher the general average of economic well-being, and the more readily money is generally expended, the higher will be the monopoly price which will yield the largest net returns.

Thus monopoly shares effortlessly in the increasing wealth of a country, and absorbs a considerable part of it. The larger wealth per capita and the greater willingness to spend freely make monopoly more profitable in the United States than in European countries.

Class price.

Thus far we have assumed that the monopolist charges one uniform price and fixes that price at the point which yields him the largest net returns. His gains will be increased if he is able to vary his price or charge several prices for the same product, and would be highest if he could charge *each individual* that price which would yield the largest net returns, taking into account the number of sales and the profits on each. A rich man might be willing to pay double the current rates for gas or electric light without diminishing his consumption appreciably. But it is usually impracticable to fix a separate price for each individual,

even if there were no legal difficulties in the way, as there are in the case of the great monopolistic businesses such as gas and electric lighting and railway transport. The next best choice for the monopolist is to divide his customers into classes, and to charge each class that price which will yield the largest net returns. In the table already considered, we found that six cents was the monopoly price on the hypothesis of one uniform price, but if the eight-cent and seven-cent prices could be secured, and six cents reserved as a price for sales that could not be made at eight or seven cents, the profits would be still higher.

This principle gives rise to the phenomenon of *class price*. The monopolist seeks in every possible way to classify his customers and to secure from each group the highest possible price. The remarkable development of class price may be observed in the case of our railways; and, unless legal obstacles are interposed, this development will doubtless go still further. We have special trains with extra charges, privately owned railway coaches, drawing-rooms and single seats in "parlor cars," and ordinary first-class tickets. The recent regulations providing passenger rates of two cents per mile applies alone to coach fares, whereas the purchase of space in Pullman cars is allowed if the rail fare of three cents per mile is paid. Then we have single tickets, multi-trip family tickets, the monthly commutation tickets, with wide variations in price. The American railway freight-rate principle of "charging what the traffic will bear" is also a consummate example of class prices.

The class price is based upon the existence of different *layers of demand*. To tap those layers separately and effectively would maximize the monopolist's net revenue. Monopoly price will vary also with *use*. This is a special variety of class price, which may be designated as *use price*. The typical instance is that of two prices sometimes being charged for gas: the higher when it is used for illuminating purposes, and the lower when it is used for fuel. Another type of price differentiation from which the monopolist can derive extra profit is based on differences in the circumstances of *supply*. Some units of the supply can be produced more cheaply than others. For example, if at equal rates the east-bound freight traffic of a railway would be distinctly larger than the west-bound, it would be profitable to reduce rates on the west-bound traffic. Otherwise, cars would have to be

brought back empty, at an expense not much less than if they were loaded. Another example is afforded by the rates charged by electric light and power stations. At certain hours, as in the early evening and in late afternoons in winter, more current is being used than at other times, creating a "peak load" upon the equipment of the plant. The capacity of the plant has to be large enough at all times to take care of this peak load; therefore, the peak could not be greatly increased without increasing the plant's capacity, which would increase its fixed expenses. At other hours of the day, however, when the capacity of the plant is not being fully utilized, additional current may be sold advantageously at a considerably lower price. The amount of current sold during these hours does not affect the peak load and hence does not affect the fixed expenses of the undertaking. Sometimes, as in railway transport, the two principles, class price and discrimination according to the relation which particular units of output have to the increase of fixed charges, work together in an exceedingly intricate fashion.

Between normal and monopoly price.

The laws of normal price and monopoly price discussed in this and preceding chapters, represent two extreme norms. In the case of consumption goods, an increasing number of price transactions fall somewhere between the two. There are a few absolute monopolies, and at the other extreme, competition has sometimes become so severe that competing producers have actually given away their products in a fight of extermination. The investigator of prices, however, will find almost every stage between cutthroat competition and absolute monopoly represented in practice.

In the main we live today under a regime in which competition has been shifted away from price by the "differentiation of products and sales effort." The average producer dreads the acid test of exact price comparison. He multiplies styles, grades, brands, and terms. He spends millions in advertising to convince purchasers that he has something that cannot be supplied by other producers. Each producer of a branded specialty is a quasi-monopolist, in that no competitor can offer that particular brand. In the case of such goods, consequently, there are no definite prices mechanically fixed by the interaction of supply and demand.

The producer fixes his own price in accordance with a procedure more or less similar to that explained under monopoly price. Price determination becomes a question of individual business policy in which the principal object is to keep the customer's loyalty and divert his attention from price considerations.

But the monopoly feature in these cases is more apparent than real. Underneath the surface the forces of supply and demand exercise a real control, not with so much precision as in the realm of free competition, but with quite as much power. Much has been made of the "growth of monopoly in recent years," but on the contrary, there may have been a growth of real competition. The reader may test the matter roughly by checking his own expenditures. The largest average expenditure is for food. Competition among producers and distributors of food, including the great packing companies and the chain stores, is genuine and effective. Rent is perhaps the next largest expenditure. There is no monopoly in housing. The same is true of most other consumption expenditures. Competition is very keen in the supply of clothing, automobiles and gasoline, tobacco, sports and amusements, education and travel facilities. It is only in the electric power, gas, telephone, water, and street-car and bus service that the average consumer is conscious of monopoly in any important degree; and the prices of these services are subject to public regulation, ineffective as that may be at times.

The interaction of supply and demand thus yields a uniform price only in a few instances. In the case of standardized goods such as wheat and cotton, which are sold on the great exchanges, competition does tend to bring about a uniform or precise price, but it is temporary and flitting. The price in the afternoon may vary markedly from the price prevailing in the morning. Such prices depend almost entirely on the estimated future conditions, and speculative estimates change with prices and the volume of sales themselves. Only in the case of a good which is strictly standardized, but which is not bought for speculative future sale do we get a manifest tendency toward uniformity likely to hold for a considerable period of time. The great majority of uniform prices apply either to branded specialties or to articles actually controlled by legal or illegal monopolies. In most other cases, the uniformity is apparent and not real. Thus

for many years the price of bread was more or less uniform, but the loaf differed from time to time in weight, quality, and wrapping. Competition may thus result in either uniform or different prices, but the tendency to differentiation of product and service makes uniformity the exception rather than the rule. Competition is just as powerful as ever, but it works out through substitutes, through the offer of supplementary service, or in better terms of payment. Monopolistic control is probably less widespread and important than it was in the last quarter of the nineteenth century. There is an effective substitute today for almost every consumers' good. The subject of unfair competition and restraint of trade is discussed further in Chap. XXVIII.

Prices of production goods.

In the case of short-lived, freely reproducible production goods such as some tools, coal, and most raw materials, normal price is controlled by the expense of production in about the same degree as is the price of a reproducible consumption good, but the demand factor is different. Consumption goods are demanded because they satisfy human wants directly and immediately, but production goods are demanded principally because they assist their owners in gaining a money income.

This introduces a new causal factor in price determination and affords an additional method of determining price or value: that of estimating the present worth or value of the expected future income, a method generally known as *capitalization*. In its simpler applications, this process is familiar to all. If a perpetual bond pays $60 a year interest and the rate of interest appropriate to bonds of this type and risk is 5 per cent, the bond will ordinarily sell for about $1,200 ($60 divided by .05). This method of valuation or price determination is frequently used in determining the market value of land, apartment houses, mines, oil wells, and business plants valued as entities or as going concerns. It is more complicated in actual usage than the simplified process given above. Account must be taken of obsolescence, depreciation, depletion, hazard, and the eventual scrapping or exhaustion of the property if it be perishable or exhaustible. But the essence of the process is the same. Present value comes from probable future value of income discounted or capitalized at the rates of interest appropriate to investments involving given risks or hazards.

This process of capitalizing or discounting expected future earnings is of fundamental importance, being at once a cause or determinant of value and a method of valuation. Some writers regard it as the most pervasive and powerful causal factor in the field of value and price. They hold that the price of production goods can be derived only from the value of the income which they produce. This is true in a sense, but it is also true that the future income will depend upon and vary with the expense of producing the good. For instance, water might become an indispensable part of some new process of production which promises to earn millions, but this will not give a large price or value to water. If the expense of producing a supply of water is small, the price of water will be correspondingly small, despite the fact that it is an indispensable factor in the profitable new process. Expense of production or reproduction is as important in this connection as capitalization of potential income; and the interest rate and demand factors behind the price of the ultimate product are as fundamental as either of the other two.

Although the capitalization process is widely used in the purchase and sale of real property, mines, and going business concerns, if property of the kind in question is freely bought and sold, more attention will be given to sales than to the capitalization of earnings, largely because the verdict of the market, taking account of all factors as it does, is properly considered more significant than any analytical estimate of future possibilities. And where parts of the property or business are reproducible, — for example, tools in a mining property, railway cars belonging to a railway — cost or replacement cost will be used as the basis of valuation. Finally, much unused land has a price and value, not because anybody capitalizes its future income, but because its owners believe that some day it will be usable and that before that time some other speculator will be willing to pay more than the cost to the present owner. It is a mistake to give to the process of price determination more precision than it has in real life; and an equal mistake to regard any one of a number of factors as determinative when all operate together. The essence of price determination and of modern economic life is equilibrium. *The balance between the various factors, and not the operation of any single one of them is what, for both theoretical and practical purposes, needs emphasis.* We have gone to some length to impress upon the reader the

concept of *one* value at a given time, not because we placed any stock in the possibility of accurately determining that value, but because we feel that the most accurate understanding of the concept of value must come from the unadulterated bases which underlie it. We are not dreamers who would have you believe that the tendencies and forces which we have presented are for obvious factors to be encountered in the everyday happenings of the world. We are, however, sufficiently imbued with the spirit of the fundamentalist to insist that our everyday relationships with value are attempts at *measurement* with too little regard for the *nature* of that which we attempt to measure.

The price at which a specified quantity of a given economic good is actually sold is a *realized* price, market price, or as often termed "market value." It is an accomplished fact. But it may tell us little about what the same good will probably sell for in the future or what it would have brought in the past if purchased in different quantity. A shrewd buyer frequently sells something that he purchased a day or few days previously for twice what he paid for it. The previous owner could have sold the good at a higher price if he had known its value. The price in the first sale was obviously no trustworthy measure of that good's general power in exchange.

The term "market value" more frequently means general or future power in exchange, than past or realized power in exchange. In the case of standardized goods which are freely reproducible and freely sold, the general power in exchange will be determined, usually within narrow limits, by reference to past prices.

Public authority and price.

In the Middle Ages there was considerable speculation by theologians and law-makers concerning the subject of "just price" — the ratio at which one thing *ought* to be exchanged for another. This term implies an important difference between the medieval and modern concepts of value. Professor Ashley has expressed it thus: "With Aquinas, it (value) was something objective; something outside of the will of the individual purchaser or seller; something attached to the thing itself, existing whether he liked it or not, and that he ought to recognize. And as experience showed that individuals could not be trusted thus to admit the real value of things, it followed that it was the duty

of the proper authorities of state, town, or gild to step in and determine it, and what the just and reasonable price really was."

This "just and reasonable price" was very often thought to be that price which would afford a reasonable compensation for the labor of the producer. When speculations upon this concept began to yield precedence later to inquiries into "natural laws," the idea of just price was supplanted by the idea of "natural price." This was sometimes interpreted as being determined by the labor put into a commodity (a dominant idea during the eighteenth century), but the growth of capitalistic production necessitated the recognition of other elements in price. In modern economic analysis we have abandoned the adjective "natural," with its misleading implication. Yet the competitive system is today so thoroughly accepted as the "natural" economic order, that there is a deep-seated conviction that normal competitive prices (measured by the expenses of production) are "natural and just" prices. This conviction, however, conflicts with the fact of the growth of a large industrial field ruled by monopoly rather than by competition. The question of "just price" is again a live issue — as it was before the growth of the competitive system. Public authority is frequently invoked to insure that the prices fixed by holders of municipal franchises and other monopolies are just and reasonable, although the emphasis is now shifted from protection for the producing laborers to protection for consumers.

The chief fundamental test which our courts are able to apply to the reasonableness of any particular price is its conformity to what the price would have been under competitive conditions. Thus it is often asked whether a particular monopoly charge gives a more than "normal" return upon the capital invested. Given the general acceptance of the competitive system, it is hard to see what other standard could be used. Moreover, the general consensus of recent court decisions is that the Fifth and Fourteenth Amendments to the Federal Constitution, prohibiting the taking of property without due process of law, prevent federal and state governments from exceeding this rule in the regulation of monopoly charges. And even this power is not conceded, except in the case of businesses affected with a distinct public interest, such as those conducted by public-service corporations. In practice, it has been found difficult to give precise definition to

"normal return" upon an investment in a particular public-service undertaking. It is often equally difficult to determine the amount of invested capital properly entitled to a normal return. In the long run, however, public authority has to be guided by the practical rule that the return allowed must be satisfactorily attractive to investors; otherwise the funds needed to maintain and extend our railways and public-service industries will not be forthcoming. The practical aspects of this subject will be discussed in a later chapter.

Other theories of value

The earlier economists used to emphasize the relation between the price of a thing and the amount or the expense of the labor spent in producing it — a relation much closer under the old methods of hand production than it is at present. The development of a systematic labor theory of value was the work of Karl Marx, founder of modern "scientific" socialism. This theory, in essence, holds that labor produces all value and that the interest on capital and the rent of land are unjustifiable deductions from the wages of labor — deductions that are made possible only by the existence of the system of private property in producers' goods. It is so obvious that things do not exchange today in proportion to the amount of labor involved in producing them, that to point this out in detail, as some economists have done, is unnecessary. Karl Marx himself recognized that his "values" were not measured by the actual prices of the market, and attempted vainly to set up a substitute explanation. But economics can recognize only the prices that really exist in the market, not that things *ought* to exchange in proportion to their labor costs.

The relation between price and the expenses of production has sometimes been stated in such a way as to lead to the inference that the expenses of production *cause* or *create* value. The cost of production theory of price, when so stated, is open to much the same objections as the labor theory. Suppose we perfect a machine at the expense of ten thousand dollars which will blow soap bubbles at the rate of a thousand an hour. Will it be worth ten thousand dollars? Certainly not; but why not? To say that the labor and materials have not been wisely used is simply to say that the machine has no value, which is just what we are

trying to explain. As a fact, it is not worth ten thousand dollars simply because no one is willing to give ten thousand dollars for it. We emphasize again that the expenses of production do not create value, but there is a sense in which price *causes* the expenses of production. That is, men think it worth while to spend money in producing things because they think that the products will sell for enough to recompense them for the expenses of production.

Many writers upon the subject of price took the facts of demand for granted, and contented themselves with examining the relation between price and the expenses of production. In more recent years writers have developed the analysis of human wants. The fact that utility in the economic sense is not just utility in the abstract sense, but the effective utility of a particular unit of a commodity, is the most significant point in this new analysis. Some writers have even gone so far as to take the facts of supply for granted, and to assume that price is explained when marginal utility is described. As a determining cause of price, utility has a logical priority over scarcity, in the sense that a demand will usually bring forth a supply. Yet in the analysis of the actual price-making process we have to recognize that utility and scarcity, demand and supply, are forces operating simultaneously, none of which can be neglected without obscuring the fundamental facts of the market process.

Finally we must recognize another determinant of prices — money, the unit in which value is measured as price. Money forces exercise an influence roughly comparable to that exerted by both demand and supply on other goods and services. Because of its importance, money has been reserved for separate treatment in the chapters immediately following.

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CHAPTER XIV

MONEY

The Nature of Exchange and the Implements of Trade

The practice of barter, the use of money, and the development of credit are usually accepted as typifying epochal steps in the exchange customs of economic life. Although the prevailing method of commerce at any time or place may be characterized as of the nature of either barter or monetary transactions or credit arrangements, the marvelous trading facilities of the modern *credit economy* have not entirely eliminated the necessity of either barter or money. The continuing practice of barter is observed in even the most cosmopolitan centers of commerce, as is the contemporary use of barter and credit in the most remote places of human habitation. Also, under critical conditions of economic and political life, the most modern systems of merchandising and the highly perfected implements of finance occasionally collapse and necessitate a temporary reversion from the use of both money and credit to the simple expedients of barter.

The invention and use of the implements of money and credit are primarily concerned with facilitating the exchange of goods and services. Sound monetary and credit policies serve also to promote industrial production and to advance the social welfare and national prestige in many ways. Basically, *all commerce is barter, and money and credit are merely convenient means of exchange.* Yet this simple truth is often disregarded in private business practice and in the formulation of public economic policies. The persistence of unsound monetary doctrines and misdirected credit practices has always been a constant menace to legitimate business enterprise and a frequent cause of social distress.

In the normal course of economic activities, the initial processes of basic industry are followed by the operations of *transport* and

merchandising. In the past, such emphasis has been placed upon initial production as to make this economic function apparently more important than the subsequent processes of exchange and distribution. However, in modern economic terminology, both transport and merchandising are properly included in the broader concept of production. It is a striking and unforeseen condition of the present economic regime that the physical production of goods, or the productive capacity of society, apparently has exceeded the facilities of exchange and distribution. As it is difficult to believe that the power to produce can exceed the capacity to consume, criticism has fallen upon the character of prevailing methods of exchange and the efficiency of the monetary and credit system. Consequently, the nature of the currency and the manner of operating the banking mechanism have recently assumed increased importance among the problems of economics.

Barter, money, and credit.

Marketing operations may take place under a variety of circumstances, the most elementary of which include the practice of barter, or direct exchange of goods and services for other goods and services without the use of a medium of exchange. *Barter* may be a satisfactory method of trading when prospective sellers and buyers can conveniently assemble their trade goods at a given market-place where each may find willing sellers of those things which he wishes to buy in exchange for those things which he has to offer in trade. This practice of "exchange in kind" is generally regarded as a characteristic of primitive civilization.

The possible convenience of barter and the extent to which it is actually practiced are always surprising to those who are not familiar with simplified living. A visit to the livestock and poultry exhibits of any county fair will reveal an active trading or "swapping" of breeding animals and fowls. The used car market is a modern form of barter. An analysis of the securities market reveals a large volume of transactions which are substantially of the nature of barter. The trading of farm products at the general store, particularly butter, eggs, vegetables, and fruits in exchange for clothing and other staple goods, which was a common practice in colonial and frontier days, still persists in many rural districts. This custom of exchanging goods at the store, or trading post, doubtless gave rise to the invention of money and also

to the initial use of credit. Although the existence of a money economy is often referred to as preceding the regime of credit economy, there is reason to believe that the appearance of money and the practice of credit in the processes of trade were coincident.

The first step in the development of money was the recognition of the need for a unit of measure as a *standard of value* or *common denominator* of merchandise values. The rating of the exchange values of units of other goods in terms of this *standard of value* established a price system which made possible the direct comparison of the values of all goods being offered for sale. It also made possible the setting up of trading accounts of credits and debits subject to future settlement in terms of the values thus established. The actual use of money as a means of future payment was, for the most part, unnecessary. The settlement of accounts was easily consummated by the subsequent delivery of goods of a value equivalent to a specified number of standard monetary units. In this instance, the monetary unit served as a standard of value and a unit of account, but not necessarily as a medium of exchange.[1]

The practices of foreign trade have always remained close to the primitive methods of barter. This condition is due to the instability of international measures of value and uncertain guaranties of international credits. Because of the prevalence of gold standard currencies during the period from 1875 to 1915, international trade and investment among advanced nations were supported by fairly uniform foreign exchange rates and dependable credit arrangements. The aftermath of the World War suspended the customary use of the gold standard in most countries. With this disappearance of a well known and dependable standard of international values, accompanied by other causes, foreign trading became irregular and declined. In order to sustain a medium of international trade, Germany, Russia, and Holland initiated a notable amount of direct barter, and reciprocal trading agreements among members of the British Commonwealth were undertaken. A Polish corporation bartered coal for a first class passenger liner built in Italy; Russia and Brazil traded wheat for

[1] It remained the practice of the Hudson Bay Company for over 250 years to conduct its trading upon the dual basis of barter and credit. Only recently have cash payments become customary in the great fur traffic of Canada. In like manner the commercial practice of the agricultural and mining frontiers combined barter and the use of trading credits before adequate sums of money became available for current needs.

coffee, bag for bag; and tramp steamers carrying foreign goods for barter appeared in every port.

The dual nature of money.

The practice of barter in primitive trade and in modern emergency transactions affords no accurate means of ascertaining and comparing the unit values of different kinds of goods. Furthermore, the conditions of barter impose the inconvenience of pairing mutually willing buyers and sellers, of arriving at a satisfactory quantitative balance of commodities to be exchanged in any given transaction, and of confining exchanges for the most part to "spot" transactions. In order to eliminate these difficulties of barter, an improved trading mechanism incorporating two different but co-ordinated elements was necessary. First, in order to reduce to a common denominator the unit values of the various commodities being exchanged on a given market, a standard unit of value was selected by common consent to serve as a means of comparing values and thus make possible the determination and expression of prices. Second, in lieu of direct exchanges in kind, several kinds and denominations of money were placed in circulation, thus making available a variety of media of exchange which would provide a convenient and accurate means of payment in all types of commercial transactions. In the beginning, certain kinds of goods which by their nature were of universal desirability, of relatively high and stable value, and which were durable and easily recognized as to kind and quality, became the accepted standards of value and were used in hand-to-hand exchange.[1]

The two outstanding functions of money briefly indicated above, to provide a *standard of value* by which the exchange values of goods are measured and compared and to serve as a *medium of exchange*, indicate the dual character of any adequate monetary system. Auxiliary to the function of the standard of value is that of the *unit of accounts*, or the *standard of deferred payments*, which is sometimes designated as a third monetary function. Also,

[1] Karl Menger, representing the Austrian School of political economists, testified to this character and origin of money as follows — "One or more goods of the highest degree of salability gradually became a medium of exchange for the entire community and thus acquired the character of what is called money. On this account they did not drop out of the category of goods, but simply occupied a new position in this category due to the fact that everyone purchased them for the purpose of re-exchange even when he did not desire them for his own consumption." W. S. Jevons emphasized the same principle more concisely by quoting Turgot: "Gold and silver, by the nature of things, are constituted the universal money independent of all conventions and laws."

auxiliary to the function of the medium of exchange is that of the *store of value*, which is sometimes included among the functions of money.

The definition of money.

The dual nature of money, its many existing forms, the increasing variety of credit instruments which supplement and, to a certain extent, displace some types of money, and the loose financial phraseology of business make a concise definition of money quite impossible. Perhaps the most useful definition of money is that which includes only *those instruments which are generally acceptable in hand-to-hand exchange and over-the-counter payments*. This concept of money is delineated by the apparently simple specifications of means of payment and general acceptability. *General acceptability* is the key quality of the purchasing power of money, and rests upon the belief of the acceptor that the money he receives represents durable and relatively stable value. The civilized world has yet to see an enduring monetary system based upon any standard of value or utilizing any medium of exchange not related, in its unitary value, to the precious metals. Consequently, any concise concept of the nature of money must recognize, as a condition of universal acceptability, the practical necessity of a more or less definite relation between the current forms and denominations of money and their ultimate convertibility into gold or silver.

Passing from the academic and legal concept of money to habitual business usage, a much broader terminology is seen to prevail. In business, one "borrows money" at the bank without receiving coins, government legal-tender notes, or banknotes; and one "deposits money" in the bank without placing coins or circulating notes in the custody of the bank. These transactions are accomplished by means of records of account and the circulation of negotiable instruments such as promissory notes, checks, drafts, and bills of exchange. These private credit instruments are neither universally acceptable nor legally recognized as money, nevertheless they are *generally more convenient* in their special exchange uses than are the conventional forms of money, so that they serve in approximately 90 per cent of all financial transactions. For this reason they are commonly termed "credit currency." However, credit currency is subject to definite limita-

tions as to its general acceptability and legal tender quality in payment of debt; its goodness and acceptability depend upon confidence in its ultimate exchangeability for standard coins or other forms of "lawful money."

Coinage and the Standard of Value

In every civilization since the Stone Age, measured quantities of copper, silver, or gold have become accepted as standards of value and media of exchange. These metals have been superlatively desirable in themselves, for decorative and utilitarian purposes, to almost every human individual and social group from the lowliest to the most exalted estate. They are durable, portable, divisible, and cognizable. They have not only constituted wealth, but they have incorporated in highest degree that most effective quality of wealth — universal desirability and exchangeability. It was natural that the possession of the precious metals should become a special privilege of monarchs, a monopoly to be shared with dignitaries of the priesthood who alone could sanctify the exclusive privileges and supreme powers of kings. Consequently, throughout history the control and, to a great extent, the actual possession of the world's supply of gold and silver are found to rest in sovereign hands.

The requisition of a part or all of the gold and silver derived from mining and foreign trade was a customary source of royal revenues. Bullion and foreign coins were delivered to the government treasuries where they were converted into "coin of the realm," of officially determined weight and fineness, and usually stamped with the portrait of the ruling sovereign. The face value of coins thus created usually exceeded the commodity or bullion value of the metal of which they were composed. This coinage-toll, or royal monopoly profit, is known as *seigniorage*.

Sovereigns often took advantage of the monopoly of coinage as an opportunity for occasional further profits by the practice of debasing the currency. By calling in the stock of metallic money in the country for recoinage and then reducing the weights of coins without changing their denomination, they could increase the number of coins without using more metal, thus deriving a net profit for the royal treasury. This procedure also facilitated the payment of debts contracted in terms of the original currency, and benefited all debtors at the expense of creditors. Debasing

the currency was a favorite expedient of Henry VIII of England and of Philip the Fair and Louis XIV of France.[1]

The fundamental difficulty with seigniorage was that it cheapened the money of a country for payments in foreign trade. Since coins were accepted in foreign trade only as bullion, the prices of goods expressed in money were necessarily higher than their prices expressed in bullion, by an amount equal to the seigniorage. One ratio of exchange could not long be maintained between coined money and bullion in domestic trade, and another ratio of exchange in foreign trade. When the currency was debased money prices tended always to rise, the value of the coins sinking to a level of the value of the bullion they contained. Under these conditions no one would voluntarily undergo loss by taking bullion to the mint for coinage and so the profits from coinage stopped. Every possible expedient, short of absolutely prohibiting foreign trade, was tried by sovereigns in their efforts to retain this source of profits, but market forces were always stronger than royal regulations.

After 1666, England made no charge for coining bullion into standard money. Most countries of continental Europe for many years have charged only sufficient to cover the expense of coinage. This charge has sometimes been called seigniorage, but it is more properly called *brassage*. Modern nations have not often attempted to secure profits from a monopoly of the coinage.

The United States mint made no coinage charge for either silver or gold until 1853 when a levy of one-half of 1 per cent was set for coining standard money. This charge was reduced in 1873 and abandoned in 1875. From January, 1879, until March, 1933, the United States exchanged gold coins, weight for weight, for bullion of standard fineness (nine-tenths gold, one-tenth copper) brought to the mint in lots of one hundred dollars or more in value. For crude bullion, or bullion not of standard fineness, gold coins were exchanged containing as much fine gold as was contained in the bullion, less a nominal charge for assaying, refining, and for the value of the alloy. Instead of coinage of the standard metal being viewed as a profitable prerogative of the government, it is now considered a public service to be performed at government expense. This policy is known as "gratuitous" coinage.

[1] Under Philip the Fair, the seigniorage charge was as high as 50 per cent. Charges of from 2 to 15 per cent were more common.

The manufacture of standard gold coins by the United States government for anyone depositing bullion at the mints or assay offices was suspended in 1933. By the Gold Reserve Act of 1934, the delivery to the government of all gold coins, gold certificates, and gold bullion was made compulsory and payment was made therefor in paper currency at an arbitrarily determined rate. Provision was made, however, for the provisional release of such sums of gold as might be considered by the President as necessary for the needs of the foreign exchange.[1]

Under the silver purchase acts of 1878, 1890, 1933, and 1934 specified quantities of silver bullion were purchased by the Treasury and converted into silver dollars. The "bullion value" of the silver dollar in every instance was less than the "face value." The coins thus provided were so inconvenient in use that they were in large part displaced in circulation by *silver certificates.* This arrangement has been quite profitable to the treasury.[2]

Subsidiary coins are coins of denominations less than one dollar made from metal purchased from time to time as needed by the mint, or as Congress directs. In none of these coins is the bullion worth as much as the face value of the coin. Such coins are sometimes called "token coins," the implication being that they pass from hand to hand at their full face value merely as a matter

[1] The Gold Reserve Act of 1934 provided that:

1. Title to all monetary gold and gold bullion in the country shall be vested in the United States.
2. The Secretary of the Treasury shall prescribe regulations by which gold may be acquired or held by the government.
3. The Secretary of the Treasury is authorized to issue gold certificates.
4. No gold may be coined and none may be paid out by the Treasury except for the purpose of settling international balances and maintaining the stability of the currency.
5. No currency may be redeemed in gold.
6. The Secretary of the Treasury may purchase or sell gold at home or abroad.
7. A fund shall be set up for the stabilization of the dollar.
8. The President is authorized to fix the weight of the gold dollar within certain limits, to issue silver certificates, to coin silver dollars of a weight proportionate to the reduced weight of the gold dollar, to redeem silver certificates, to collect seigniorage for coinage of silver and to fix the weight of minor coins.
9. Changes are authorized in section 16 of the Federal Reserve Act which pertains to the issue of circulating notes.
10. The Second Liberty Bond Act is amended to extend purpose and amount of bonds issued.
11. The President's past emergency actions are ratified.

[2] The Supreme Court in 1935 held that the sovereign powers of Congress were not exceeded by the sequestration of all monetary gold and gold bullion at a "profit" to the government of $2,806,000,000; and also concluded that the repudiation of the contractual agreement of the "gold certificates" and the "gold clause" of outstanding United States Bonds, both of which obliged the government to redeem these instruments in "standard gold coins of the United States of present weight and fineness," while without the purview of the Constitution, were within the sovereign powers.

For provisions of the Silver Purchase Acts of 1933 and 1934, see p. 230.

of habit or usage, supported by general acquiescence and convenience. More accurately, they are *credit coins*, because by the amount of the excess of their face value over their bullion value their acceptability depends ultimately upon the good faith of the government in maintaining their exchangeability into the standard money. In principle, our subsidiary silver coins would serve their purpose just as well if they were made of some cheaper metal. A very considerable profit has accrued to the government since 1853 from limited coinage of subsidiary silver coins and minor coins.[1] In the accounts of the federal treasury this profit is also called seigniorage.

The evolution of the coinage.

The story of commerce in that part of North America which now constitutes the United States is particularly interesting because it epitomizes within the span of a few generations the evolution of money throughout all history. The processes of barter which had originally prevailed among the Indian tribesmen persisted in remarkable volume and in varied forms for 250 years after the coming of the white man.

During the colonial period, a few foreign coins, mostly Spanish, found their way into the settlements but were either concealed in private hoards or impounded by the colonial governments as security for their issues of paper currency. In a few instances, foreign silver coins were reminted under colonial authority. It was the predominance of Spanish silver among coins received by the colonists in trade that determined the name, weight, and fineness of the first official coins minted under the authority of the Constitution.[2] Considerable amounts of Spanish silver entered the country in the trade which followed the War of Independence. These Spanish coins constituted an important part of our monetary circulation until the development of gold and silver coins which came into effective production about 1850.

Bimetallism in the United States.

Bimetallism was inaugurated in 1792 as the original principle of American coinage because it had been fairly successful in western Europe and because the young republic could not muster

[1] Nickels and pennies are known as "minor" or "token" coins.

[2] In these respects the early American dollar was made to resemble closely the old Spanish dollar, which took its name from the German thaler and similar north European coins of the same name. The original thaler was probably coined in Bohemia about 1518.

a sufficient amount of either gold or silver to supply the minimum basis of an adequate issue of paper currency under a monometallic system.[1] Under bimetallism the dollar was defined as either a definite amount of gold or a definite amount of silver. In practice this meant the opening of the mints to the unlimited coinage of both gold and silver into dollars, or dollar multiples. The weight of silver in a silver dollar and the weight of gold in a gold dollar was established by law, and the ratio of one weight to the other was called the *mint ratio*. The silver coins contained $371\frac{1}{4}$ grains of fine metal per dollar, and the gold coins $24\frac{3}{4}$ grains per dollar, a ratio of 15 to 1 thus being established. This ratio was adopted after careful consideration. Records of the London market showed that only during one year within the preceding century (1760) had the value of gold to silver fallen so low as 14 to 1, and in only one year (1703) had it advanced to 16 to 1. Furthermore, the facts that neither gold nor silver was produced in North America and that no speculative trading in these metals existed in the United States seemed to afford additional safeguards against future disturbing variations between the market ratio and the lawful mint ratio.

It was afterward found, however, that, because of the importation of Spanish silver, gold became worth in the market slightly more than fifteen times as much as silver and, as a consequence, that gold was hoarded or exported and disappeared from circulation and only silver was brought to the mint for coinage. Soon, the newly coined silver dollars, too, went out of circulation, but for another reason. Although somewhat lighter than the Spanish dollars which were also in general circulation at the time, because of their new and attractive appearance they could be used advantageously in trade with the Spanish possessions in America. They were exported for that purpose, while the heavier Spanish dollars were brought back and presented at the mint for recoinage at public expense, and at a profit to the importer, only to be reexported and circulated in the Spanish possessions. This wasteful coinage of silver dollars was stopped in 1804, leaving the mint open to the coinage only of gold, the smaller silver coins, and minor

[1] The act of 1792 followed in detail the recommendations of a Report on the Establishment of a Mint by Alexander Hamilton, then Secretary of the Treasury. Hamilton incorporated some of the recommendations contained in earlier reports by Robert Morris and Thomas Jefferson. During a period of twenty years the total coinage was little more than $10,000,000 in equal proportions of gold and silver. Many of these coins left the country so that the actual circulation at any time was very much less than the total coinage.

coins. Until 1834, American coins were only an insignificant part of the circulating medium.

In order to secure a more adequate coinage, Congress changed the legal mint ratio to 16 to 1 in 1834 by reducing the weight of the gold dollar. In establishing this mint ratio, however, it overshot the mark, for gold was not worth quite sixteen times as much as silver in the market. Although the number of gold coins increased, little silver was brought to the mint, and silver coins quickly disappeared from circulation. To provide an adequate supply of small change, Congress abandoned in 1853 the principle of the unlimited coinage of standard silver coins smaller than a dollar, and ordered that such silver coins should be coined only from bullion purchased by the government at the market price. At the same time the weight of the *subsidiary coins* was reduced by 6.91 per cent to insure their being retained in circulation.

Most opponents of bimetallism, while admitting that it might possess some advantages if feasible, deny its possibility. The difficulty is, they maintain, that while the *mint ratio* (the ratio of the weight of silver in the monetary unit to the weight of gold in the monetary unit) has to be fixed and definite, the *market ratio* at which gold exchanges for silver is not fixed and definite, but is subject to the changing influences of supply and demand. If gold is relatively over-appraised by the mint ratio, only gold will be brought to the mint for coinage, for the under-appraised silver will be worth more as bullion than as coin. The result will be, not a bimetallic standard, but a single standard composed of the metal which, at the mint ratio, is overvalued. However, if, by a change in the market ratio of the metals, silver in turn becomes over-appraised by the mint ratio, the standard coins composed of gold, which are already in use, will disappear from circulation, being hoarded, melted down, or exported, and silver will become the actual standard of value. The opponents of bimetallism claim, in short, that it encounters a formidable obstacle in the principle known as *Gresham's law*, which is usually summarized with rough accuracy in the statement that "bad money drives out good," or that "the cheaper money drives out the dearer." [1]

The weightiest argument for bimetallism is found in its so-called

[1] See p. 233.

compensatory action, which is explained substantially as follows: If the market ratio should change, leaving one of the metals somewhat over-appraised by the mint ratio, Gresham's law would begin to operate. But its operation would specifically be checked. The metal under-appraised by the mint ratio would be thrown upon the market and would be available for industrial uses and for export. The other metal would be drained from the market into monetary uses. The market cannot presume to be indefinitely elastic. It will not absorb large quantities of the other metal without a marked increase in its price. In other words, the flow of one metal out of circulation and the flow of the other into circulation will hardly have begun without tending to correct the original divergence of the market ratio from the mint ratio. If the pendulum swings too far in the other direction, similar forces will be brought into operation, so that the net effect of the compensatory action of bimetallism would be, it is claimed, a continuous *tendency* on the part of the market ratio to agree with the mint ratio.

The appeal to history has been used both by bimetallists and their opponents. The claim of the monometallists that legal bimetallism is apt to mean actual monometallism, with the relatively cheaper metal as the standard, has been substantiated many times in the monetary experience of different nations. On the other hand, the bimetallists are able to point to some fairly successful bimetallic systems, such as that of France in the first half of the nineteenth century. But it would hardly be possible for any nation independently to maintain the double standard under the present conditions of a large and fluctuating annual production of the precious metals, coupled with an international commerce of vast proportions.

The discovery of gold in California in 1848, in Australia in 1851, and shortly thereafter in Colorado, suddenly increased the world's supply of gold by an unprecedented amount. The careful estimates of Dr. Adolf Soetbeer indicate that as much gold was produced in the third quarter of the nineteenth century as in the preceding three centuries and a half following the discovery of America. The result was to increase the discrepancy between the mint ratio and the actual market ratio of exchange of gold and silver, even though the production of silver had also been greatly increased. Gold was brought to the mint in large

amounts and silver was withdrawn from the currency and profitably sold abroad as bullion.

In a general revision of the coinage laws made by Congress in 1873, the silver dollar, which had not been in actual circulation since 1834, was dropped from the list of authorized standard coins. Although this action received little public attention at the time, great political significance was, in subsequent years, attached to it. It has been repeatedly condemned in political controversy as the "Crime of 1873," though the law merely gave legal recognition to an existing fact.[1]

A sudden depreciation in the bullion value of silver which was coincident with the depression of 1873, brought the question of bimetallism into the foreground. Since the seventeenth century the market ratios of gold and silver had fluctuated between relatively narrow margins, and in no year since the establishment of the United States mint had the average price of an ounce of gold been less than 15 or more than 16 times the price of an ounce of silver. In 1875, however, the market ratio rose to 17 to 1, by 1878 it was 18 to 1, by 1886 it was 21 to 1; and in 1896 it was 31 to 1.[2] It is clear that if the opportunity for the free and unlimited coinage of silver at the ratio of 16 to 1 had still existed, there would have been another sudden change in the actual monetary standard. Gold would have been under-appraised by that ratio, and would have disappeared from circulation, and silver would have taken its place. It was the realization of this fact, coupled with the belief that the silver standard would mean a "cheaper dollar" and higher prices, that led to a popular agitation in the West for the free and unlimited coinage of silver which continued for more than twenty years.

Compromise measures. — The Bland-Allison Act, passed by Congress in 1878, authorized the Secretary of the Treasury to purchase at market prices not less than $2,000,000 nor more than $4,000,000 worth of silver bullion per month, and to coin it into dollars. Consequently, the amount of silver coined was in excess

[1] Some silver dollars were coined nearly every year from 1838 to 1873, but very few were circulated.

[2] The causes of this unprecedented decline in the relative value of one of the precious metals were complex. The following may be mentioned as contributing circumstances: (1) Cessation of an extraordinary demand for silver in India which had existed since 1850; (2) stoppage of the unlimited coinage of silver in several European countries; (3) discovery of large silver deposits in the United States; (4) increase in the value of gold, as evidenced by a general decrease in the prices of commodities.

of the demand for that particular kind of money, but the movement in favor of the unlimited coinage of silver continued to gain strength.

A second compromise was effected in the Sherman Silver Purchase Act of 1890, which provided for an increase in the amount of silver purchased to 4,500,000 ounces each month, practically the entire output of all American mines, which was to be paid for in *treasury notes*. These treasury notes were to be full legal tender, and were redeemable in gold or silver coins at the discretion of the Secretary of the Treasury.

The Sherman Act was soon tested by a period of business depression. The country was suffering from an adverse balance of trade and gold was desired by the banks for export to support the foreign exchange rates. The bankers presented the new treasury notes, together with other forms of money, at the federal treasury and asked that they be redeemed in gold. Under the law the treasury might have insisted upon paying them in silver. But, at the urgent insistence of President Cleveland, the government did not avail itself of this option. Under the operation of the Sherman Act, the treasury was virtually exchanging gold coin for silver bullion at a time when gold was sorely needed and when the silver, steadily decreasing in value, remained idle and useless in its vaults. The government's stock of gold was rapidly depleted until Congress, in a special session in 1893, ordered that the purchase of silver under the Sherman Act be stopped. At about the same time, with the co-operation of a group of New York bankers, the government succeeded in floating a gold loan and thus replenished its reserves.

The agitation for the free and unlimited coinage of silver continued with increased vigor, and was made the principal issue in the Bryan campaign in 1896. It was then alleged that the yet continuing industrial depression could be alleviated only by "more money" and "cheaper money." The most effective argument of the friends of silver was found, however, in the admitted fact that the value of gold, as shown by falling market prices, had been increasing. This, it was argued, was a hardship to those who had borrowed money on long-term obligations such as mortgages, because they would be forced to repay in value or purchasing power more than they had borrowed. The defeat of the advocates of bimetallism in 1896 would probably not have

stopped the agitation for the unlimited coinage of silver, had it not been for a notable increase in the world's annual production of gold which, together with other things, brought a general increase in prices.

The later history of the silver dollar.

Although the United States had virtually been on the gold standard since 1834, monometallism was formally and definitely recognized by law in 1900. Up to 1873 the silver-dollar coinage had amounted only to $8,000,000. The coinage under the Bland-Allison Act was $378,000,000 and under the Sherman Act $187,000,000. Coinage of dollars under the Sherman Act continued until 1904, when the bullion that had been purchased between 1890 and 1893 was exhausted. This was the end, for the time being, of the forced increase of our silver currency. It also concluded a concerted political agitation throughout the world for a return of bimetallism that had resulted in a number of international conferences, two unsuccessful presidential campaigns for bimetallism in the United States and finally, in a complete defeat in both Europe and America.

The end of the World War added another chapter to the history of silver. The organization of armies, their mobilization in large camps, the operations of the war industries, and the circulation of the United States currency abroad had greatly increased our monetary requirements. Higher wages, the rising price level, and increased spending had advanced the demand for small change. Likewise, the subsidiary coinage of all important countries was greatly increased. Furthermore, the world's production of silver had declined, largely by reason of unsettled political conditions in Mexico. The deleterious effects of the resulting increase in the price of silver were felt especially in British India, where more silver coin customarily circulated than in any other country. In September, 1917, the United States mint was paying $1.16 per ounce for silver. Silver had not reached so high a price since 1878. At the price of $1.30 per ounce, the bullion in a silver dollar would have been worth more than a dollar, and silver coins would have been melted down for export. The price of silver did not then reach that level, but it did go high enough so that it became profitable in India to convert silver rupees into bullion. The Indian government then increased the redemption value (in

British currency) of the silver rupee. India had already obtained large quantities of silver from China, whose people were induced by the high prices offered to export some of their vast stores of that metal. Nevertheless, the increasing scarcity of currency led the people of India to hoard silver, and this, of course, merely increased their difficulties. The British and Indian governments finally turned to the United States for aid.

The operation of the Pittman Act.

Of our total stock of 568,000,000 silver dollars, over 490,000,000 were held in the federal treasury and were represented in circulation by silver certificates. Here was a convenient stock of silver which could be utilized in the emergency. The Pittman Act of April, 1918, authorized the treasury to melt and sell these silver dollars, up to the amount of 350,000,000, at a price not less than a dollar per ounce. In the meanwhile, the silver certificates covered by these silver dollars were to be withdrawn from circulation, their place being taken by a special issue of federal reserve bank notes, secured by short-term obligations of the federal treasury. The melted coins, however, were later to be replaced by dollars coined from silver from American mines purchased at the fixed price of a dollar per ounce. Altogether a little more than 270,000,000 silver dollars were melted down under the provisions of the Pittman Act. Of the bullion thus secured some was used in making subsidiary coins, but the greater part was sold to the British government for the use of the government of India.

From May, 1920, to June, 1923, the treasury purchased domestic silver at one dollar per ounce as required by the Pittman Act, while the international market rate was usually below 70 cents. The recoinage of silver dollars began in 1921 and continued until April, 1928, when all of the silver dollars melted had been replaced. As the new dollars coined from domestic silver became available, silver certificates were issued against them, and bank notes were withdrawn from circulation.

Silver legislation of 1933 and 1934.

In May, 1933, the Thomas inflation amendment to the Agricultural Adjustment Act [1] authorized the President, among other things, to fix a coinage ratio between gold and silver and to provide for the unlimited coinage of gold and silver at the ratio

[1] See p. 222

so fixed. Thus, despite the failure of bimetallism after patient and continually unsuccessful experiments over the period of a century, the President was authorized to establish a bimetallic currency at any ratio he might choose.

In December, 1933, the President exercised his authority by issuing a proclamation which provided for purchase by the treasury of at least 24,421,410 ounces of silver annually for a period of four years, this amount being the approximate national output for 1932. The net price at which the silver was to be purchased was 64.5 cents an ounce,[1] a value 50 per cent above the market price of silver on the day of the presidential proclamation. The mints were to make a seigniorage charge of 50 per cent, thus returning to those who offered the silver for coinage silver dollars containing only half of the metal presented. This meant that for each ounce of bullion brought to the mint the government would exchange legal tender silver coins weighing half an ounce and would retain a substantial royalty. This plan of silver purchase was also designed to furnish a substantial subsidy to the producers of silver. However, Congress was not satisfied with the prospective results of the policy and, by the Silver Purchase Act of June 19, 1934, authorized and directed the Secretary of the Treasury to undertake more intensive treasury activities in the manipulation of the silver market. This law also authorized the President to acquire on government account all privately owned silver bullion.

The Silver Purchase Act of 1934. — This act provided for the acquisition of silver by the government sufficient to maintain a silver coinage value equal to one-third of the monetary gold stock, and not more than one-fourth of the total monetary stock of both gold and silver. The amount of silver required to meet this ratio, December 31, 1934, was 2,125,000,000 ounces, and the government was faced with the task of securing an additional 1,000,000,000 ounces of silver in order to comply with the terms of the law.

On August 9, 1934, the President exercised his authority under the Act of June 19, to require delivery to the government of privately owned silver bullion. The Executive order did not apply to foreign or domestic coins, newly mined domestic silver,

[1] Equivalent to a price of 38 cents under the old gold standard. This price of silver placed the relative purchase price of gold and silver upon a ratio of 27 to 1, as compared with the old bimetallism of 16 to 1.

or manufactured articles. Its obvious purpose was to acquire the stock of silver held by speculators. A fixed price of 50.01 cents per ounce was paid for this silver, and the amount thus secured during 1934 was 111,000,000 ounces. This quantity was only a small contribution toward the total purchases directed by the statute. Newly mined domestic silver amounting to 21,400,000 ounces was purchased within the year at 64.5 cents per ounce, and 165,000,000 ounces were secured in the "open market" at varying prices.[1]

During this period and later in 1935, the treasury actively extended its silver purchases abroad. In support of the Silver Purchase Bill in Congress it had been argued that the artificially increased price of silver contemplated by the bill would be a beneficent gesture toward our friendly silver standard neighbors — their monetary media would thereby be "increased in value." The result, however, proved to be quite different. The currency systems of both China and Mexico were seriously disturbed by the loss of their silver to the United States treasury. Mexico was able to rescue her reserves only by impounding silver coins and bullion and issuing semi-redeemable circulating certificates instead. The Chinese government unsuccessfully appealed to Washington to desist from further purchase of silver in China, and subsequently, in November, 1935, was obliged to abandon the silver standard.[2]

The inflow of gold to the United States so rapidly increased the gold reserves that, despite all silver purchases, no progress was being made toward establishing the one-to-three ratio of silver to gold in the coinage value of "monetary stock" required by the Act of 1934.[3] After forcing the market to a peak of 81 cents on

[1] During the years 1933 and 1934, the open market price of silver in New York varied from a low of 41¾ cents, May 1, 1933, to 61 cents, April 26, 1934.

[2] On December 31, 1936, the monetary stock of silver was less than 2,500,000,000 ounces.

[3] Aside from the purely inflationary aspects of the 1933–1934 silver purchase program, its justification and its probable results are significantly summarized by Professor Edwin W. Kemmerer, a widely recognized monetary authority and Professor of International Finance at Princeton University. He says,

"The silver money problem in the United States is fundamentally not an economic problem, but a political one. It is assuming importance today not by reason of any monetary need of the country but because we have seven States that produce substantial quantities of silver, each of which has two United States Senators, . . . in 1931 . . . they had less than 3 per cent of our continental population, . . . their entire silver output was worth less than nine million dollars, or was equal to about 1 per cent of the value of our national wheat crop for that year, and about half that of our peanut crop. A plan that *Does Something for Silver* by paying a large government bonus to American silver producers over a period of four years . . . will perform no useful monetary function in the United States, but the removal of the competition of this American produced silver in the world's silver market will help India sell her enormous surplus of monetary silver at better prices and lessen the

April 25, 1935, the treasury discontinued its aggressive silver buying campaign and the open market price in New York quickly declined to 49¾ cents.

Monometallism in the United States.

We now return to the consideration of the nature and use of money from which we diverged on page 220 to follow the erratic course of the "battle of the standards" which began with the adoption of bimetallism in 1792. The physical difficulties of maintaining in concurrent circulation standard coins of both silver and gold, at a fixed legal ratio, when their bullion values were certain to vary independently, was evident from the beginning. Under the simple logic of *Gresham's law*, the two standard metals were alternately withdrawn from and reinjected into the circulation until the exigencies of the Civil War temporarily removed the national monetary system from any juristic or physical relation to either gold or silver. Although the silver dollar remained a *de jure* standard of value until 1900, gold had been the *de facto* foundation of the currency since 1834, with the exception of the 14 years of suspended "specie payment" preceding 1879, and so remained until 1933.

It is noteworthy that as soon as the gold mines of California and Colorado came into production, the gold standard automatically became effective in the West. Western prices were quoted in gold, and raw gold, crudely measured, became the popular medium of exchange. Bank notes and even government legal tender paper, because of their doubtful redemption and uncertain value, were soon largely displaced in the gold-producing sections by locally minted gold coins which entered into general circulation. West coast trade by sea with the East and abroad was transacted upon a gold basis. The flood of California and Pikes Peak gold to the East supplied an open gold market in New York. Thus, the daily gold quotations in paper dollars became, in reality, a measure of the fluctuating national currency in terms of the more stable element, gold, and made possible the translation of all greenback prices into gold values. Foreign trade was conducted upon a gold basis, and contracts, when considerable values or futurities were concerned, specified payment in gold.

depressing influence of these Indian sales on the silver market." — *Kemmerer on Money*, 2d ed. Winston Co., 1935, pp. 120–122.

The varied and painful experiences of a hundred years of nominal bimetallism, when considered in contrast with the spontaneous development of the *de facto* gold currency in this country, the simplicity of the operation of the gold standard in Europe, and the relative stability of the monetary and credit system based thereon, seemed to lead logically and conclusively to the Gold Standard Act of 1900.

The gold standard. — The Gold Standard Act of 1900 has been widely credited with having successfully combined the accumulated wisdom of world-wide monetary experience and an accurate understanding of economic conditions and exchange requirements in the United States. All commercial nations of importance had at that time firmly established their currencies upon monometallic standards of value. Most of Europe and the British Empire were on the gold standard. Most nations of the Orient and the Americas south of the Rio Grande were on the silver standard, which in earlier times had prevailed generally. Bimetallism had been tried in some parts of Europe and had been abandoned. The act of 1900 placed the monetary system of the United States squarely upon gold. It specifically defined the standard dollar as containing 25.8 grains gold, nine-tenths fine (23.22 grains pure), to be coined in denominations of $2\frac{1}{2}$, $5, $10, and $20. All other forms of lawful money of the United States were made redeemable on demand at the United States treasury in standard gold coins. Provision was further made for the unlimited coinage of gold upon presentation at the mint, at a nominal service charge, and for both purchase and sale of gold bullion at the mint at $20.67 the ounce.

Gold standard defined. — The above provisions of the Gold Standard Act, together with the *legal tender* clause, constitute the five customary requirements of a gold-standard monetary system; namely, (1) description by name, weight, and fineness, of the standard unit and of authorized standard coins, (2) parity of all forms of currency by obligatory redemption, on demand, in standard coins or bullion, (3) the legal tender qualification, (4) the maintenance of an open gold market, (5) "free and unlimited coinage" of the standard metal.

The concise definition of *the gold standard* may, however, be confined to much narrower specifications than the five which we have indicated. Professor Kemmerer offers the following:

"Briefly, the gold standard is a monetary system in which the unit of value, be it the dollar, the franc, the pound, or some other unit in which prices and wages are customarily expressed and in which debts are usually contracted, consists of the value of a fixed quantity of gold in a free gold market." [1]

The monetary unit is thus a commodity which the government *buys and sells at a fixed price.* It pays a fixed price at the mint; it sells for a fixed price at the treasury, by exchanging it for other forms of money.

In this abbreviated definition, we find no mention of standard coins, redemption of paper money and subsidiary and minor coins, free coinage, or legal tender. But if these customary auxiliaries to "a free gold market" were not provided, many practical qualities of a good monetary system would be conspicuously wanting. Under normal monetary conditions, in a nation having a monometallic standard of value, the actual stock of money is made up of a variety of coins and paper money, including standard coins, all of which circulate at a parity.

Convertibility and stability. — The primary determinants of the composition, size, and denomination of the several elements of the currency are *convenience*, *safety*, and *general* acceptability in monetary transactions. A further essential of a satisfactory currency system is that it shall tend to sustain a *relatively stable level* of *average prices* and *wages*. It is for this reason that national currencies, in their unitary values, customarily are related to a metallic standard unit of value, either gold or silver, of lawfully defined weight and fineness. Gold was finally chosen as the superior one of these monetary metals because of its indestructibility, its high value, and the superior stability of its value in the world markets. The uniform purchasing power of the coins and paper money of a currency based upon a metallic standard resides in the lawful provision that all elements of the currency shall be convertible or redeemable on demand in standard coin. Inasmuch as standard coins have a relatively constant and certain bullion value, the redemption process imparts to all elements of the currency a like quality in the world markets. Because of the "redemption value" and consequent stability of paper money, under the gold standard, and its general convenience as well, it largely displaced standard coins as a popular medium of domestic

[1] E. Kemmerer, *op. cit.*, pp. 1–2.

exchange. For several years following 1918 a considerable amount of United States paper currency was in circulation abroad. Gold coins and "standard bars," regardless of the country of their origin, serve as the essential currency of international trade — the settlement medium for making international payments.

Elasticity. — It is also important that a monetary system shall provide at any time a volume of currency adequate in amount but not in excess of the needs of trade. That is to say, the currency should be quantitatively elastic, automatically increasing and decreasing in direct proportion to the current variations of business. At the time of the *de jure* inauguration of the gold standard, in 1900, the total stock of money in the country amounted to $2,266,320,000, of which 44 per cent was in gold. The sum actually in circulation was $2,081,000,000. The stock of gold coins, standard bars, and silver held as a reserve in the federal treasury in support of the active currency was $855,000,000. At that time the currency of the country was peculiarly inelastic. The government issues of coins, and gold and silver certificates ($1,703,299,000), and treasury notes of 1863 ($346,681,000) were in no way related in amount to the changing needs of trade. The national bank notes ($309,640,000), issued against United States bonds owned by the banks, were likewise unresponsive to business requirements.[1]

Federal reserve notes.

When the federal reserve banking system became operative in 1915, federal reserve notes constituted a new element of the currency which incorporated the much needed quality of elasticity. This was accomplished by concentrating most of the gold reserves of the member banks in the twelve regional federal reserve banks and providing for the rediscounting, by these regional banks, of commercial paper supplied by the local banks. This "eligible paper" immediately became available as a basis for the issue of federal reserve notes to the value of the eligible paper rediscounted, but the issuing federal reserve bank was obliged to pledge an additional security in gold amounting to 40 per cent of the value of the notes. The United States treasury undertook to redeem these

[1] In order that we may indicate the relation of the standard of value to bank currency it is necessary to refer to certain features of the banking system which are more fully described in the succeeding chapter.

circulating notes at face value in standard gold on demand. Thus, the federal reserve notes were designed to automatically appear and disappear in direct proportion to the fluctuating needs of trade, as measured by the volume of funds currently required by local banks for legitimate merchandising, agriculture, and manufacturing purposes. At the same time the 40 per cent "gold reserve" sustained this elastic bank currency at gold parity in both foreign and domestic exchange.

The gold bullion standard is a variation of the gold standard which is well known in France. It was also made effective in England in 1925 and continued until that country went off gold in 1931. Under the gold bullion standard, gold coin is withdrawn from general circulation by confining the redemption of paper and subsidiary currency, on demand, to such large amounts as definitely to restrict the conversion of nominally redeemable currencies into gold. In England, redemption was confined to multiples of about $8,000 representing the value of a single standard bar, weighing about 19 pounds (troy). Adequate gold is thus made available in convenient form only for foreign trade and large domestic transactions and hoarding is discouraged, but all the money of the country is maintained at gold parity. The point must not be missed, however, that all forms of currency are *constructively* redeemable, on demand, in standard metal. The practical difference, therefore, between the operation of the gold coin standard and the gold bullion standard is primarily a matter of convenience in the conversion of small amounts of currency into gold.

Commodity standard currencies.

The currency systems described above, whether bimetallic, monometallic, or based upon a primitive standard of value such as beaver skins or wampum, are properly designated as *commodity standard currencies.* They are so called because the standard of value is a definite quantity, by weight and fineness, of a specific commodity — customarily gold or silver. Its value as money is practically identical with its value as a commodity. For example, under the gold standard, gold coins and gold bullion might be transformed in any way, bullion to coins, coins to bullion, or United States coins melted down and reminted into British or French coins. In either form the value remained essentially

unchanged. A second essential of a commodity standard currency is that all elements of the currency — paper money, subsidiary coins, and minor coins — must be convertible at face value on demand into standard coins. These characteristics may be summarized as — (1) the equating of the monetary unit to the open market value of a given number of grains of gold or silver bullion; (2) the recording of prices in terms of the monetary unit through the exchange of goods and services for money of convenient forms; (3) the maintenance of the parity of the standard in all varieties of current money through their interchangeability. These are the fundamental facts which have been considered essential to the qualities of superior stability and certainty of the *sound money currency systems* of the world since the advent of which is called "money economy."

Fiduciary currencies.

When the general circulation of money is sustained by considerations of immediate currency needs and the lack of other lawful money, or is prescribed by effective governmental authority, or is maintained by custom or by "confidence" in continuing fiscal integrity of the government, it is called *fiduciary currency.*

The underlying principle controlling the value of the fiduciary standard unit is that of scarcity or monopoly value. In contrast with commodity standard money, fiduciary currency is not convertible on demand into standard coins or exchangeable for a predetermined amount of any commodity. In most instances, fiduciary currencies are composed of money having very little value as a commodity. The United States greenbacks of 1862–1879 were of no commodity value. Their value as money rested upon fiduciary considerations related to potentialities of political integrity and future conversion. The rentenmark currency of Germany in 1923–1924 possessed a high monetary value which rested upon their scarcity, the currency needs of the time, and fiduciary considerations involving conditions of possible future conversion. During the World War, when metallic commodity standards were suspended nearly everywhere, fiduciary currencies generally prevailed. Later, Great Britain and the United States suspended the use of convertible money for fiduciary currencies which, by government mandate, are lawful money and acceptable

in payments of debts, but are not "redeemable" at face value on demand in any valuable thing of specific quantity or quality.[1]

Fiduciary currency is not, necessarily, confined to paper money but, whatever may be its composition, it has a greater value as money than as a commodity. The currency of India from 1893 to 1898, although on a silver basis, was fiduciary because, under existing circumstances, the value of silver rupees was substantially higher than the market value of an equivalent amount of bullion. The mints were not open to free coinage and the rupee was in no way tied to silver or gold in international exchange.

Managed currencies.

The monetary system which uses for its standard of value a basic commodity, which by common knowledge has superior qualities of stable value and universal desire, is a spontaneous evolution of the natural processes of unrestrained production and unrestricted marketing. The determination of individual prices and of price levels in an open market under the operation of a currency based upon such a natural standard is characteristically *automatic*.

The automatic process by which prices are arrived at by the balancing of the unitary values of all kinds of goods against a commodity standard unit of value may be disturbed either (1) by an *artificial control of quantity or quality of merchandise admitted to the market*, or (2) by the *official control of the amount and nature of the means of payment made lawfully available for trading on the market*. The former is a manifestation of monopoly in production and marketing which, in this country, has customarily been held to be obnoxious to sound economic policy. The latter is the exercise of legislative or administrative authority to suspend, partially or wholly, the automatic functioning of a natural commodity standard in an open and unrestricted market, and to substitute therefor a modified or entirely different system which may be so politically controlled as to achieve certain desired results. In earlier times such politically desired results usually were concerned with increased royal revenues and public funds. Latterly, however, the more frequent objectives of political control or management of the currency are the stabilization of

[1] For a complete and concise discussion of the fiduciary currency see Edwin W. Kemmerer, *Money*, Macmillan, New York, 1935, pp. 96–101.

prices, the reduction of speculation, the elimination of financial crises, and the alleviation of economic depressions.

In the earlier efforts at currency management, governmental authority was directed to the regulation of the supply of money, either by the application of the principle of seigniorage to the coinage or by the device of maintaining a currency denominated by or composed of inconvertible paper money. Over short periods of time and particularly at times of national emergency when monetary metals were hoarded or exhausted, when credit failed, and when a sudden increase in government funds was imperative, resort to seigniorage and to the use of fiat money have often served a useful purpose.

Emergency issues of irredeemable paper money. — Because of extraordinary requirements for government funds at times of national emergency, the issue of irredeemable circulating notes is frequently unavoidable. As an incident of the revolutionary government of France (1789–1796), inconvertible "assignats" were issued to the amount of 45 billions of francs. Confiscated lands of the crown, the church, the nobility, and of emigres were pledged for the ultimate redemption of these notes. By May, 1807, the French assignats were repudiated and worthless. Nevertheless, they served the imperative need for government funds at a time when taxation and the issue of interest-bearing bonds were ineffective means of public finance. Under such circumstances the issue of inconvertible currency notes is accurately described as a "forced loan" concealed behind an issue of managed currency.

The issue and partial repudiation of American colonial and continental currencies, and the later issue of "greenbacks" during the Civil War, and the ultimate conversion of the latter in gold, at face value, are incidents of our own financial history. It is noteworthy that revolutions usually result in both the issue and repudiation of paper currency. When revolutions fail, as did the secession of the southern states, their obligations as a matter of course became worthless. When revolutions succeed, the revolutionary government invariably repudiates obligations of the preceding government. Russia is a typical case in point. In some Latin-American countries revolutions and counter-revolutions have customarily followed so closely upon the heels of each other that the people have refused to surrender their metallic

money or their goods in exchange for legal tender paper, and traders have chosen to use foreign currency or to revert to barter rather than risk the acceptance of their own national paper currency. This explains the customary use of silver coins and the notable scarcity of paper currency south of the Rio Grande.

The withdrawal of standard coins in Germany and the carefully controlled use of paper issues sustained the purchasing power of the reichsmark during the entire period of the war and for a considerable time thereafter. This was made possible by confining the use of the reichsmark to domestic commerce, and maintaining foreign trade upon a combined gold-exchange and barter basis. The "crash of the mark" did not threaten until the imperative demand of France and Belgium for an immediate payment on the "reparation" account, in gold exchange, forced the sale of reichsmarks in New York for what they would bring. It was the necessity of making foreign payments in the absence of export markets and when gold reserves were exhausted that finally brought defeat, in 1923, to Germany's war-time program of currency management.

The magic reconstruction of the German currency immediately following the crash of the reichsmark affords a novel demonstration of the creation of a managed currency under most difficult circumstances. A similar plan is said to have been followed in Denmark some two centuries ago. By Act of the Reichstag, October 15, 1923, a constructive capital levy of 4 per cent was made upon all physical properties within the boundaries of Germany. A consolidated mortgage to the amount of 12½ per cent of the value of these properties, at 6 per cent for five years, was pledged as security for the payment of the levy and was impounded in the Rentenbank, which was created for the purpose. Against this asset the bank issued 5 per cent mortgage bonds (Rentenbriefe) which in turn became security for circulating notes to be issued by the bank. These notes, amounting to 2,400,000,000 rentenmarks became the original working capital of the Rentenbank. Half of the notes were loaned to the government to meet its demand liabilities and to assist in balancing its ordinary budget. The remaining notes were immediately available for loan and discount operations. Because of the lack of gold reserves, the rentenmark notes were of course irredeemable in metallic standard money, but they were convertible in multiples of 500 marks into

5 per cent rentenbriefe.[1] Upon the face of the rentenmark notes were engraved the conditions of the mortgage indenture and the rather bold statement "4 Rentenmarks = 1 Dollar." These currency notes went into immediate circulation at gold par with foreign money and were so quoted on the foreign exchanges. Inasmuch as the rentenmark was not conveniently exportable, these notes were necessarily confined to domestic circulation. Germany was therefore obliged to balance her foreign account without gold. She did so by cutting her imports to an irreducible minimum, by securing a suspension of reparation payments, and by negotiating foreign credits sufficient to cover immediate commercial obligations abroad. In the meantime the volume of rentenmarks was restricted to a minimum amount consistent with the absolute needs of domestic trade.

Having thus temporarily "pegged" the domestic value of her improvised money and relieved the banks of demand obligations abroad, steps were rapidly taken to establish a permanent currency on a gold basis. The accumulation of a reserve of gold and foreign exchange was undertaken by the co-operation of the government and the banks by means of impounding all "foreign exchange" realized by exporters and investors abroad. Beginning in 1924, an issue of new reichsmarks, supported by a small gold reserve and guaranteed by the great industries, by the Reichsbank, and by the four great private banks known as the "D banks," [2] was gradually placed in circulation and the emergency rentenmarks were retired. The indefinite suspension of the reparation debt and the revival of foreign trade have thus far made possible the maintenance of the new reichsmarks on a nominal gold basis at approximately the pre-war par value.

The European allies all went off gold currencies during the war. Because of the burden of their foreign and domestic indebtedness incurred for purposes of war and reconstruction after the war, aggravated by reduced export trade, and the failure of taxation, currency issues were not sufficiently restricted and depreciation became acute. Subsequently, a policy of stimulating home production, restricting imports, expanding foreign markets, and suspending payment on foreign political obligations (for the most

[1] Mortgage bonds.

[2] The Deutsche Bank, the Dresdner Bank, the Darmstadter Bank, and the Discontogesellschaft.

part to the United States) was strictly enforced, and the depreciation was finally checked at about 20 per cent of the former gold value. By 1926, a general return to the gold standard with monetary units devalued to approximately 20 per cent of pre-war values was accomplished.

The necessary embargo on gold shipments during the war and the consequent pegging of exchange rates between Great Britain and the United States, the establishing of the "gold bullion" standard in Britain, the sale of United States monetary silver to Great Britain for the Indian account and the substitution therefor of federal reserve bank notes secured by government bonds, the subsequent repurchase and coinage of an equivalent amount of silver, and retirement of the federal reserve bank notes introduced a considerable flavor of monetary management in the financial policies of both Great Britain and America during that period.

As a matter of fact, it is possible, even customary, to exert a considerable measure of currency management within the confines of a thoroughgoing gold standard system. This is universally true in the control of bank note issues and the maintenance of legal reserves against both bank and national currency issues and it was notably true in the United States under the silver purchase and coinage legislation of 1878, 1890, and 1918. To the extent that national bank notes and federal reserve bank notes have been issued against government bonds, "eligible paper" and other assets and reserves, as prescribed by Congress and administered by treasury officials and the federal reserve board, the currency has been quite extensively managed both as to quantity and quality.

In most cases of fiduciary currency issues, future redemption has been *expected* although rarely promised for any definite date. The expectation of ultimate conversion, particularly in a country where conversion has customarily prevailed under a commodity standard, is a strong sustaining influence during the earlier period of circulation of such currency. If the date of redemption is known or assumed, fiduciary money acquires an estimated investment value which may or may not determine its purchasing power, but would tend to limit its depreciation by encouraging hoarding.

There are certain difficulties which arise in respect of the maintenance and operation of commodity standard currencies. Sometimes, as in the case of the United States following the Civil War,

a government may find itself unable to secure a sufficient amount of precious metal to maintain a redeemable currency based thereon. It may be, as was the case in Germany during and after the World War, that government revenues and the public credit are insufficient to finance immediate and imperative national needs. In either case the use of fiduciary currency is expedient. What shall happen thereafter as regards its stability and usefulness is dependent upon control (or failure to control), which is a matter of political action. In the case of the United States, an exceptionally rigorous fiscal policy enabled the treasury gradually to accumulate specie reserve to restore the currency to gold par in 1879. In the case of Germany, the early issues of reichsmarks lost practically all value within a few years resulting in national insolvency and the repudiation of all domestic debts both public and private. The second effort, the rentenmark plan above referred to, was more successful and was ultimately converted into a gold standard system. Historically, the control of fiduciary currencies has customarily revolved around the political alternatives of (1) continued inflation until depreciation is complete or (2) restored redemption upon the basis of a devalued monetary unit, as in France in 1928, Belgium in 1926, and Italy in 1927.

The recent general breakdown of the gold standard during the period 1931 to 1936 resulted in the prevalence of fiduciary currency systems in a majority of the nations of the world. The term "managed currency," as used in present-day monetary discussion, usually refers to controlled fiduciary currency.[1]

Emergency irredeemable currency.

When hard pressed by increasing expenditures and inadequate revenues, governments have often used their own notes, their promises to pay, to discharge their obligations. Government notes differ from government bonds, often issued in similar circumstances, in that the bonds bear interest, are sold to voluntary buyers, and usually are payable at a definite time in the future; while the notes are usually non-interest bearing, represent a *forced* rather than a *voluntary* loan and are, in form at least, "payable on demand." They are, moreover, issued in convenient

[1] A certain amount of "management" is always effective even in a gold standard currency. Those elements of the currency which involve *credit*, for example, national bank notes and subsidiary coins, are subject to definite administrative control as to amount and conditions of issue.

denominations for monetary use, and generally are made legal tender, with the intent that they shall pass from hand to hand "without recourse" as a medium of exchange.

Colonial and revolutionary bills of credit. — Paper money issues were often used in the American colonies to meet fiscal emergencies, especially the extraordinary expenditures occasioned by wars. The expense of sending troops to the Indian wars was one of the things that led most of the American colonies to issue paper money. The history of these colonial bills of credit, as they were called, illustrates two dangers that seem to be inseparable from the use of government notes as money. In the first place, there was always the temptation to relax taxation and to pay the ordinary as well as extraordinary expenditures of government in this way. Some of the colonies got entirely out of the habit of taxing themselves to meet current public expenses. The refusal to levy taxes was a prolific cause of disputes between colonial assemblies and royal governors.

In the second place, because no specie money was raised for the purpose, these bills of credit were not redeemed promptly. Their purchasing power fell as their quantity increased and as people lost confidence in them. As prices rose it took continually larger issues to meet government expenditures, and each increase led to a further fall in purchasing power. After the currency had become heavily depreciated, it was a common practice to repudiate it in whole or in part, and to start afresh with bills of a "new tenor." Any attempt to restrict this reckless use of public credit was met with determined resistance from the "cheap money" advocates of that day. There were frequent complaints of the scarcity of money, especially from newly settled districts. The greater the quantity of money issued, the more insistent was the demand for yet further issues. In short, this colonial experience in itself gives sufficient basis for the inference that from the monetary as well as the fiscal point of view, the use of irredeemable paper money easily degenerates into a bad habit.

Again, in the Revolutionary War, paper money issues were made by the Continental Congress as well as by the individual states. The Continental Congress was virtually driven to this action by the lack of the power to collect taxes. Its bills became practically worthless, although every effort was made to maintain their parity with the metallic money by appeals to patriotic

sentiment. After the national government was formed, some of them were redeemed at one cent on the dollar. Our colonial and revolutionary experience with paper money led to the insertion of a wise provision in the federal constitution which forbids the individual states to issue bills of credit or to make anything but gold and silver a legal tender in the payment of debts.

The greenbacks. — The federal government made no important issues of paper money until the Civil War. It was not generally foreseen that the conflict would be so long continued and Congress consequently neglected to make provision for taxes adequate to meet the increased expenditures and to sustain the government credit in the borrowing operations that became necessary. In 1861 the withdrawal of gold from the banks by depositors for hoarding, and by the government for its own use, led first the banks and then the government to suspend specie payments, — that is, to refuse to pay their current obligations in gold.

A clearly defined project for a politically controlled currency in the United States was incorporated in the greenback policy which had its beginnings in the distressed condition of the treasury. In February, 1862, moved *by the apparent necessity of providing additional money for the federal treasury,* Congress authorized the issue of $150,000,000 in legal tender notes, or greenbacks, as they came to be called. It was hoped, moreover, that this increase in the circulating medium would improve the market for government bonds for which the greenbacks were made convertible at par. At first there was strenuous opposition on the part of those who foresaw some of the disastrous consequences of large paper money issues. But, as in earlier American experience with paper money, succeeding issues met with less and less resistance. All together, greenbacks to the amount of $431,000,000 were issued during the war.

It was generally expected when the greenbacks were issued that they would be retired soon after the conclusion of the war. But this policy was opposed as an unnecessary tax burden and when it really became possible, many argued that the reduction of the circulating medium would decrease prices, impose additional burdens upon debtors, injure business interests, reduce the public revenues, and hamper the government in the refunding of its public debt. In 1874, a bill requiring the increase of the issue and meant to perpetuate the use of irredeemable paper money

was passed by Congress and prevented from becoming law only by the veto of President Grant.

Some greenbacks were retired under the provisions of an act of 1875, but in May, 1878, there were $346,681,000 outstanding. The Redemption Act, effective in 1879, made them exchangeable at par for gold coin and provided for their constant reissue after being redeemed at the treasury. The Gold Standard Act of 1900 included provision for a gold reserve of $150,000,000 to be held against United States notes to insure their redeemability.

Economic effects of the greenbacks. — During the period of the suspension of specie payments (1861–1878), gold was not in general circulation as a medium of exchange except on the Pacific coast. Gold was, however, in addition to its industrial uses, employed in paying balances in international trade, in the payment of interest on government bonds, and for customs duties (for which the greenbacks were not legally receivable). The constant demand for gold money was met by the sale of bullion in the New York market, most of which came from the mines of California.

Everything that was thought to affect the probability of the ultimate redemption of the greenbacks in gold influenced their value in the purchase of gold. Among these factors were the quantity of greenbacks issued, the condition of the federal treasury, the military successes and reverses of the Union cause, and in later years the political prospects for the resumption of specie payments. Greenbacks reached a parity with gold two weeks before the actual resumption of specie payments on January 1, 1879.

As the common medium of exchange consisted almost entirely of greenbacks, prices were stated in greenback dollars and advanced as the gold value of the greenback depreciated. Reference to the chart on the next page will show a rough correspondence between changes in the general level of prices, expressed in greenbacks, and changes in the price of gold, also expressed in greenbacks.[1] But the wholesale prices of commodities rose relatively higher than did the price of gold, and declined less rapidly. Retail prices in turn declined less rapidly than did wholesale prices. Wages advanced more slowly than prices; maximum wages were not paid until 1872, — seven years after

[1] No doubt the rapidly increased supply of new gold tended to advance prices during this period.

retail prices and eight years after wholesale prices had reached their maximum.

As a fiscal expedient, the greenbacks led to results as disconcerting as those which attended their use as money. The government was forced to sell bonds for depreciated greenbacks, but in order to maintain its credit it paid the interest and ultimately the principal of these bonds in gold. Supplies for the army were paid for in depreciated greenbacks, but these greenbacks were ultimately redeemed in gold. It has been estimated that the use of the greenbacks increased the expenses of the government during the Civil War by nearly $600,000,000.

The irredeemable paper money movement. — During the period following the Civil War, the advocates of cheap money undertook concerted political action to prevent a return to metallic money. It was demanded that national bank notes, because they were issued by "privileged corporations," should be abolished. It was urged that the greenbacks, greatly increased in amount, should constitute the sole circulating medium.

RELATIVE PRICES AND WAGES IN THE GREENBACK PERIOD

YEAR	AVERAGE ANNUAL PRICE OF GOLD IN GREENBACKS	JULY WHOLESALE PRICES[a]	AVERAGE ANNUAL PRICES[b]		AVERAGE WAGES[c]
			Wholesale	Retail	
1860	—	100	100	100	100
1861	—	95	94	107	99
1862	113.3	120	109	131	104
1863	145.2	155	148	168	119
1864	203.3	236	225	215	142
1865	157.3	183	224	219	155
1866	140.9	191	203	208	164
1867	138.2	170	177	193	167
1868	139.7	165	180	190	170
1869	133.0	158	172	177	179
1870	114.9	145	156	166	179
1871	111.7	137	144	155	184
1872	112.4	139	138	151	185
1873	113.8	140	143	148	183
1874	111.2	138	144	145	175
1875	114.9	129	134	140	163
1876	111.5	118	120	135	153
1877	104.8	114	117	134	143
1878	100.8	99	99	127	142
1879	100.0	98	93	123	139

[a] 92 commodities. [b] 21 commodities. [c] For 78 establishments.

The Greenback Labor Party, organized in 1876, carried the issue into state and national political campaigns over a period of fifteen years. It participated in three presidential elections and polled more than a million votes in the congressional elections of 1878.

The theory of money which lay back of the program of the Greenback Labor Party is sometimes called the "fiat money" theory. According to this theory, there is no particular significance to be attached to the fact that the greenbacks were in the form of *notes* or promise to pay, or to the fact that they were commonly regarded as only temporarily irredeemable. They were, in this view, merely "dollars," made such by the expressed will or *fiat* of the government and the *legal tender* quality which imposed their acceptance in payment of debts. It has been suggested that to make such fiat money receivable in the payment of taxes, or redeemable in interest-bearing government bonds, would help to keep it in circulation at a fairly stable value. But it should be noted that the taxes themselves would have to be assessed in terms of the fiat money, and likewise the bonds would be promises to pay interest and principal in fiat money.

Such considerations, however, should not be taken to mean that inconvertible paper money, issued in guarded amounts and convenient denominations, may not circulate for some time among people accustomed to its use, even if there is no convincing prospect that it ever will be redeemed. The practical necessity for a medium of exchange, combined with the legal tender quality, doubtless does give irredeemable money a more or less definite "trading value" dependent upon the volume of trade and the limited supply of money available. But difficulty in the maintenance of this value will soon occur in the foreign trade and gradually will appear in domestic commerce. As an example, it is noteworthy that when the United States went off gold in March, 1933, it was taken for granted that the country would return to gold at an early date, domestic prices were not at first disturbed and the foreign exchange rates remained at nearly par until the middle of April. When the embargo on gold was not removed and it appeared that an early return to the gold standard was not probable, the dollar rapidly depreciated on the exchanges, but domestic price levels showed little substantial change for nearly a year.

The supply of fiat money, it is argued, can be controlled by governmental agencies and its purchasing power may be kept more nearly stable than can that of a gold standard currency. Closely scrutinized, this particular argument for managed money turns into the strongest argument against it. Under practical conditions, experience has shown that governments find it much easier to expand than to contract their issues of paper money. Expansion permits larger expenditures; it is, for the time being, a substitute for taxation; it tends to raise prices and stimulate business. Contraction, on the other hand, is affected at the expense of an immediate increase in taxation; it calls for rigid economy on the part of the government; it may have, temporarily, a depressing effect upon business activities. Political expediency, therefore, is certain to exercise a strong influence on the monetary policy and, with few exceptions in past experience, has induced over-issues. The gold standard escapes this disadvantage. Its variations, largely the automatic result of the play of the forces of the market, are generally beyond the arbitrary control of administrative authority and the unwholesome influence of personal bias and partisan politics.

The decline of the gold standard.

Prior to the World War the currencies of all important nations were firmly established upon metallic standards; furthermore, arrangements had been perfected in the smaller nations and dependencies, by means of intermediate "gold exchange standards," which virtually made gold the common denominator of commodity values throughout the world, fixed a definite par of exchange between the currency of each country and that of every other, and effectively established gold coins and bullion as the universal currency of international trade and finance. The disruption of foreign trade by the war was accompanied by the disappearance of convenient and certain means of international payments, credits, and investments. Dislocated international markets lowered industrial earnings and reduced public revenues. These deficits, when added to the continuing financial burdens of the war, created fiscal obligations which few nations could carry. The inevitable result was a widespread repudiation of public obligations and the general collapse of gold standard monetary systems.

Within three or four years after the war, the defeated nations of central Europe which had abandoned the gold standard and repudiated the redemption obligation of their paper currency, had thereby escaped the greater burden of their domestic debt and, at the same time, wiped out a large part of the savings and investment accumulations of their citizens. Subsequently, they returned to the gold standard. The victorious continental allies "devalued" their currencies by approximately 80 per cent. Having thus rid themselves of most of their domestic indebtedness, these countries also re-established gold standards and returned to sound currencies. Great Britain and the United States, having escaped the need of debasing their currencies after the war, chose nevertheless, for reasons political and economic, to abandon gold standards and stable currencies in September, 1931, and March, 1933, respectively.

The apparent retreat of these two great commercial nations from their traditionally impeccable policies of sound money and firm credit again deeply disturbed the partially reconstructed fabric of national currencies and international exchange. Smaller nations thereupon rapidly abandoned gold for irredeemable paper currencies until, at the close of 1934, only a scant half-dozen gold-standard currencies remained. These gold currencies were sustained with difficulty by the "gold bloc" states of Europe which had only recently reconstructed their monetary systems. The resulting chaotic monetary situation gave rise to a general searching for a workable currency system which would not require the maintenance of expensive reserves of standard metal, which would permit the mechanical adjustment of prices to fit transient needs, and which would admit of the writing down of public and private debts without the appearance of repudiation. The result was a broad and serious consideration of a variety of monetary projects and theories, both old and new, and an era of experimentation with what is generally designated as "managed currency."

Managed currency, in its first essential, is a diversion from a full-fledged commodity standard monetary system. For that reason it is feared by some to be a reversion to the old fallacies of irredeemable inflationary currency. The fact remains, nevertheless, that the great nations of the world, including the United States, are at the present time on fiduciary monetary bases and the operation of managed currencies is actually in progress.

Going off gold. — The United States stepped off the gold standard at the instant of the President's executive order, on March 6, 1933. Acting in the "emergency," under authority of the Trading with the Enemy Act of 1917, President Roosevelt forbade the exportation of gold and suspended the automatic operation of the free gold market which had long maintained the relative stability of the United States monetary system and the parity of our foreign exchanges. The gold embargo was quickly followed by suspension of gold payments by the government and the banks, the sequestration of gold by the treasury, the repudiation of gold certificates and the "gold clause" of United States bonds, and the debasement of the currency by the arbitrary reduction of the gold equivalent of the dollar from 23.22 grains to 13.07 grains. Each of these steps was in itself of deep economic significance but, in principle, they were all sequential to the initial act of closing the gold market and served to complete the routine of passing from a gold standard to a fiduciary system, supplemented by an informal gold-exchange standard which functions in the foreign trade.

The gold-exchange standard provides a modified form of gold standard system by which a nation may carry on its domestic trade and financial transactions by means of silver or paper currency, and concurrently operate its foreign trade on a gold basis. This is accomplished by the simple process of setting up a gold-exchange fund for exclusive use in foreign trade. The actual gold is usually held abroad and made available through the mediation of authorized banks to merchants purchasing or selling abroad. Trade bills drawn against the fund, on behalf of foreign sellers, are payable in gold from the fund at current gold-exchange rates, and the purchase price is paid into the fund in domestic currency by local importers. Conversely, trade bills drawn against foreign buyers are subject to payment in gold to the fund, and local exporters receive their payments from the fund in domestic currency.

In the final analysis, international trade is maintained on a gold basis, but traders pay or collect only in their respective domestic currencies. The gold-exchange standard was used before the war in India, the Philippines, Siam, the Straits Settlements, and several South American and Central American countries. During the gradual return to gold after the war, principles of the gold-

exchange standard were incorporated in the monetary systems of most countries. In the United States, following the suspension of the gold standard in 1933, the continuation of foreign trade was made possible by the maintenance of a gold-exchange fund in the federal treasury. In the beginning gold might be withdrawn from the treasury only by banks for the purpose of settling an adverse account in the "balance of international payments." In October, 1936, when France devalued her standard a second time, a joint gold-exchange arrangement became operative among Britain, France, and the United States. By this agreement gold was made available, for purposes of mutual trade, in each country in exchange for currencies of the other countries. The rates of exchange were fixed from day to day by mutual agreement of controlling officials of the three countries.

The effects of the changing value of gold. — A modern criticism of standard currencies has arisen from the observation that great or rapid changes create maladjustment of wealth and income and otherwise inflict hardship upon certain individuals and groups of the population, and simultaneously benefit other individuals and groups. It is therefore argued that the automatic price variations resulting from uncertain operation of demand and supply upon the value of the standard metal, and consequently affecting prices of other commodities, should somehow be eliminated and a more stable price level be maintained. This has led to the formulation of a number of price-raising and price-leveling schemes. It is believed by some that prices could be stabilized and economic depressions thus avoided. These plans, for the most part, are derived from the *quantity theory of money.* This theory, roughly stated and using "money" in its broadest sense, affirms that, other things remaining equal, *the price level varies directly with the quantity of money and inversely with the volume of trade.* Therefore, it is argued, prices might be increased, decreased, or stabilized by artificially controlling the ratio of the volume of money to the volume of trade.[1] The plausibility of the quantity theory is fettered by the fact that "other things" do not remain equal. Furthermore, the theory as stated above and popularly accepted neglects adequate consideration of the role of credit in

[1] The quantity theory as here stated is supported by comparatively few modern economists. However, the advocates of a managed currency and controlled prices, with few exceptions, base their reasoning upon it.

modern trade, and also the "velocity of circulation" which indicates the variable *efficiency* of money and credit under different conditions and at different times. Nevertheless, in the United States, political measures have several times been devised with a view to readjusting an unfavorable price level by currency inflation. As we have seen, this proposal was the principal "plank" in the platform of the Greenback Party of the 1870's. It appeared again in the 1880's. During the Democratic Administration beginning in the spring of 1933, the nominal supply of money was doubled in an effort not only to raise the general price level, but to readjust the relation of "farm prices" to "other prices," and at the same time, to lighten the accumulated burdens of public and private indebtedness.

The standard of deferred payments. — The relation of changes in the purchasing power of money to long-time debts and credits has some very important aspects. If prices increase, the purchasing power of the principal of a loan is less at the time of repayment than at the time the loan was made. If prices decrease, the reverse is, of course, true. In periods of cheap money agitations the additional burdens imposed upon debtors by decreasing prices are always emphasized. An important function of money, then, is found in its use as a standard of deferred payments.

There is a partial, but only partial, compensation for the injustice done to debtors and creditors by general changes in prices in the fact that the interest rate usually increases when prices increase and decreases when prices decrease. Generally this is because rising prices increase profits, thus inducing business men to pay higher interest rates in order to secure larger supplies of funds for investment; while falling prices decrease profits and lessen the demand for funds. Or when the purchasing power of money is rapidly depreciating, as in Germany in 1923, lenders may demand higher interest rates because they foresee the shrinkage in the value of their principal. Whatever the cause, the result is that the changing purchasing power of the principal of a loan is to some slight extent offset or discounted by changes in the rate of interest. The decline in interest rates as prices fall sometimes enables debtors to pay off their old obligations with funds borrowed at a lower rate of interest. Creditors cannot so easily take advantage of the fact that interest rates are increasing when the purchasing power of the principal of their

outstanding loans is decreasing. Nevertheless, more emphasis has been given to the question of the standard of deferred payments in periods of declining prices, when debtors are injuriously affected, than in periods of rising prices, when creditors are the losers.

(*References follow Chapter XVIII.*)

CHAPTER XV

CREDIT AND CREDIT INSTRUMENTS

The nature of credit.

In the discussion of the origin of money in the preceding chapter, it was observed that at about the same time that money was first being used as a common denominator of trade values and a medium of exchange, *credit transactions* were also coming into use. The primitive type of credit transaction persists in common business usage today in the form of mercantile credit or book credit. It involves the recording of a present sale and delivery of goods of a certain kind, amount, and value, with the understanding that at some future time an agreed payment shall be made. Such specified future payment, by agreement, may be either in money or "in kind." Several other conditions of payment may also be included in the agreement between buyer and seller, such as the place of payment, the person by whom payment may be made, and whether or not interest shall be charged upon the amount of the indebtedness. The significant feature of the credit transaction is that present goods, services, or money are exchanged for a future equivalent.

In a "cash" transaction there are only two elements, the goods sold and the money paid for them. In a credit transaction a third element — time — is added. The introduction of this third element has important consequences. In the first place, it makes possible an enormous number of exchanges in which the buyers would be either unable or disinclined to render a present equivalent. In the second place, it largely obviates the necessity of making payments, even future payments, in money. Finally, the intervening period of time gives rise to an element of uncertainty as to the actual consummation of the transaction.

In business practice, the majority of individual credit transactions are links in a chain of related exchange activities which transfer the ownership of goods from the original producer to

the ultimate consumer. A manufacturer may buy his fuel and raw materials on open account payable in 90 days and sell his product to the wholesale trade at 60 days; the wholesaler may sell to the retailer on a 30-day account, and the retailer may sell to consumers either on 30-day credit or for cash. The receipts of the retailer eventually are available to meet, successively, the credit obligations of himself, the wholesaler, and the manufacturer. Within an average period of approximately 90 days, the processes of manufacture, transport, and merchandising may prepare the crude products of mine, forest, and soil for the satisfaction of consumer needs or for their conversion into durable goods to be used in further production. These processes may be financed, in whole or in part, by deferred payments or credit. Credit transactions of this simple form thus make possible a large volume of trade, conveniently extended over any period of time necessary for the extraction, processing, and distribution of goods. A relatively small amount of money, in active circulation, suffices to make the successive payments necessary in the settlement of these accounts. The expenses of production in the extractive and manufacturing industries and also the purchasing requirements of traders and consumers are normally supplied in large part through credit, and the actual amount of money used in trade is thereby reduced to a surprisingly small sum. Thus most modern economic activity may be visualized as a *flow of goods and services* from producer to consumer through the various stages of production, transport, and merchandising, and as a *reverse flow of payments*, both of which are made possible largely by a variety of credit transactions. The realization that, collectively, producers and consumers are identical, reveals the fact that the net result of this circular process of production and merchandising is the convenient interchange of a great variety of goods and services among their respective producers. It is for this reason that we are said to be living in an epoch of credit economy.

In the credit transactions discussed above, reference is made to the agreement between a seller and a buyer whereby the buyer contracts to pay for his purchase at some future date. The seller enters into this agreement because of his confidence in the good faith and the probable ability of the buyer to meet his obligation when due, and the transaction becomes a *record of account*. In small communities where the character and business record of

residents are matters of common knowledge, as are also the nature and approximate amount of their wealth and income, small credit obligations are not customarily secured by a definite pledge of valuable property. However, in case of default on an obligation, the creditor may exercise his legal claim against the debtor and may enforce the claim by *attachment and sale* of his property or by *garnishment* of a part of his income. Thus even in this informal type of credit transaction the confidence of the creditor in the debtor is based not only upon knowledge of the character of the debtor but also upon the power of the courts to enforce the terms of the agreement. Furthermore, the amount of credit extended is usually limited by the estimated financial ability of the debtor to pay. It is this aspect of credit that justifies its juristic definition as *a legal claim of one person upon another.*

The same principles hold in the borrowing of money. In this case, the transaction usually involves the delivery of a promissory note by the borrower to the creditor upon which are recorded the place, date, amount, time and place of payment, the rate of interest, if any, and the signature of the debtor. The promissory note may be accepted without collateral security, or it may be secured by a property pledge in the form of a mortgage, a warehouse receipt, a bill of lading, or corporation stocks and bonds. The payment of the note may also be guaranteed by the signature of an endorser, or a "co-maker." In any case, the amount and quality of credit rest, first, upon the "personal attributes" of the debtor, secondly, upon actual or potential commercial values, and thirdly, upon the force of law. These considerations constitute respectively the *personal*, *economic*, and *legal* bases of credit.

The definition of credit.

From the point of view of the buyer of goods or the borrower of funds, *credit is purchasing power* made available in the present in consideration of a promise to repay its equivalent in the future. From the point of view of the seller of goods or the lender of funds, *credit is the right to receive* specified sums of money, or equivalent values, at specified future dates. Such rights are secured by guarantees which may be specific or implied. From the legal point of view, *credit is a contract* — a promise to pay in return

for value received, which constitutes a claim or lien upon the present or future resources of the debtor enforceable by due process of law. As an economic concept, *credit is a medium of exchange* and may be described as *a form of purchasing power which serves to supplement the supply of money.* It is based fundamentally upon values incorporated in actual or potential goods which are directly or indirectly pledged as security for the exchange value of the credit.

The mechanics of credit involve the pledging of future values in exchange for goods or for evidences of credit (credit instruments) which, in turn, serve as present means of payment. The *adequate and continuous operation of credit is a function of the financial system.*

The availability of credit at any time rests (1) upon the confidence of creditors (usually financial institutions) in the ability, willingness, and legal obligations of potential debtors to fulfill their contracts of future payment and (2) in the appraised value of the securities which may be pledged by them as guarantees of payments.

The "Three C's of Credit." — The economic and social bases of credit are sometimes expressed as the "Three C's of Credit" — character, capacity, and capital. *Character* relates to the moral and ethical qualities of businessmen and, in the case of public credit, to the established integrity of governments, which indicate their willingness to meet future obligations. *Capacity* is measured by the energy, technical knowledge, and executive skills of borrowers which make for success and earning power in business and consequent ability to meet their obligations as they mature. As respects public credit, capacity is indicated by the ability to develop the natural, industrial, and financial resources of government units, their political stability, the "taxable ability" of the people, and the integrity of national currencies. *Capital* relates to the volume of net valuable assets possessed by the borrower, as indicated chiefly by the balance sheet of his business and by the status of his personal fortune, and together with his capacity measures his ability to meet future obligations.

This approach to the definition of credit affords a fairly accurate explanation of personal and public credit, but in general is not satisfactory. Its terms are not sufficiently concrete and fail to fit into the frame of business practice, particularly as an expla-

nation of the credit of great corporations. In the final analysis, the three C's rest mainly upon opinion rather than upon measurable tests. The volume of "character loans" is essentially negligible in modern banking practice. The business capacity of many would-be borrowers is often disregarded as a test, in favor of that of available collateral. Confidence and credit are technically based upon the analysis of the credit position of the borrower, careful appraisals of securities pledged, and the dependability of legal guarantees.

Modern credit institutions have scientifically formulated technical methods of ascertaining the *credit rating* of any client at any time. The formula varies according to circumstances which determine the number of items to be considered and their relative importance. The following table typifies the form of analysis used in determining the credit position of a personal business enterprise.

I. *Pertaining to the borrower.*
   1. Record of solvency and honest dealing.
   2. Personal attributes.
      a. Social, religious, and public activities.
      b. Manner of living, including family obligations and wife's ambitions.
      c. Gambling and drinking tendencies.
   3. Ability.
      a. Success attained.
      b. Commonsense and shrewdness.
      c. Education and technical training.
      d. Age and general experience.

II. *Pertaining to the business.*
   1. Nature and location of business.
   2. Net worth of the business, listing assets and liabilities.
   3. Ratio of quick assets to current liabilities.
   4. Net earnings record.
   5. Character and turnover of stock.
   6. Nature and intensity of competition.
   7. Insurance.
   8. Character of business organization.
   9. Use to be made of credit.

III. *Pertaining to collateral security and guarantees.*
   1. Collateral securities.
      a. Stocks and bonds.
      b. Mortgages and liens.
      c. Deeds of trust.
      d. Promissory notes.

2. Commercial documents.
   a. Warehouse receipts.
   b. Transport bills of lading.
   c. Insurance policies.
   d. Trust receipts.

Kinds of credit.

The classifications of the several kinds of credit according to name, basis, instrumentality, time, and legal character are directly related to the respective *functions* which the credit transactions are designed to perform.

Commercial credit is customarily employed in financing the short-time processes of production and merchandising. It serves the manufacturer in purchasing raw materials and the paying of wages. The borrowing operations of all merchants — jobbers, wholesalers, commission men, and retailers — usually fall within the scope of commercial credit. Some agricultural operations, including the harvesting, storing, and shipping of farm produce, are properly financed by this type of credit.

Two important characteristics of commercial credit should be noted: (1) The borrower is usually able to liquidate his obligations in a relatively short period of time; and (2) the creditor is usually able to obtain security for his loan in the form of some sort of lien or claim upon the goods financed by the transaction — a chattel mortgage, a warehouse receipt, or a bill of lading. For these reasons commercial credits command high regard in banking circles as *self-liquidating paper*, so-called because the borrower is expected to use the credit obtained for the purchase of goods whose re-sale is expected to furnish him with the funds needed to pay off the loan before or at its due date.

Investment credit, sometimes called capital credit, is to be contrasted as to purpose with commercial credit. Investment funds are used to provide the fixed mechanism of production rather than to furnish the raw materials and supplies and to finance the processes of the production of goods and their distribution. Credit which is used to purchase agricultural, mineral, and timber lands, to develop mines, railways, and factories, and to equip them with durable operating installations is a source of *fixed capital.* Such borrowings are usually repaid from accumulated earnings over long periods of time, and not from the re-sale of purchased goods. The creditors are best able to secure their

loans by mortgages on physical properties or by obtaining the pledge of specified proportions of future earnings.

Consumers' credit serves the purchasing requirements of consumers and is usually extended either in the form of personal loans or as "customer credits" for the purpose of enabling the purchase of goods for direct consumption. It is generally assumed that such credits will be devoted to unproductive uses, that repayment will be made from sources of income not related to the credit transactions, and that the risk of non-payment at maturity is greater than in the case of either investment or commercial credits.[1]

Agricultural credit has always presented an insoluble economic and political problem in the United States. The farmer requires three types of credit: (1) long-time investment credit for financing the purchase and improvement of land; (2) short-time commercial credit to finance the planting, cultivation, harvesting, and marketing of the crops; and (3) intermediate credit to finance the purchase of livestock and equipment and the making of minor improvements.

Until recently farm mortgages were not freely admitted to the usual channels of investment credit. This is explained largely by the fact that rural land values in the United States have historically been highly speculative.[2] The farmer's needs for commercial credit have also proved to be a poor banking risk because of the erratic fluctuation of crop prices, even over short intervals of time. Finally, the uncertainties of the harvest and increase of the herds, because of unforecastable conditions of climate and frequent visitations of insect pests and animal diseases, have made the farmer an unwelcome client for intermediate credit advances for periods ranging from six or nine months to three years.

Public credit includes the borrowing operations of the national, state, and local governments. In contrast with the types of *private credit* defined above, government borrowings, like taxation, are for *public* purposes. Governments usually borrow funds

[1] H. S. Moulton, *op. cit.*, Chap. XXIX. In this chapter Professor Moulton supplies an excellent treatment of the operations of personal loan departments of banks, labor banks, co-operative credit unions, small-loan companies, remedial-loan societies, pawnbrokers, and loan sharks.

[2] A. M. Sakolski, *The Great American Land Bubble*, Harper Bros., New York, 1934. This volume presents "the amazing story of land-grabbing, speculations, and booms from colonial days to the present time."

when tax receipts are inadequate to meet immediate or prospective fiscal requirements. Such situations are often transient, as in case of delayed tax collections, when "notes" or "warrants" are issued for short periods not exceeding five years. In case of war or other forms of emergency, when extraordinary expenditures become necessary and ordinary revenues usually decline, long-time borrowing in large amounts must be undertaken by governmental units.[1]

The issue of irredeemable paper money constitutes another form of public credit sometimes characterized as a "forced loan." Paper money issues are justified only in most extreme situations when the government's borrowing power is exhausted and the national existence requires additional funds at any cost.

Bank credit relates to the current advances which banking institutions are able to extend to their clients through the operations of lending and discounting. In this way the banks of the country create and circulate negotiable instruments which serve as safe and convenient means of payment in approximately 90 per cent of all financial transactions.

Banks have sometimes been referred to as "manufacturers of credit." This term, although not exact, is sufficiently accurate to aid in understanding the general credit functions of a modern bank. A banking corporation may begin business in a small city with a minimum capital of $50,000, including a banking house and equipment and a small cash reserve. Some clients, having surplus funds, will augment the original cash reserves of the bank by making deposits of money and will receive in return credit entries on the books of the bank and the privilege of drawing checks on the bank up to the amount of their deposits. Other clients, being in need of funds, will desire loans and will present to the bank their promissory notes, together with satisfactory evidence of their ability to pay the notes at maturity. The bank will accept these notes, grant loans in the amounts requested, and credit the "proceeds" of the notes on the books of the bank to the borrowers as "deposits." The borrowers will receive check books and will have the privilege of putting their checks into circulation to the amount of their deposits. Still other clients

[1] On June 30, 1916, the gross debt of the United States Government was $1,225,146,000 ($11.96 per capita); June 30, 1919, $25,482,034,000 ($240.09 per capita); June 30, 1930, $16,185,308,000 ($135.42 per capita); June 30, 1934, $27,053,141,000 ($213.75 per capita); Dec. 31, 1935, $30,000,000,000 ($237.00 per capita), estimated.

will come to the bank with drafts drawn upon other banks or upon persons to whom they have sold goods. These drafts, including checks on other banks, will be accepted for discount or collection and the proceeds will be placed to the credit of the deposit accounts of the respective clients. An occasional patron will require actual cash on his loan or discount transaction, or may desire a transfer of funds to another bank, but a large proportion of the total loans, discounts, and collections will be reflected in the "deposits" of the bank. Bank deposits, of course, are all *payable* in cash, but experience shows that payment of more than a small fraction thereof will seldom be so requested, and new deposits of cash may generally be depended upon to replace current cash withdrawals. In consideration of this habitually small requirement for cash in proportion to the bank's outstanding deposit obligations, the law recognizes that a cash reserve of approximately 10 per cent of total demand deposits is sufficient coverage under normal conditions.[1] Consequently, upon the basis of each dollar of cash reserve, together with its claims against the actual or potential assets of its borrowers, a bank may sustain approximately ten dollars of bank credit. This "multiple" bank credit provides an effective medium of purchase and payment in the form of checks and bills of exchange.[2] Furthermore, banks of issue (federal reserve banks) in the United States are permitted to issue federal reserve notes against a gold reserve of 40 per cent and additional securities, which are themselves related in amount to the volume of trade, equivalent to 60 per cent of the face value of the notes. Thus the mechanism of modern banking refines the raw values of industry and commerce into a smooth-flowing current of credit adequate to meet the legitimate financial needs of business when and where desired and in convenient form.

[1] The Board of Governors of the federal reserve system was empowered by the Banking Act of 1935 to increase the required reserve ratios of member banks by 100 per cent, and by three successive steps in 1936 and 1937 did so. The present (1937) average reserve requirements for member banks is 20 per cent of their demand deposit liabilities.

[2] This principle, which rests upon the "law of averages," may not be applied with safety to individual independent banks, or during times of abnormal business conditions, to the entire banking system. Neither does it mean that, when a bank is operating on a minimum reserve of 10 per cent of its deposits, it can increase its loans by $10,000 on the basis of an additional (surplus) reserve of $1,000. It is probable that over 95 per cent of the checks drawn against such a loan would be presented through other banks. If two-thirds or more of these banks demand cash in clearing the checks, the reserve of the lending bank would be impaired. Analysis of this situation would indicate that new loans should not be undertaken in excess of one and a half to two times the amount of the actual surplus reserve at any time. C. A. Phillips (*Bank Credit*, Part II, p. 65) calculates that new loans should not exceed the surplus reserve by more than 22 per cent.

We now pass to an examination of the various types of "instruments" to which attach the power of credit in the financial exchanges and the marts of trade.

Credit instruments.

From the above analysis of the nature and function of credit, we may reasonably define credit, from a practical point of view, as *purchasing power* which serves to supplement money in financial transactions. Any kind of power can become effective in the service of human needs only as it is applied through the medium of instrumentalities of a more or less mechanical nature. In this respect, the utilization of credit is no exception. A considerable number of instrumentalities have been devised and have been given legal sanction, by which the power of credit is made conveniently safe and effective in practically every form of financial transaction. These instrumentalities include banks and other credit institutions, which are discussed in the following chapter, and *credit instruments* which are legal financial documents of a contractual character. A credit instrument clearly reveals upon its face the nature and amount of the credit which it represents, and the manner in which it may be used.

Special types of credit instruments best serve the purpose of corporate investment finance — corporation bonds and short-time notes. Other types are most useful in commercial transactions — promissory notes and commercial drafts, including checks. Financial transactions between banks, although basically relating to commercial and investment affairs, are accomplished by the use of such credit instruments as "bankers' bills" and "clearing house checks." Travelers' purchasing needs, either for personal expenses or business purposes, are served by travelers' checks and letters of credit.

Public credit, pertaining to federal, state, or local governmental transactions, usually appears in the form of such instruments as bonds, warrants, and certificates. Paper money, or "circulating notes," constitutes a type of public credit instrument which may be issued only by a sovereign government, or by banks of issue acting under authority of such a government.

Credit instruments may be classified according to their use as (1) investment credit instruments, (2) commercial credit instruments, and (3) government credit instruments.

Investment credit instruments are the credit obligations of business corporations which are issued as a means of securing funds for purposes of location, construction, equipment, and development of industrial establishments. We here refer to *industry* in its broadest sense, including the extractive industries, manufacturing, transport, merchandising, and finance. In so far as any business establishment requires credit for the purpose of providing fixed capital and durable goods, the credit instruments involved are *investment* instruments or "securities." These instruments express the ability, willingness, obligation, and guarantees of the borrowing corporation to make repayment in the future and are exchanged for investment funds amounting to from one-third to one-half of the capital resources of industry.

As in many instances within the field of economics, the difficulty of precise or mutually exclusive classification appears in the delineation of credit instruments. Shall shares of corporation stock, for example, be classified as corporate credit obligations, of which the corporation is the debtor and the stockholder the creditor, or shall they be construed as certificates of proprietorship? Legally, a stockholder is not a creditor of the corporation, but is a joint owner in the enterprise. He receives dividends on his shares only in case the earnings of the corporation are sufficient to show net profits. On the other hand, the bondholder is legally entitled to interest on his investment regardless of the showing of the profit-and-loss account. In fact, however, the stockholder is generally as far removed from the management of the business as is the bondholder. In the final analysis, the payment of both interest on bonds and dividends on stocks, and also the recovery of the principal sum invested, in either case depends upon the success and earning power of the enterprise. When certain types of preferred stocks are considered, the common investment status of stockholders and bondholders is even more obvious. Because of this similarity of stocks and bonds, from the pecuniary point of view of the investor, corporation stocks are classified by some authors as credit instruments. There are both technical and legal reasons, however, why corporation stocks are not properly included among credit instruments, despite the fact that under some circumstances their function in the field of practical corporation finance may be identical with that of certain kinds of bonds.

There are many types of bonds customarily designated by name and description with regard to (*a*) the character of the issuing corporation, (*b*) the purpose for which the funds are used, (*c*) conditions governing the payment of principal and interest, and (*d*) the nature of the security. The following partial listing of standard types of bonds is in accordance with this classification, and by names which commonly prevail in the securities market.

1. The character of the issuing corporation.
   a. Public bonds — government, state, and municipal.
   b. Corporation bonds — railroads, public utility, industrial, and real estate.
2. The purpose for which funds are used.
   a. Construction bonds.
   b. Equipment bonds.
   c. Improvement bonds.
   d. Refunding bonds.
3. Conditions governing payment of principal and interest.
   a. Gold bonds.
   b. Participating bonds.
   c. Convertible bonds.
   d. Coupon bonds.
   e. Callable bonds.
4. The nature of the security.
   a. Mortgage bonds — first, second, blanket, and open-end.
   b. Debenture bonds.
   c. Income bonds.
   d. Collateral trust bonds.

Unless otherwise specified, bonds are legally payable in *legal tender* money. For many years, prior to March, 1933, the United States specified payment of its bonds in "standard gold coin of the United States of present weight and fineness." Many American corporations also adopted this policy as a means of adding "character" to their issues.

During the period of unstable currencies which followed the war, the practice of issuing "gold bonds" became general. Foreign governments and corporations, in order to create a maximum of confidence in the maturity values of their obligations, issued "dollar bonds" which stipulated payment of interest and principal in "standard gold coins of the United States or the value equivalent thereof in current money." In so far as the United States government and its citizens are concerned, either as creditors or debtors, the legal obligation to pay government or

corporation bonds in gold and the right of bondholders to recover the equivalent of the gold-standard currency which they had invested in the bonds were nullified and repudiated by Congress in June, 1933, a step which was approved by the Supreme Court in February, 1935.

Participating bonds provide that, in addition to the annual rate of interest payable thereon, bondholders may participate with the stockholders in any part of the net earnings of the corporation which may remain after the stockholders have received a specified dividend payment. Bondholders are thereby permitted to share in any extraordinary prosperity which the corporation may achieve.

Convertible bonds may, at the option of the holder, under certain conditions and at specified times, be exchanged for shares of common stock. Such bonds are always popular during periods of prosperity. They combine the advantages of present safety with the possibility of a proprietary interest in future profits.

Coupon bonds are printed with affixed interest coupons which are payable to bearer and are so dated and validated that they may conveniently be detached when due and presented at any bank for collection. This arrangement also eliminates the necessity of maintaining an up-to-date register of all bondholders.

Callable bonds are so drawn that the date of maturity remains optional, beyond a stated time, with the issuing corporation.

Mortgage bonds are secured by the execution and pledge of mortgages upon specified properties. During the term of a bond issue, the mortgage is held in trust as a guarantee of the payment of principal and interest on the bonds. Second, third, and blanket-mortgage bonds constitute subsequent and successive claims upon the property after the claims of the first-mortgage bonds are satisfied. Open-end mortgage bonds are so drawn that additional bonds may be issued under the original mortgage against the original security or additional property acquired after the date of the first issue.

Debenture bonds have no mortgage security, consequently, their claim against the earnings and property of the issuing corporation is subsequent to that of all mortgage bonds.

Income bonds are often erroneously identified with debenture bonds. Although both types are subsequent to the rights of the mortgage bonds, the unsatisfied claims of a debenture bond

carry over as an obligation to be met in the future, whereas the claims of an income bond are not cumulative, interest being paid to holders only if earnings are sufficient in any year.

Collateral trust bonds are secured by shares of stocks or bonds of other corporations, which are placed in trust for the benefit of the bondholders in case of default of principal or interest.

In recent years many preferred stocks have been issued which, from the point of view of the investor, are essentially equivalent to some form of debenture or income bonds. Although a modicum of legal distinction remains, such securities actually fall within the twilight zone between investment credit instruments and proprietorship interests.

Commercial credit instruments. — In contrast with the long-time investment credit instruments which are used in the accumulation of the fixed capital funds of industry and commerce, are the credit instruments which serve to supply working capital and to finance the current operations of production and merchandising.

Within the field of *commercial credit* operations there is a variety of credit instruments which fall into two distinct classes. First, there are *promises to pay* (promissory notes), which usually indicate that the *makers* are buyers who are arranging means of payment for goods purchased or to be purchased. Secondly, there are *orders to pay* (drafts), which generally indicate that the *drawers* are sellers who are collecting payments for goods sold. Within the field of commercial credit, there are also many transactions which are evidenced merely by entries in the books of account of business men, appearing as "accounts payable" in the books of buyers and as "accounts receivable" in the books of sellers. The total volume of this "mercantile credit" is large. In an economic sense, such *records of account* are effective and important instrumentalities of credit, but, because of the fact that they are not readily transferable or negotiable, they are not legally and technically designated as credit instruments.

Promissory notes. — A promissory note is legally defined as an unconditional written promise of one party (the maker) to pay to a second party (the payee) a certain sum of money, at some future date. The note usually, but not necessarily, designates a place of payment and a rate of interest to be paid. Promissory notes which are drawn in the course of business are often dis-

counted at banks and the resulting deposit credit constitutes available purchasing power for the creditor.

Promissory notes may be issued by individuals, partnerships, and corporations, both public and private. However, upon the principle that commercial transactions should be consummated within a period of ninety days and never exceeding a year, corporation notes not payable within a year are rated as bonds and investment certificates, not as commercial credit instruments. Likewise, personal promissory notes drawn for periods longer than one year are usually secured by mortgages or other forms of liens, and are not considered commercial credit instruments.

Endorsements. — Promissory notes, when made payable "to order," are transferable by endorsement. This quality of "negotiability" is essential to the proper functioning of commercial credit instruments. When the original payee endorses a note and transfers it to another, he automatically assumes responsibility for its payment, in case the maker defaults. A second or subsequent endorser likewise becomes liable for the payment of interest and principal in case of default by previous endorsers. Consequently, the *quality* of promissory notes improves with the frequency of their transfer. An endorser may, if he chooses, escape the usual liability of endorsement by transferring the instrument over his signature "without recourse," provided the transferee is willing to accept such a transfer.

Rediscounting promissory notes is a customary banking practice which is widely exercised under the federal reserve system. Customers' notes received by member banks may be endorsed by the receiving banks and transferred to the federal reserve bank of their district for rediscount. The proceeds of rediscounting thus become available for further credit extensions to local commercial borrowers.

Promissory notes may serve as currency when issued by the federal government or by authorized banks of issue, and if payable without interest to bearer on demand in lawful money. It is not necessary that they shall be "legal tender," although this provision is sometimes made.

Drafts — bills of exchange.

A draft is legally defined as a written order by one party (the drawer) upon a second party (the drawee) to pay to a third party

(the payee) a certain sum of money at some future time. A draft is, in itself, of no legal value until "accepted" for payment by the drawee.

Drafts are of many varieties, including foreign and domestic drafts, bills of exchange, trade bills, bankers' bills, checks, and letters of credit. In modern commercial practice, the historical or generic term *draft* tends to become obsolete, or to be confined in its use to domestic 3-party credit instruments, and *bill of exchange* is more often designated as the comprehensive term, particularly as regards instruments of international credit transaction. This practice, unfortunately from the point of view of economic analysis, disregards or conceals certain qualities of bank checks and letters of credit which are neither included among bills of exchange nor recognized as drafts.

The function of bills of exchange. — In order to clarify the commercial function of a bill of exchange, let us first recall the manner in which promissory notes are used by business men to create deposits in commercial banks against which checks are drawn by the borrowers, as a means of payment for stocks of goods; also how the subsequent resale of the goods by the borrowers enables them to pay off their obligations at the banks, and thus complete the circle of commercial credit transactions. Suppose that instead of borrowing funds at the bank to pay for his goods upon delivery, or 30 or 60 days thereafter, buyer *A* should arrange with seller *B* that, upon the shipment of the goods, *B* should draw a bill of exchange for the amount of the purchase price on *A* and send it to *A*'s bank for collection. In this instance, the seller would become the drawer of the bill, the buyer would be the drawee, and the bank would be the payee. The bill would be made payable either when presented, or 30 days or 60 days thereafter, according to the convenience of the drawee. The bank, after having collected the amount from *A*, would cancel the bill of exchange and remit the proceeds to the drawer of the bill or place the amount on deposit to his account, and the credit transaction would be complete.

In actual practice the routine of commercial bills of exchange is not always quite as we have indicated, but the principle and results remain unchanged. Instead of naming a bank the payee, the seller of goods and the drawer of the bill may make himself ("ourselves") the payee. He then takes the bill, which is drawn

on the buyer together with the shipper's bill of lading for the goods, to his own bank where he endorses the bill to the bank and offers it, with the bill of lading attached, for discount. If the bill is drawn payable "at sight," the bank pays the amount, less a small charge for collection, to the drawer and forwards the bill to a correspondent bank, located near the place of business of the drawee, for collection. If the bill is drawn "at 30 days," 60 days, or 90 days, the seller's bank pays to the seller the amount less the prevailing rate of discount for the time intervening before the date of collection. In either case, the seller of the goods receives his payment, less discount, without delay, and the completion of the transaction rests with the banks and the buyer.

The concluding procedure is as follows. The collecting bank having received the bill of exchange and the accompanying bill of lading, presents the bill to the buyer. If it is a "sight bill," payment must be made at once. If it is a "time bill," the buyer "accepts" the bill and writes thereon his agreement to pay it at the time specified. The bill of exchange thereupon becomes a *trade acceptance.* Having thus met his obligation under the bill of exchange, or contracted to do so within the required time, the shipper's bill of lading is released to him and he may secure the goods from the custody of the carrier.

It will be observed that the bill of lading for goods shipped, and usually the insurance policy also, accompany the bill of exchange and remain in the possession of the bank which handles the credit transaction until the bill is paid or accepted for payment. This procedure establishes the fact that the economic basis of the credit involved is the value of the goods being financed. Not infrequently the bank retains control over the goods against which credit is granted by demanding possession of the warehouse receipts until the obligations are met in full.

Trade acceptances constitute that particular type of bills of exchange discussed above, which serve to finance the actual transport and sometimes the intermediate jobbing and wholesaling of merchandise from the producer to the retailer. The storage and processing of goods, which may intervene between the date of drawing and the maturity of 90-day bills, are also legitimately served by this type of commercial credit instrument. Consequently, the operating expenses of a large volume of rapid

manufacturing, such as meat packing and milling of grain "in transit" is thus financed by "commercial credit."

At this point, attention may be directed to a definite similarity in the use of promissory notes and trade bills. It would appear to be a matter of choice whether buyers should finance their purchases by the method of promissory notes and bank loans, or whether sellers should finance their sales by the system of commercial bills of exchange and bank discounts. Such a choice actually exists in some instances, but the decision usually rests upon concrete facts of convenience, expediency, or established custom. In the last analysis, established custom is quite certain to be most expedient. In foreign trade the "bank acceptance," a draft accepted by a bank, is predominant. In domestic trade the loan and deposit system, including the general use of depositors' checks, prevails.

Bankers' bills are drafts drawn upon banks, either by commercial firms or by other banks. They serve as a necessary counterpart of trade bills. In the normal course of trade, particularly in international trade, certain banks accumulate large sums from the proceeds of trade bills and bank acceptances. Such funds are held at the disposition of both private firms and other banks and are ultimately withdrawn or transferred to third parties. A bill drawn upon a bank by a commercial creditor firm, or by a bank, directing the transfer of funds to a third party is a *banker's bill of exchange.* Bankers' balances abroad are regularly drawn upon in this manner for the convenience of their clients in making payments abroad and for tourist expenses. On the other hand, if a bank anticipates collections which are to be realized in the future and desires to be placed in present funds, a draft is drawn on a correspondent bank, payable to the drawer bank, and offered for discount. This instrument is known as a *finance bill.* The transfer of funds from bank to bank upon the order of a third bank is also accomplished by the use of bankers' finance bills.

Credit instruments and the transfer of wealth.

Until comparatively recent times the transfer of wealth often presented serious economic problems. The transfer of ownership usually involved the physical transfer of possession and use. Only jewels, money, and other precious objects could be trans-

ported with ease, and their movement from place to place was accompanied with much risk. Many large properties were not divisible and no means were available whereby a number of persons could conveniently share in their ownership and use. Similarly, many valuable properties were of a highly specialized nature and consequently not in general demand or readily salable.

If wealth is to be effectively used, either as fixed capital or as operating capital it must be shiftable as respects its ownership and management, or liquid as respects its form and the nature of its use. Negotiable instruments in general are representative forms of wealth which are easily divisible, salable, and transferable from one person to another, either by endorsement or delivery. The actual capital instruments which they represent may be physically fixed and indivisible with unit values so large as to command few investors and no adequate market. Such forms of wealth may, however, serve as the basis for the creation of negotiable instruments, including corporation stocks, investment credit instruments, and commercial credit instruments. Consequently, these instrumentalities make it possible to transfer sterilized wealth from incompetent management to strong hands and to transform idle properties from useless possessions to productive capital. The various forms of bonds, notes, and drafts possess qualities which facilitate the divisibility, salability, transfer, and consequent greater efficiency of wealth. The expeditious transfer of property invariably enhances its productivity, economic value, and social usefulness.

(*References follow Chapter XVIII.*)

CHAPTER XVI

PRINCIPLES OF BANKING AND EXCHANGE

Banking institutions are business organizations which perform a number of financial services in connection with the accumulation of capital, the investment of funds, and the provision of money and credit necessary in the processes of industrial production and in transactions of foreign and domestic commerce. The development of modern banking has resulted in a variety of types of banks each of which specializes in one or more of the several banking functions. However, most banks, in addition to their specialized services, undertake to satisfy, with the aid of their "affiliates" and "correspondents," practically all financial requirements of their clients. Banking institutions are roughly classified, functionally, as (1) commercial banks, which supply funds necessary to finance short time industrial processes and the marketing of goods, (2) exchange banks, sometimes called "banks of mediation," which are occupied with the transfer of funds among other banks, particularly, banks located in different cities and countries, (3) savings banks, which accumulate capital, and (4) investment banks, which aid in the transformation of savings into industrial capital and in the transfer of funds from one industry to another.

Commercial banking.

In the course of the preceding chapters, we have observed that the use of money and credit succeeded the general practice of barter in the merchandising of goods. The early development of banking was in connection with the use of money and credit in commerce, and we therefore begin with a discussion of commercial banking. We may divide the functions of commercial banking into two groups — (1) Monetary functions; (2) Credit functions. This grouping is used here for convenience of analysis. The two classes are not quite mutually exclusive and we shall find instances of overlapping and duplication.

The monetary functions of commercial banking.

Historically, the first commercial service of a banking nature was *money-changing*. In medieval times, merchants and travelers, when passing from city to city or from one political jurisdiction to another, were obliged to supply themselves with money acceptable in each locality which they entered. Money-changers, sitting upon benches (*banken*) at city gateways, offered such clients a variety of coins of different origins, denominations, and compositions and charged such exchange rates as they could exact. Incidentally, they acquired for themselves and for their successors the title of *banker* — one whose place of business is a *bank* or bench.

Among Anglo-Saxon peoples, the English handicraft workers in gold and silver were the first to undertake money-changing in a systematic manner, which they practiced in connection with the purchase of the precious metals for their industrial uses. The goldsmiths, being provided with strong boxes for the protection of their own stocks, also accepted deposits of money for safe keeping, for which service they received fees.

The goldsmiths, having pooled the deposits of their several clients, observed that, although the money was all subject to withdrawal on demand, very seldom was it all withdrawn at any time. It appeared logical and profitable, even if not quite ethical under the circumstances, to make confidential loans from this idle surplus of deposits, keeping only a sufficient "reserve" on hand to meet probable demands of depositors for withdrawals. In this way, the goldsmiths secretly profited by interest exacted from borrowers in addition to fees received from depositors. Thus, the service of receiving safety deposits quickly developed into the banking function of *deposit and loan*.

In the course of time the practice of making short-time loans from accumulated deposits was legalized, interest rates on commercial loans came under the automatic control of competition, and bankers found it profitable to pay interest on deposits as a means of accelerating the accumulation of loanable funds.

The use of bank checks and drafts for making payments in lieu of money was only a short step from the practice of having money on deposit with bankers for safe keeping. Depositor A, wishing to make a payment of money to B, instead of going to the bank and withdrawing the amount from his deposit, gives B a written order

directing the bank to pay him the necessary sum from A's deposit. B presents the order to the bank and receives the money, the amount of which the bank charges to A's account.

Such informal orders drawn by depositors, directing their banks to make payments to third parties and to charge the amounts against deposit accounts, gradually evolved into standard varieties of negotiable instruments known as checks, drafts, and bills of exchange. They are sometimes called "deposit currency," and occupy an important place in modern business. Dr. David Kinley, in 1910, estimated that, in the United States, about 85 per cent of all payments were made with bank checks.[1] In 1911, Professor Irving Fisher estimated payments by check to be 90 per cent of the total.[2] In 1928, Carl Snyder, statistician for the Federal Reserve Bank of New York, stated that "cash transactions do not much exceed one-eighth of the total money transactions of the country," and that "this ratio does not change greatly from year to year, save that the proportion of check transactions grows slightly greater."[3]

The manufacture and issue of money, we have already noted, is primarily a prerogative of government. This right, however, is generally delegated to banks of issue which are created by charter by a state or national government. The First and Second United States Banks, chartered respectively in 1791 and 1816, by Congress, each for a period of 20 years, were authorized to issue circulating notes. The several states have exercised their sovereign powers to create banks of issue. The notes of these state banks constituted the major portion of the currency of the country prior to the development of the national banking system. An amendment of the National Banking Act, of March 3, 1865, which levied a federal tax of 10 per cent on state bank notes, brought to an end the lurid history of the "red-dog" and "wild-cat" bank notes which were circulated during the days of "free banking." Since that time, the national banks, together with the federal reserve after 1913, have enjoyed a monopoly of bank-note issue.

The volume of national bank notes was at first limited to $300,000,000. It declined to $123,000,000 in 1890, reached

[1] David Kinley, *The Use of Credit Instruments in Payments in the United States*, Report of the National Monetary Commission, Washington, 1910.

[2] Irving Fisher, *The Purchasing Power of Money*, New York, 1911, p. 318.

[3] Carl Snyder, *The Review of Economic Statistics*, February, 1928, pp 40–41.

$284,000,000 in 1900, and advanced to $727,000,000 in 1913. On January 31, 1936, national bank notes outstanding amounted to $441,000,000. Federal reserve notes and federal reserve bank notes at that date amounted to $3,997,000,000, bringing the total bank currency to an all-time high of $4,438,000,000; an increase of nearly 75 per cent since June 30, 1930.

The credit functions of commercial banking.

The definition of credit and the discussion of its nature and functions on page 259 have already given us a preview of the principal functions of banking institutions. Commercial banks are, first of all, occupied with the financing of "commercial activities" which, broadly speaking, include relatively short-time processes of production and merchandising. We may assume, therefore, that commercial credit is associated with the actual transactions of marketing and the transport, storage, and processing of goods which are generally expected to reach the markets within one to six months. Under these conditions, the amounts of the various kinds of goods, the approximate market demand for each kind, and its actual or probable market price, are facts which are more or less accurately known, or may be estimated within a reasonable degree of probability. *The primary function of commercial banks, therefore, is to create funds which may be used to complete the processing of goods, to bring them to the markets, to transfer them to the possession of the ultimate consumer or user, and to provide means of final payment for all materials and services involved in the production and marketing of the goods.* In performing this function, commercial banks utilize the technique of several related financial operations which are included within the general category of loans, discounts, and exchange.

Commercial bank loans.

Loans are made by commercial banks on promissory notes presented by industrialists, merchants, transport corporations, storage agencies, and agriculturists. In very few instances are the proceeds of such loans made available to borrowers in actual money, or are they so desired. The notes are placed in the "portfolio" of the bank and are entered among the assets on the books of the bank as "loans." The proceeds of a loan appear in the accounts as a "deposit" to the credit of the borrower and

a liability of the bank, subject to draft on demand. Interest on the loan, in American banking practice, usually accumulates, at the rate specified, until maturity and is added to the principal when the note is paid. In European practice, interest is subtracted from the proceeds of the loan as a "discount" when the note is accepted, and thus appears in the bank's "earnings" at an earlier date than would be if taken as matured interest. Furthermore, by this method, the actual amount of the loan is somewhat less than the "face value" of the note, and the actual interest rate is slightly higher than that represented on the face of the note.

In urban communities, loans are granted only after the financial ability of the borrower is carefully investigated by the credit department of the bank, including an analysis of the borrower's present balance sheet and his profit and loss accounts for several months or, possibly, years. Additional assurances in the form of collateral, endorsers, or co-makers are sometimes required. Interest rates seldom vary by more than a fraction of one per cent as between long and short loans. The determining factor, in respect of the maturity of a loan, is the purpose for which the credit is extended.

In rural communities, banks are not usually equipped with credit departments, nor are they really needed. The character, financial ability, and normal business requirements of most borrowers are well known to bank officials, and their business operations are easily observed. For these reasons, loans are arranged with less formality than in the cities. Usually the signature of the borrower, together with the banker's personal knowledge of his past and current affairs, afford the only "security" a country bank requires, or could hope to secure, for its short-time loans.

Commercial bank loans in American banks are roughly designated as *time loans* and *demand loans*. Time loans have a specified date of maturity and are classified as of "sixty-days," "ninety-days," "four-months," and "five-six months." Demand loans are payable "on demand" and are made with the understanding that the bank will allow the loan to run indefinitely, that is, the time payment is at the convenience of the borrower, or until such time as the bank shall choose to demand payment. In modern banking the principal of the demand loan is almost

entirely confined to what are known as "call loans." Such loans are commonly made by commercial banks in only a few large cities. Strictly speaking, *call loans* are not used for purposes properly designated as "commercial," or are the borrowers of "call money" engaged in what is customarily understood to be production or merchandising. Nevertheless, call loans and the business activities which they serve exercise a very potent influence upon various phases of industry and trade.

The majority of stock exchange transactions on the organized securities markets are executed through brokers by a procedure known as "marginal trading." By this arrangement, the purchaser of stocks or bonds is permitted to "margin his deals" by depositing with his broker a sum approximating 45 per cent of the purchase price of the securities to be bought. The broker, after he has executed the purchase order and when he accepts delivery of the stocks purchased, must make payment in full. He is thus required to advance from his own funds 55 per cent of the amount. But he immediately replenishes his operating capital by borrowing the amount of his advance from a bank "on call," for which he pledges the stock, as collateral. Prior to the Securities Exchange Act and the Banking Act of 1934, margins required on the New York Stock Exchange varied from 20 to 40 per cent at different times and under different conditions.[1] The increased margin requirements, and their regulation under these laws, were designed to supply a much needed check upon speculative activities in the securities market and the questionable use of commercial banking funds in financing them.

Call loans appear in the accounting records of banks as "loans to brokers" and as "security loans." They are payable on demand without notice. In case of default, the collateral securities are subject to sale by the bank, the proceeds of sale being immediately applied to the liquidation of the loan. The residue, if any, is returned to the broker for the account of his client. The freedom of the bank to call brokers' loans at any time and to protect themselves by selling the collateral, has caused this type of "paper" to be rated as one of the most liquid forms of bank assets.

[1] Under the terms of the law, as administered by the Securities Exchange Commission and the Board of Governors of the federal reserve system, the banks may loan on any transaction an amount not greater than (1) 55 per cent of the current market price of the security, or (2) 100 per cent of the lowest market price of the security during the preceding thirty-six calendar months, but not more than 75 per cent of the current market price, whichever is higher.

The economic justification of marginal trading on the exchanges, and, especially, the use of commercial funds in this speculative type of business, has always been questioned and is still subject to criticism. In defense of the practice, it is argued that the funds thus utilized are not immediately required for legitimate commercial purposes and may be quickly recovered when needed. It is also argued that speculative trading, within limits, creates a healthy investment market and tends to maintain reasonable security prices, which the bankers may keep within bounds by restricting loans and manipulating interest rates. But there is little convincing proof of the last assertion, and history affords ample evidence of the great social and economic hazard of uncontrolled speculative trading, which is dependent upon loans made against stock-market collateral. It is estimated that loans on securities, mostly call loans, at the peak of the boom in 1929, aggregated $20,100,000,000, of which $8,500,000,000, was loaned to members of the New York Stock Exchange.[1]

Recent experience has also caused doubt as to the assumed superior liquidity of call loans among the resources of commercial banks. It is observed that a decline in the stock market may be accelerated by the calling of loans by the banks. The forced sale of margined stocks, in large quantities, tends to stampede the market and may precipitate a general financial crisis in which the banks themselves may suffer most.

Discount and collection.

Domestic commercial credit is, in most cases, supplied to merchants and industrialists through the medium of loans and deposits, the original credit instruments being the promissory notes of borrowers. In the foreign trade, however, the use of the discount system of commercial credits, in which the initial credit instruments are bills of exchange, is more readily adjusted to the convenience of exporters and importers and is generally prevalent. Although the practice of discounting usually applies to the negotiation of various kinds of bills of exchange, the provisions of the federal reserve banking acts authorize the *rediscounting*, by the federal reserve banks, of certain kinds of promissory notes presented to them by member banks. These latter

[1] Benjamin Haggott Beckhart, *The New York Money Market*, Columbia University Press, New York, 1932, p. 78. See also H. Parker Willis, and John M. Chapman, *The Economics of Inflation*, Columbia University Press, New York, 1935, p. 314.

banks have already made loans on the notes which are offered for rediscount. When negotiated over a bank's endorsement, the notes become "bankers' paper" of a superior quality. This rediscounting of "eligible paper" by the reserve banks has created a unique type of discount within the federal reserve system which enables member banks to convert their paper into cash at a federal reserve bank whenever liquid funds are needed. *International commercial credit transactions* may follow either of two courses which may be agreed upon by the buyer and seller in any transaction. It may be arranged that the exporter shall *draw upon* the importer, or his bank, at 30 or 60 days, for the amount of the purchase; or it may be agreed that payment shall be made in advance to the exporter, or in cash on delivery.

For example, in the first case, a consignment of cotton is forwarded from Galveston to Bordeaux. The exporter draws a commercial bill of exchange payable to himself which, together with the bill of lading and insurance policy, is presented to his bank in Galveston for discount. The documented bill is subsequently transmitted to France for acceptance and collection. The proceeds of the bill are then held in a French bank at the disposition of the American bank. It may recall these funds or leave them on deposit for possible future use.

In contrast with the case illustrated above, it may be agreed that a different procedure of payment shall be followed. In this instance, the buyer arranges to remit payment, in the "exchange" of the country of export, either with the order or upon delivery of the goods. For example, a consignment of wine is ordered from Bordeaux by a Denver firm. The buyer in Denver, being remote and possibly unknown in Bordeaux, the merchants request payment in advance, or to their agent on delivery, in French francs. The importer buys "franc exchange" at his bank (a banker's sight bill drawn on a French bank, payable in francs) for the amount and remits it in payment as requested. Such bankers' bills are drawn against deposits maintained for that purpose in foreign banks. So too, travelers' checks and letters of credit, and commercial letters of credit used for commercial purchases abroad are, in effect, bank drafts against credits in foreign banks. The credits drawn upon usually originate from the proceeds of trade bills previously collected from importers in that country. Thus, international credits and

debits resulting from the exchange of goods and other valuable items are canceled against one another by the interchange of commercial bills of exchange and bankers' bills. At the end of any given fiscal period, a net composite international bank balance, either credit or debit, remains for settlement. This amount, as calculated from the consolidated foreign accounts of the banks of any country, is known as the "balance of international payments." [1]

Business pertaining to foreign trade and foreign exchange is generally handled by *foreign exchange departments* in the larger commercial banks. Rural banks arrange their foreign transaction through correspondent banks in the cities. A few banking firms in the larger trading ports of the United States continue to specialize in foreign accounts. In the principal coast cities of western Europe, particularly London, Liverpool, and Hamburg, *foreign exchange houses* are much in evidence.

Savings institutions.

The stimulation of thrift and the accumulation of savings constitute an essential process in the creation of capital. In order that there may be *social savings* it is necessary, of course, that more shall be produced than is consumed. This is possible only under favorable economic and social conditions which also implies the existence of beneficent political institutions. First, natural resources available for exploitation must be adequate to render to industry a total annual product in excess of the subsistence requirements of the population. Second, the population must be sufficiently industrious, their productive efforts must be sufficiently well managed, and their sense of thrift must be sufficiently developed to enable them to realize a cumulative surplus over and above their actual current consumption. Third, some mechanism must be devised which will provide a safe depository for savings, which will aid in the conversion of savings into productive capital, and which will encourage thrift by "making saving pay." This third requisite of economic progress, as measured by the creation and efficient use of capital, defines the functions of *savings institutions.*

Savings institutions include savings banks, savings departments of commercial banks, insurance companies, trust companies, building and loan associations, and a variety of co-operative

[1] For a discussion of the balance of international payments see Chap. XXXVII, p. 870.

organizations designed to promote thrift and accumulate savings. The mutual or co-operative plan of organization quite definitely prevails among savings banks and insurance companies in the United States, and continues to gain, relatively, to the joint stock savings banks and the old line insurance companies.

The changing status of savings banks in the United States over the period of only a decade is revealed by the decrease in the number of stock savings banks from 990 on June 30, 1924, to 316 on June 30, 1934, with a coincident decline of depositors from 3,562,000 to 1,283,046. During the same period, mutual savings banks decreased in number from 613 to 578, but their depositors increased from 10,410,000 to 13,077,111. Total deposits in all savings banks (including postal savings) and saving departments of other banks and trust companies, amounted, in 1924, to $21,189,000,000 and on June 30, 1935, was $22,653,489,000 — a decline from $28,478,631,000, the all-time high in 1930.

The liabilities of life insurance companies, which measure the approximate accumulated savings of their policy holders, totaled $9,798,850,000 in 1924, and $20,813,483,000 in 1934.

Savings banks, insurance companies, and trust companies, which together hold about three-fourths of the savings accounts of the country, operate under state supervision and are required to invest their resources in selected securities, chosen for safety rather than for profits. In this matter, however, the laws of some states are over liberal, particularly as respects the investment of savings and trust funds in the securities of public utilities and other corporations within the respective states. During the depression years, the shrinkage of savings because of ill-advised investments by savings banks, trust companies, and insurance companies was regrettable, not so much because of the general capital loss involved, but because of the many personal losses of marginal savers in the lower and intermediate income classes. There is no doubt that the resulting loss of self-confidence and independence and the discouragement to personal industry and thrift will persist for many years. Habits of economy and thrift are outstanding characteristics of successful and progressive peoples. The discouragement or destruction of such habits rapidly undermines the economic structure and weakens the social fabric of a nation. Next to the hazards of a depreciated currency, inadequate supervision by the states and by the fed-

eral government of savings and trust funds constitutes a serious menace to the growth of savings, thrift investments, and the accumulation of new capital.

Investment banking.

Investment institutions are best defined in terms of their functions, which are:

1. To increase the magnitude and capacity of industrial enterprise by supplying capital funds necessary for its organization and profitable development and growth, including the exploitation of natural resources.
2. To supply capital funds necessary for the construction and equipment of the durable means of transport, communication, and merchandising.
3. To supply long-time funds to governments, the expenditure of which is considered necessary for the protection of life, health, and property and the promotion of the general welfare.
4. To provide means of liquidating investment securities and of shifting capital funds from one industry or commercial enterprise to another.
5. To seek profitable opportunity for the investment of newly created capital funds and for the reinvestment of capital funds which are constantly being released by the amortization of superannuated and obsolescent capital goods, and also to seek a more productive or safer investment of capital funds than they now enjoy.
6. To maintain an adequate and unrestricted market for all forms of legitimate capital securities.

In all of these functions, investment bankers are serving as middlemen between those who have capital funds for which they desire profitable employment and those who have opportunity for the profitable employment of additional funds. *In general, therefore, investment banking is that field of financial business which is occupied with the distribution of capital funds among industrial, commercial, and governmental uses.* The principal medium by which capital funds are made available for the purposes which are indicated above is the securities markets where stocks and bonds are sold.[1]

If investment bankers and other agencies so direct the stock and bond markets as to maintain an adequate and unrestricted opportunity for the issue, sale, and purchase of honest securities,

[1] Transactions in real estate and mortgages and the acquisition of proprietorship interests in partnership and individually owned enterprise are also included within the field of investment.

capital demand and supply will tend to come into equilibrium at the level of maximum average productivity and safety. But investment bankers, because they take for themselves a commission on every transaction, may endeavor to do more than automatically equalize the supply of and the demand for capital in an open investment market. It is to their personal pecuniary advantage to amplify as much as possible both the number of sales and the size of investment transactions. They may be tempted to sacrifice their functional interest of seeking permanent, safe, and profitable investments in favor of the satisfaction of their profit-making interest in an artificially active market. When serving merely as brokers they take their profits alike on a falling market and on a rising market, and they are well aware that a fluctuating market is an active market because it is an objective inducement to investors to shift their funds. They also know that fluctuating security prices, especially rising prices, may be made to exercise a strong appeal to those who are afflicted with the gambling psychology. The privilege of marginal trading on the exchanges and the availability of bank credit in the form of call loans enable many brokers to secure a clientele composed of persons who possess neither the funds nor the desire to become *bona fide* investors by the outright purchase of securities, but who hope to make a speculative profit from the quick turnover of a rising stock or the short sale of a falling stock.

The issue of securities. — All markets have their beginnings in the existence of *demand.* The proverbial saying "for every demand there is a potential supply" is economically accurate. The capital market is no exception. The vast amounts of capital which have flowed through the American "money market" did not spontaneously appear seeking investment, but were irresistibly drawn by the loadstone of investment demand and the prospect of capital earnings. The first step, therefore, in the process of investment, is the creation of an effective demand for capital — bidding for capital by offering in exchange shares of stock in a corporate enterprise and the potential dividends which they anticipate, or by offering bonds in exchange for the temporary use of capital which, in effect, are contracts to pay a certain rate of interest for a given time and, at the expiration of the period, return the capital fund unimpaired.

The decision of a corporation to issue either stocks or bonds

rests upon the judgment of the officials as to the probable earning power of increased capital under their management and the consequent profit resulting therefrom. In reaching their main conclusion, as to the amount of new capital required, corporation officers may need little assistance from specialists in the capital market, but, when details are to be settled concerning the nature, form, maturities, price, interest rates, dividend payments, and the precise manner of offering the issue, especially if the transaction is large, investment specialists must be consulted.

Underwriting firms and syndicates perform investment functions somewhat similar to the services of mercantile jobbers and wholesalers. They will first determine the types of securities best fitted to the financial structure of the corporation and most appealing to potential investors, also, the bond rates and initial stock prices which, under existing money-market conditions, may be expected to attract capital. These points having been settled, the underwriters engage to distribute the stock to investors within a specified time and to turn over the proceeds, less an agreed percentage, to the corporation. They also undertake to absorb any balance of the securities which may not be sold within the period. The prestige of the underwriting firms is an important condition to the successful distribution of new securities. They must have an adequate investing clientele sufficient to absorb the securities offered, and sufficient resources of their own to assume the risk of marketing and to carry the issue indefinitely in case of unfavorable reception. Moreover, well-known investment houses are frequently called upon to handle several projects at the same time. There are private bankers in some twenty-five cities of the United States with sufficient resources to handle individual issues up to 2 or 3 million dollars. In New York, there are seven or eight firms capable of underwriting issues up to 5 millions dollars, and as many more in Chicago, Philadelphia, and Boston combined. In case of the larger issues, it is customary for several underwriters to pool their available resources and divide the risk by forming a syndicate and handling the issue on joint-account.

An underwriting syndicate will first consign a large portion of a bond issue to affiliated and correspondent banks which, in turn, will retail the bonds "over the counter" to local clients. Bonds will also be disposed of to insurance companies, savings banks,

trust companies, and endowed institutions, and may even be peddled from door to door by personal bond salesmen. Shares of stock in considerable blocks will be placed with investors of known resources who prefer the less certain but larger potential returns than are expected of bonds. Investment trusts are also dependable purchasers of new stock issues. Finally, both stocks and bonds of the larger issues are "listed" on one or more stock exchanges and a portion of the issue is immediately put over the exchange so that it may be known as an "active" and "regularly quoted" issue. In introducing a new issue on the exchange, it is important that a favorable initial price or quotation shall be established. If necessary, this is easily accomplished by placing reciprocal orders with different brokers to buy and sell at a predetermined price.

The better-known underwriters are private banking houses of many years standing and having branches or other connections in every city of importance both at home and abroad. Until recently, they were mostly organized as partnerships. In addition to the underwriting function described above, these investment bankers perform both financial and fiduciary services of almost every character.

Investment trusts are financial corporations whose stockholders desire to enjoy the benefits of participation in the ownership of investment securities and, at the same time, to avoid the risk of a sudden decline in the value of individual security issues. By combining their resources to provide capital for the investment trust, the funds of which are invested in a carefully selected and diversified "list" of securities, the stockholders are able to spread the risk and share the profits of a rising securities market. Theoretically, there is much to be said for the advantages, to the unskilled and uninformed investor who becomes a stockholder of an investment trust, which should result from the constant supervision of the market operations of the trust under the management of skilled officers. Obviously, the success of an investment trust depends jointly upon the skill and foresight of its management and a situation of general upward trend of security values. Investment trusts are fair-weather enterprises and can succeed only during periods of prosperity. If the "list" of securities held is not sold on the rising market, or during the initial period of the decline which invariably follows in the

business cycle the investment trust fails of its purpose. A veritable swarm of investment trusts appeared in the United States during the late 1920's. Because of amateur management, and the further fact that many of them were improperly affiliated with banks and were used by them to absorb the low-grade securities, they took a large share of the speculative losses which followed the crash of November, 1929.

In England, mature experience with investment trusts has resulted in the development of a recognized field of operations and a high standard of managerial ability and corporate responsibility. Consequently, the theoretical advantages of diversification and careful forecasting have generally resulted in a satisfactory profit to stockholders.

Trust companies were first organized in the United States in the early part of the last century to act as trustees for individuals and estates, with which were combined the gathering of savings accounts and the business of insurance. Their insurance activities were subsequently abandoned as rapid growth in the number and size of private fortunes supplied a more profitable field of opportunity. Finally, the appearance of great corporations after the Civil War, and the development of their extraordinary requirements for financial and fiduciary services provided for the trust company its widest and most distinctive field of enterprise.

The laws of the State of New York confer upon trust companies authority to exercise over thirty distinct types of services which are enumerated under five general captions: (1) banking, (2) investment, (3) agency, (4) fiduciary, and (5) safe-keeping. In this classification of trust company services, we find included practically all the functions of banking institutions elsewhere described in this chapter, and, in addition, agency, fiduciary, and safe-keeping. We have space for only the briefest definition of these functions.

Agency is the legal power to act for and in the place of another in any business transaction.

Fiduciary services are affairs of trust and confidence involving the exercise of a delegation of authority as guardian, trustee, executor, or depositary.

Safe-keeping refers to the custodianship of things of value upon such terms and conditions as may be described.

The financial statement of a prominent New York trust company reproduced below is an illuminating illustration of the nature and diversification of modern trust-company activities.

Department-store banks. — On a previous page of this chapter we have said most banking institutions specialize in one or more of the several banking functions, but that most modern banks are prepared to render or arrange for almost any financial or fiduciary service which may be required by a client.

CONDENSED STATEMENT OF CONDITION OF A PROMINENT NEW YORK TRUST COMPANY

(Member of the Federal Reserve System and of the New York Clearing House Association)

December 31, 1935

Assets

1.	Cash on hand, and in Federal Reserve and other banks		$44,926,160.58
2.	Exchanges, collections, and other cash items		50,398,449.18
3.	United States government securities		149,699,900.00
4.	Reconstruction Finance Corporation notes		2,500,000.00
5.	Other bonds and securities		37,598,336.09
6.	Loans, discounts, and bankers' acceptances		123,043,451.31
7.	Interest receivable, accounts receivable, and other assets		2,092,445.74
8.	Real estate bonds and mortgages		2,545,479.42
9.	Customers' liability for acceptances and letters of credit		2,985,243.22
10.	Liability of others on acceptances, etc., sold with our endorsement		477,486.06
11.	Equities in real estate		697,734.86
12.	Banking premises — equity and leasehold		2,711,084.84
			$419,675,771.30

Liabilities

13.	Deposits	$340,553,428.35	
14.	Outstanding and certified checks	24,904,852.16	$365,458,280.51
15.	Dividend payable January 2, 1936		625,000.00
16.	Agreements to repurchase securities sold		4,500,995.26
17.	Accounts payable and other liabilities		1,535,730.76
18.	Acceptances and letters of credit		3,421,923.47
19.	Acceptances, etc., sold with our endorsement		477,486.06
20.	Reserve for contingencies		9,429,026.32
21.	Capital	$12,500,000.00	
22.	Surplus	20,000,000.00	
23.	Undivided profits	1,727,328.92	34,227,328.92
			$419,675,771.30

United States government obligations and other securities carried at $25,012,173.29 in the above statement are deposited to secure public and trust deposits and for other purposes required by law.

Even the small state banks of a half-century ago were equipped, on a small scale, to render a surprising variety of services. They

accepted "character" notes payable on demand, and mortgage notes payable in ten years; they issued circulating notes; they arranged insurance on request; they accepted real-estate commissions to buy or sell; they acted as trustees, executors, and guardians; they made collections of all kinds, except gambling debts; they accepted orders for the purchase or sale of stocks and bonds, and generally were willing to sell a few of their own government bonds without taking a profit to accommodate regular customers; they had no direct foreign connections, but they usually managed to secure a letter of credit or a foreign draft through their city correspondent when anyone in the village desired funds for a trip abroad. They "held themselves out" to be doing a *general banking business.*

In earlier days, city banks did business in much smaller units than they now do and were more highly specialized. This tendency of city banks to restrict the variety of their activities was due partly to lack of funds, partly because other fields of banking were occupied by other banks in the neighborhood, and partly because of the unwritten code among bankers which discountenanced "undignified" competition with a neighboring bank which had established itself in the services of a different class of clientele.

With the progress of modern integration of banking institutions, the policy of departmentalizing individual banks and actively competing throughout the entire gamut of banking operations, from savings to foreign exchange, has become common. The practice, as we have explained, really started many years ago as a necessity and in an informal way with the village banks. It was first developed on a grand scale by the trust companies operating under omnibus charters and exempt from many of the regulative restrictions imposed upon commercial banks within the national banking system. Later, the multiple function policy was exploited by the large commercial banks, by means of an elaborate staff-and-line operating organization and administrative correlation of their departmentalized functions. These banks, by analogy, have come to be called "department-store banks." From the point of view of services rendered, the department-store bank is commendable. But, in the absence of thoroughly reliable safeguards in behalf of the public interest, aggregations of banking funds amounting in individual instances to

over a billion dollars are properly to be viewed with apprehension.[1] A timely criticism of department-store banking practice is justified by the neglect of these banks to departmentalize their capital reserves and other resources to correspond with the several operating functions of the bank. The distinctive character of the several departments of banking is such that each should be maintained as regards its respective assets, liabilities, and legal obligations in a separate and exclusive compartment.

The organized securities market of the United States is centered within the financial district of New York City and, more concisely, in the two auction exchanges — the New York Stock Exchange and the New York Curb Exchange. The Stock Exchange has been in existence since the middle of the eighteenth century; at first as an auction market for livestock and produce and, since before the Civil War, as an open market for government bonds and for the securities of the rapidly developed railway companies and the great industrial and commercial corporations which soon followed. The present Exchange is the survival of a reorganization which occurred soon after the Civil War. It is described in the resolution of reorganization as a voluntary association of 1,100 members "to furnish exchange rooms and other facilities for the convenient transaction of their business by its members." It has never been incorporated and its membership remained unchanged in number until recently when it was increased to 1,400. It reached the peak of its activities in 1929. In that year 1,125,000,000 shares of stocks and bonds to a par value of over $3,000,000,000 were exchanged. The total value of securities listed at that time exceeded $85,000,000,000. A membership, or "seat," on the Exchange sold, in 1929, for $625,000. They have since sold as low as $68,000.

The Curb Exchange, organized and operated in a manner similar to the Stock Exchange, is of recent development and deals in securities of somewhat lower class, in general, but not in all issues. Its total annual transactions have never exceeded one-fourth of the Stock Exchange transactions in any one year.

Members of both New York exchanges execute all transactions in securities listed on their respective boards by open offers

[1] On January 2, 1935, three American banks held deposits in excess of one billion dollars.

Chase National Bank, New York	$1,709,792,374
National City Bank, New York	1,394,604,308
Guaranty Trust Company, New York	1,260,064,445

and bids, and the resulting price in each sale is immediately transmitted by wire to securities dealers in every city in the United States and likewise to foreign markets and dealers. These "ticker quotations" establish the price of each American security on the markets of the world until changed by the next succeeding transaction.

Members, privileged to trade in securities on the floor of the exchanges, are classed as "dealers" or "brokers" according as they buy and sell for their own account, or for the account of their clients whose orders they accept for immediate execution as directed. Orders received before the opening of the Exchange, at ten o'clock, are placed as quickly as possible. Orders received after the opening are transmitted by telephone to the floor of the Exchange for immediate purchase or sale, as the case may be. Many large banks, brokerage houses, and investment houses maintain Exchange memberships for their own exclusive service. These members remain in constant attendance on the floor of the Exchange awaiting possible orders from their firms. Such members are called "floor traders."

The manner in which stock exchange transactions are financed is explained on pages 285–286, and the stock clearing operations which accomplish the delivery of securities purchased are explained in the description of exchange clearings below.

The course of stock exchange transactions is said to be "bullish" when buyers anticipate higher prices and "bid stocks up" in expectation of selling present purchases at a profit.

The market is said to be "bearish," or in a bear market, when securities holders anticipate falling prices and are anxious to sell at present levels in hopes of avoiding losses, or realizing a profit by buying back at lower levels. A trader or dealer is "long," or has a "long position" in a security, when he has bought and is carrying a large number of shares in expectation of selling at a profit later. He is caught "long" and takes a loss if prices decline and he chooses or is obliged to sell.

One "sells short," or "assumes a short position," when he expects prices to fall and sells more securities of a certain kind, for delivery within 48 hours, than he actually owns. In order to make delivery he must buy in, or borrow, enough securities to make delivery, or "cover." If the price advances, he covers at a loss. If the price falls, he takes a profit.

The issuing and marketing of securities were placed under strict government control by the Securities and Exchange Acts of 1933 and 1934. Certain provisions of the Banking Act of 1935 also restrict certain dangerous tendencies of the stock market. The Securities and Exchange Commission, in general, exercises three types of control — (1) control over conditions under which the issue, listing, and offering of securities are permitted; (2) restriction of speculative trading; (3) regulation of the technique of trading, with a view to eliminating "irregular" transactions and protecting brokers' customers.

The circulation and clearing of bank checks.

Customers' checks and other forms of bank drafts serve conveniently as a medium of payment, because they are payable on demand by the bank upon which they are drawn to the payee, or his order. They are commonly accepted in business transactions by any person to whom the maker is favorably known. If the check is transferred by the payee to a third person, the payee writes his endorsement upon it and thereby becomes legally responsible to the holder for the amount in case the check is dishonored by the bank upon which it is drawn. In like manner, each succeeding endorser is bound with those preceding him to make the check good.

In cities, checks are seldom circulated from hand to hand. They are used once, then taken to a bank "and die." In rural districts, checks may be negotiated several times before reaching a bank for payment or deposit. When checks received in the course of business are taken to a bank, the receiving bank, in very few cases, is the bank upon which they are drawn, and in many instances the drawee banks are located in distant cities. However, all such checks on other banks are readily "cashed" by the banks to which presented, provided the bearer is favorably known to the bank and places his endorsement on the check. The amount of the check is charged to the bank upon which it is drawn under the account "Due from other banks." If the two banks are in the same town, and if the town is a small one, the check will enter into the daily messenger exchange of cash items between the banks and will be cleared in the settlement of their daily balance.

In the larger cities, a further economy in the use of credit is achieved by means of the *clearing house*, to which a representative

of each bank brings daily all of the checks drawn against other local banks which it has received since the last previous "clearing." At the clearing house the checks are turned over to the representatives of the banks against which they are drawn, but the balances are not usually settled between the individual banks. Instead, a balance is struck between the total sum of each bank's claims against other banks and the total claims of other banks against it. Each bank then pays to the clearing house, or receives from it, as the case may be, the amount due from it or to it. There were more than 325 clearing houses in the United States in 1926. Because of improved clearing arrangements among banks of the federal reserve system, this number has since been reduced.

Aggregate bank clearings in 163 cities in the United States amounted, in

1926 to 518 billion dollars
1929 to 700 billion dollars
1933 to 245 billion dollars
1934 to 261 billion dollars
1935 to 297 billion dollars

Of the above totals, New York City bank clearings composed approximately two-fifths.

We have now developed in the United States a continuous process of balancing and canceling debts and credits, first, in every bank; second, between the different banks in each locality; third, between different localities and different sections of the country.

Today, in a general way, the federal reserve system does for the entire country what the clearing house does for a particular city. Banks in the reserve system can accept for collection, without charge for exchange, all checks payable at par, and the time required for collection has been cut in half. The reserve system now handles for collection probably 95 per cent of all out-of-town checks.[1] "Inland exchange" has been transformed, and the actual shipment of currency from place to place within the country for the settlement of net balances has practically disappeared (although of course some currency has to be shipped to serve as "till money"). Funds are customarily transferred over the wires of the federal reserve system and, in 1926, the federal reserve bank of New York made 329,000 wire transfers

[1] W. R. Burgess, *The Reserve Banks and the Money Market*, Harper & Brothers, New York, 1927, p. 79.

amounting to $44,392,000,000. A net settlement between the federal reserve banks is made every day by telegraph through transfers of ownership equities in a *settlement* fund which is kept at Washington in the custody of the Treasurer of the United States.

This process of matching and canceling credits and corresponding debits is, in some respects, the most distinctive and essential function of commercial banks. The more comprehensively and effectively it is carried out, the greater the economy in the use of both money and credit and the larger the superstructure of bank credit that can be reared upon the basic resources of the banks. It is estimated that a dollar in our federal bank reserves will support bank credit equivalent to considerably more than ten dollars. This, more than any other one circumstance, perhaps, explains the development, the service, and the profits of the modern bank, which rest in turn in large degree upon the scope and efficiency of the clearing process.

Stock exchange clearing.

The New York Stock Exchange, as do also the London Exchange and the Paris Bourse, maintains a stock clearing system. At the end of the day's business, each member of the Exchange submits a balance-sheet showing the purchases and sales of each security dealt in on that day. Bought and sold items are canceled against one another and tickets are issued for the balances outstanding for delivery *to* or *by* each *member*. Deliveries and payments are made through the clearing house within a period of 48 hours, excepting Friday and Saturday sales, which are cleared on the following Tuesday.

The operation of the securities clearing system does not interfere with the execution of exceptional transactions which, by agreement between buyer and seller, may require immediate delivery.

The bank statement.

In order that we may have a concrete knowledge of the several banking functions, of their relations to one another, and of the relative magnitude of the operations which pertain to each, it is necessary to examine a variety of bank statements.

A bank statement, more properly, the *financial statement of a bank*, is a summary list of the assets and the liabilities of the

bank, together with their *book values*, at a given time. It should be kept in mind that, because of the summary nature of the statement and the uncertain quality of book values, the character of many items is not revealed on the face of the statement. Indeed, the *actual* financial conditions of a bank may be ascertained only by an examination of the "portfolio" of the bank, meaning the documents which themselves represent the respective assets and liabilities of the bank. The *statement*, however, does give us a complete picture of the operations pertaining to the several functions of the bank and a satisfactory means of comparing its operations at different times, and with the coincident operations of other banks.

There is reproduced below the financial statement of a small national bank.

STATEMENT OF THE CONDITION OF A NATIONAL BANK IN A SMALL TOWN

Resources

Government securities	$443,900
Other securities and real estate	744,700
Loans and discounts	1,270,057
Lawful reserve (deposit with federal reserve bank)	114,386
Cash and cash items	242,044
Other assets	10,036
Total resources	$2,825,123

Liabilities

Capital	$100,000
Surplus	100,000
Notes outstanding	100,000
Deposits	2,489,432
Due to other banks	14,338
Undivided profits	21,353
Total liabilities	$2,825,123

(*References follow Chapter XVIII.*)

CHAPTER XVII

BANKING IN THE UNITED STATES

The banking experience of the United States falls, historically, into four periods. The distinctive character of each of these periods is rather more definitely political than economic. Despite the fact that a continuing evolutionary trend in both magnitude and technique of banking activities has been apparent since Robert Morris and Alexander Hamilton laid the foundation of the American banking system, our banking history clearly reveals how arbitrary political action may accelerate or retard economic development.

The first period, which extended from the administration of Washington to the accession of Andrew Jackson, was characterized by a political struggle between the federal government and the state governments in which each sought to dominate the policies of the banks. In this experience we have, from the very beginning of our national life, a continuing example of governmental interference with private initiative in business by both federal and state agencies — ample proof of the mythical character of *laissez-faire.*

The second period, which ended with the Civil War, was, for the most part, an epoch of so-called *free banking* during which federal control, which had prevailed in the beginning, was forced to give way to the exercise of "states rights" in the control of the banks and the determination of banking policies. During this quarter-century of credit and currency confusion, the futility of non-co-operative banking under the varied and conflicting policies of the several states was clearly demonstrated.

The third period includes the 50-year span of the dominance of the national banking system. During this epoch, the national banks (which exceeded one-third of the total number of commercial banks), operating under the supervision of the national government, gradually evolved by precept and example

the general acceptance of advanced financial standards and a salutary degree of co-operation and uniformity in banking practice.

The fourth period, beginning with the Federal Reserve Act of 1913, and continuing to the present, has witnessed a vast improvement in the technique of commercial banking and a noteworthy progress in gradually bringing all elements of the banking system under a policy of centralized management — a policy which now seems to be rapidly approaching a perfection of governmental control which is not exceeded by any of the great centralized banking systems of Europe.

The early period of American banking.

None of the colonial banks survived the early years of the Revolution. One of the few constructive acts of the Continental Congress following the end of the war, was to charter the Bank of North America in Philadelphia, which began business under the management of Robert Morris, January 7, 1782. During the earlier years of its existence and before the organization of the first Bank of the United States, this bank issued its own notes which supplied the first acceptable money available after the collapse of the continental currency. It also made large loans to the government, which was in desperate need of funds. The Bank of Massachusetts, in Boston, received a state charter in 1784. The Bank of New York was founded, also, in 1784, under the auspices of Alexander Hamilton. The Bank of Maryland, in Baltimore, was chartered in 1790. These four state banks anteceded the first Bank of the United States and may be said to constitute the charter members of the banking fraternity of the Union. Reorganized and renamed to meet changing conditions, these early institutions exist today as prosperous members of the federal reserve system.

The First United States Bank was chartered for a period of 20 years, by Congress, February 25, 1791, and began business in December of that year. The bank was a part of the general financial plan of Hamilton. He regarded it, in the light of the experience of the Bank of England, as an essential means of supporting the public credit and the most reliable source of a nationally uniform currency.

The bank was located in Philadelphia, and eight branches were established in the larger cities of the country. It enjoyed the

close co-operation of the banks of Philadelphia and New York, and maintained favorable relations with other state banks until, because of their increased numbers and expanding activities, they came into keen competition with the branches of the central bank. To a certain extent, also, the Bank of the United States exercised an unwelcome control over the operations of the state banks.

The Treasury was greatly aided by the financial and fiscal services of the new bank. Large loans were granted whenever the national revenues were inadequate or tax collections were slow. As fiscal agent, the bank acted as a depository of public funds and made all necessary transfers for the government in the collection of revenues and the making of public disbursements. In addition to these services, which were of exceptional public value in view of the financial weakness of the government and unstable credit conditions of the time, the bank made loans to private customers, discounted trade bills, and otherwise assisted in the financing of both domestic and foreign commerce.

When the time approached for a renewal of the charter of the central bank, political opposition developed. Because of its note issues, which were privileged as legal tender payments in all government obligations, and because of the wide and varied activities of its branches in competition with local state banks, the bank was considered by many to be monopolistic and undemocratic, and was attacked by Jefferson and Clay as unconstitutional. The Congressional bill providing renewal of the bank's charter for a second 20-year period was lost by a bare majority of one vote in both the House and Senate and the bank was liquidated in 1811.

It is generally conceded that the first Bank of the United States rendered an inestimable service to the government during the two most trying decades of its financial history. Henry Adams, writing in 1891, expressed the belief that, between the years 1790 and 1860, the United States was never in greater peril than in 1811 "when destruction of the bank threatened national ruin." [1]

Banking under state charters, following the disappearance of the first Bank of the United States quickly demonstrated the inherent weakness of a credit system based upon a multitude of irresponsible banks operating under charters granted by fourteen rival

[1] Henry Adams, *History of the United States,* New York, 1891, Vol. V, p. 330.

states. The average state bank charter of that time was a blanket grant of almost unlimited financial privileges including the issue of paper money, the making of loans, the receiving of deposits, and the unrestricted investment of the funds of its depositors. There were practically no reciprocal responsibilities imposed upon the banks. Speculation in land was an impelling motive in the creation of new banks and the circulation of a flood of bank notes for the redemption of which no adequate reserve could be maintained. The first result of the War of 1812, and the depression which followed was to drive the great volume of circulating notes back to the banks of issue for redemption. The inevitable result was complete collapse of the state banks and paralysis of the financial system.

It was then pointed out, by Secretary Gallatin and others, that if the United States Bank had continued in business, its notes would have been supported by adequate reserves and public confidence and the crisis would have been avoided. Conditions grew steadily worse until, in 1816, Congress abandoned the principle of the supremacy of states rights in the field of banking and enacted legislation which provided for the organization of a second bank under the auspices of the federal government.

The Second Bank of the United States was organized along lines substantially identical with those of the first bank. Twenty-five branches were established in the larger cities and the administrative offices were again located in Philadelphia. The bank circulated its notes freely and re-established the currency on a specie basis in 1817. At the same time it attempted, as did the first bank, to force the state banks to maintain their circulation at a parity by returning their notes and demanding redemption in specie. The state banks, in many instances were unable or unwilling to do so. The constitutionality of the central bank was again questioned and was finally settled in favor of the government bank, in 1824, by the Supreme Court. In the meantime, the management of the bank had been both inefficient and corrupt. Its reserves were recklessly invested and lost and its condition came near insolvency. However, when placed under the management of Nicholas Biddle, the bank regained prestige and within a few years was generally recognized as a permanent institution.

In 1829, President Jackson, who had a violent prejudice against anything of a monopolistic nature, and disliked the bank because he thought it had secretly opposed his political interests, proposed to remove the government deposits from its custody and otherwise to restrict its activities. The renewal of its charter was made the principal issue of Jackson's second campaign in 1832. At the height of the campaign, the bill granting a new charter was passed by Congress and immediately vetoed by the President. Subsequently, the second Bank of the United States was rechartered as a Pennsylvania state bank and the public funds were removed from its custody to politically favored state banks.

State banking from 1836 to 1863.

When one reviews the chaotic banking conditions which prevailed from 1836 to 1863 and the coincident irregularity of money and credit during that period, it seems to have been a great misfortune that the second Bank of the United States was obliged to withdraw its controlling influence over the state banks. It is reasonable to think that, if the bank had not been a chance victim of political controversy, it could have overcome the earlier handicap of weak management and developed into a strong centralized institution, gradually displacing or absorbing the petty banks of some 35 independent states and consistently meeting the requirements of the country for adequate and uniform credit and exchange facilities. On the other hand, the economic history of the United States shows that centralized control of business methods and policies can never come about in this country without every form and degree of independent action and of state or local control having first been tried. Only after experiments with individual initiative and home rule have proved unsatisfactory and ineffective, have our people been content to submit to either centralized private management or national control.

The misfortunes of unorganized and irresponsible banking during the years under review provided many impressive and expansive object lessons in banking methods and policies. The crisis of 1837, although probably inevitable as a result of other causes, was no doubt greatly intensified by the uncontrolled expansion of state banks and the issue of bank notes. The government funds which had been transferred to state bank depositories were in large part lost in the state bank failures which occurred

in 1837 and during the three years from 1840 to 1843. In the absence of any responsible depository, the government was obliged to establish the *Independent Treasury System* with its system of sub-treasuries and to impound its revenues therein until needed. This forced withdrawal of the public funds from circulation further impaired the monetary supply and the basis of credit by materially reducing the already scant amount of specie.

Bank failures and ruined depositors, unsecured and depreciated bank note issues, lack of uniformity in banking practice among the states, and the withdrawal of specie from circulation were outstanding symptoms of the general bank situation preceding the Civil War.

Some communities successfully resisted the temptations of unsound banking, and some states successfully purged themselves of the plague of irresponsible bankers. Massachusetts and New York established a wholesome leadership in controlling the two most serious evils of unsound state banking. These were (1) the over-issue, depreciation, and repudiation of bank notes, and (2) the loss of personal deposits because of the failure of under-capitalized and mismanaged banks.

The Suffolk System grew out of a courageous effort of a group of Boston bankers to establish and maintain the bank notes of all New England state banks at a specie parity in the Boston exchanges.

From the days of the first Bank of the United States, the management and solvency of New England banks had maintained a record which excelled that of most other sections of the country. These banks did not suspend specie payments in 1814, as other banks were obliged to do, and in the years that followed until the Civil War few banks in New England refused to redeem their notes at par on demand.

The difficulty which the Boston banks faced in 1824 was not the failure of any particular banks to redeem their notes, but resulted from the necessity of presenting the notes of outlying banks for redemption *at the banks*. In New England, transport was tedious and the carriage of money in the sparsely settled districts was somewhat dangerous. As a natural result, country bank notes when circulated in Boston could be returned to the banks of their issue and converted into specie only at considerable cost and risk and, for this reason, were accepted by the Boston

banks at a discount equivalent to the expense of their return and conversion. At the same time, the notes of the Boston banks were convertible, in Boston, into specie at par. Obviously, the operation of Gresham's Law in Boston, the commercial and financial center of New England, favored the general use of the country notes in trade and prevented the Boston banks from keeping their notes in circulation. These notes, being as good as gold on demand in Boston, were automatically withdrawn as a general medium of trade and either hoarded or turned into the banks for redemption whenever specie or foreign exchange were required. This situation practically resulted in converting the Boston banks into *specie banks.*

In 1824, the Suffolk Bank in Boston put a plan into operation which soon placed both country and city bank notes on a parity at the superior specie value which had previously applied only to the Boston bank notes. The plan provided that out-of-town banks which maintained a minimum deposit of $2,000 in the Suffolk Bank would have their notes accepted at par by the Suffolk without charge. Notes thus received would be returned to the issuing banks, from time to time, and the Suffolk would accept in exchange therefor the notes of any solvent New England bank. But, in the case of country banks which preferred not to enter into this arrangement, when their notes came to Boston and to the Suffolk Bank, or any of its associates, they were sent home at once and redemption in specie demanded. The country banks were quick to see the point of this policy and, with few exceptions, unhesitatingly complied with the plan.

The Suffolk policy resulted (1) in establishing New England bank notes upon a uniform par of exchange; (2) in creating a clearing system for the bank currency of the region which, indirectly, operated to prevent the undue expansion of country bank note issues; and (3) in establishing the principle that the volume of bank notes which can successfully be sustained in circulation at any time is dependent upon the adequacy and expediency of their means of redemption.

The Suffolk System remained in operation until the Civil War, its basic principle was incorporated in the National Banking Act and is perpetuated in the present federal reserve system.

The Safety Fund System resulted from an attempt of the New York legislature, in 1829, to protect the depositors and note-

holders of failed banks from loss of their deposits and the repudiation of bank notes in their possession. Banks incorporated under the Safety Fund law were required to make annual payments to the state safety fund of an amount equivalent to ½ per cent of their capital until they had contributed a sum equal to 3 per cent of their total capital. In case a bank failed, the difference between its total assets and its total liabilities (disregarding capital stock) was paid from the safety fund for the benefit of the creditors.

Early in the crisis of 1837 three banks failed and their creditors were reimbursed from the safety fund. By the end of 1842, eleven more banks had failed, the safety fund was soon depleted, and the state was obliged to assume the residual obligation and raise the money by a bond issue. The safety fund plan, in a variety of forms, has since been tried by several states, but always with the same disappointing result. In times of depression, when bank failures were numerous, the safety fund has always proved inadequate to meet the strain.

Nevertheless, under the Banking Act of 1933, the Federal Deposit Insurance Corporation was formed which now applies the safety fund principle to the insurance of deposits up to $5,000 in all federal reserve member banks and to such other banks as may choose to subscribe to the fund. The amount of the annual subscription of each bank is equivalent to $\frac{1}{12}$ of 1 per cent of its total deposits. It is estimated that, if a system of guaranteed deposits had been applied to the national banks from the Civil War to the present, an annual levy of $\frac{1}{12}$ of 1 per cent of their deposits would have provided a fund more than adequate to compensate all depositors' losses in bank failures during the period.

The Free Banking System is related to the early banking experience of New York and was formulated by the so-called *Free Banking Act* of that state in 1838. The primary purpose of this law was to eliminate the objectionable method of creating banks by special legislative charters. Before that time, the generally accepted method of authorizing the creation and operation of any kind of a corporation was by special act of a state legislature. But the lack of uniformity of special charters, their usual failure to charge bank officials and stockholders with responsibility commensurate with their powers as custodians of private and public funds, their neglect to safeguard the resources

of individuals entrusted to the banks, and the political log-rolling and personal discrimination involved in the granting of special charters, became so subversive of sound banking as to be no longer tolerable. These defects of the system of special legislative charters were more apparent in the great industrial and commercial state of New York because the magnitude and rapidity of development of financial institutions were greater there than in other states.

The new banking law set up certain standard requirements as respects capital, the issue of shares, the selection of officers, the acceptance of deposits, the making of loans, the issue and redemption of circulating notes, the maintenance of reserves and numerous other features of conducting the banking business. The law further provided that any group of men complying with the initial requirements of the statute would be permitted to establish themselves in the banking business, subject to the continuing supervision of designated state officials. This enactment of a *general banking law*, which enabled any qualified person to enter the banking business was said to establish a system of *free banking*. As a matter of fact, this title is a misnomer. The purpose and effect of the law constituted a definite and continuing *curb* upon the comparatively unrestrained activities and arbitrary policies which had formerly prevailed. The system was one of *voluntary regulation* rather than freedom of action.

A second general provision of the New York law dealt with the unsolved problem of the bank-note holder in case of the failure of the issuing bank. The safety fund plan, although it had not yet collapsed, did not command the confidence of bankers and legislators, and a more favored substitute was proposed and written into the law. The issue of all state bank notes was placed under the control of the State Comptroller of the Currency. He issued notes in limited amounts to the banks, only when secured by federal bonds, state bonds, or New York real estate mortgages. These securities were placed in his custody by the banks as a pledge for the faithful redemption of the notes. In case a bank failed or refused to redeem its notes, the pledged securities were sold by the state and the proceeds applied to redemption of the notes. Although this method of bank-note guarantee did not operate with complete success in New York,

the defects were due to lax administration rather than the principle of the law.

The principle of pledged bank-note securities, supplemented with a redemption fund in specie, was incorporated in the National Banking Act. With further modifications as to the nature and custody of the securities pledged, this method of bank-note security is now effective in the federal reserve system.

The failure of state bank notes to serve the currency needs of the rapidly growing and diversified business of the country was clearly demonstrated during the half-century following the suspension of the first Bank of the United States in 1811. During the periods of depression following the crises of 1814, 1837, and 1857 few banks had maintained specie payments; and, save for the Suffolk System in New England and the brief life of the New York safety fund under the free banking system, there was no protection for the note holder of failed banks.

A survey of bank currency issues in 1860 reveals an astonishing variation in the circulating values of the notes of different banks at a given time, and an equally erratic fluctuation in the value of notes of individual banks within relatively short periods of time. When notes in New England and New York were circulating at par, notes originating in certain southern and western states were worthless outside of the immediate neighborhood of their issue. Between these extremes there were bank notes of every degree of depreciation and instability. "Bank-note reporters" and "counterfeit detectors" were issued periodically to give business men the latest quotations and information relating to the currencies of uncertain quality which they were obliged to receive in the course of business.[1]

The national banking system.

The successful state banking system of New York was the model upon which Congress, following the recommendations of Secretary of the Treasury Salmon P. Chase, patterned the national banking system which it established in 1863. He desired, among other things, to provide an artificial market for government bonds. National banks were required to use govern-

[1] One issue of Nicholas' *Bank-Note Reporter* "lists more than 5,000 types of spurious notes in circulation at one time, while at another it lists 30 types of counterfeits for a single bank that also had additional issues of sound currency in circulation." — James, *op. cit.*, p. 140.

ment bonds as the assets behind note issues, and furthermore, the national banks were, in 1866, given a monopoly of the note issue privilege by the imposition of a prohibitive tax of 10 per cent per annum upon the note issues of state banks.

The details of the national banking law have been amended from time to time, but its general principles remain unchanged. As the law now stands, national banks may not be organized unless the stockholders contribute a minimum capital varying from $50,000 for places of less than 6,000 population to $200,000 for places of more than 50,000 population. Three limitations were placed on the ordinary issue of circulating notes: (1) They could not exceed in amount the capital stock of the bank. (2) United States government bonds, in amount equal to the notes issued, had to be deposited by the bank with the treasurer of the United States as security for the redemption of the notes. (3) Each bank had to maintain in the United States treasury a redemption fund in "lawful money" equal to 5 per cent of its note issue. As this last requirement indicates, bank notes were redeemable at the federal treasury. They could also be used in all payments to the government except customs duties, although they were not legal tender.[1]

National bank reserve requirements. — While the note holder was protected by a special kind of security set aside for the purpose, the depositor in a national bank was protected only by its general assets. The nature of these, however, was prescribed in some degree by the federal government. But the most important requirement related to the reserves that must be held by the national banks. Until the Federal Reserve Act was passed in 1913, banks in "central reserve cities" (New York, Chicago, and St. Louis) were required to maintain on hand a "lawful money reserve" [2] equal to at least 25 per cent of their deposits. Banks in "reserve cities" (including most of the cities with over 100,000 population) were also required to maintain 25 per cent reserves, but their deposits in the national banks of the central reserve cities might be counted for one-half of that amount. In all other places the banks were required to hold a 15 per cent reserve, three-fifths of which might consist of deposit accounts in banks in central reserve cities or other reserve cities.

[1] These two disabilities were removed by the Banking Act of 1933.

[2] Including all kinds of United States money except minor coins and bank notes.

In all cases the funds kept by the banks with the United States treasurer for the redemption of their notes were counted as part of their legal reserves.

Under the operations of this plan the cash reserves of the national banks were centered in New York. New York is the chief market place of the continent and the center of financial operations. State banks and trust companies, as well as national banks, found it to their advantage to maintain deposit accounts in New York. All together the deposits of other banks usually constituted more than half of the aggregate deposits in New York national banks. Like an inverted pyramid upon its apex, the structure of bank credit in the United States rested upon the money reserves of the New York banks. Every important change in the demand for money or credit in any part of the country had an effect on the New York money market; similarly, every important disturbance in the New York money market affected financial conditions throughout the country.

The central reserve plan which we have just described was modified when the federal reserve system was installed in 1914. It is generally agreed that the old system worked badly. The trouble was not that the reserves were centralized. Centralization of reserves in some form is found in all of the leading commercial nations; it effects economies in the use of cash and permits a larger volume of bank credit than could otherwise be issued. The necessity of having this large volume of bank credit makes some kind of centralization practically inevitable. The trouble was that we did not get the advantages which many other nations derived from centralized reserves. There was not a ready response to variation of credit needs in different parts of the country or available resources to meet special demands such as for gold to be exported to other nations. In brief, the organization of the bank reserves did not provide that "elasticity" which serves to moderate the violence of those alternating periods of prosperity and depression which have been a major defect in the operation of the business mechanism.

Inelastic reserves. — Bank reserves, both local and central, tended always to remain very close to the legal ratios prescribed by law. They could not fall very much below those points, for the law compelled banks to stop lending when their reserves fell below the legal minima. The real difficulty was that the

rigid and inelastic requirement of the law fixed a dead line beyond which the *extension of credit* could not go.

This often had serious consequences. It is a well-tested principle of sound banking practice that for bankers to stop lending when bank reserves are low is to invite disaster. Business men, otherwise solvent, are not able to secure bank credit. Forced sales ensue; the prices of securities and of other forms of property fall; banks "call" their demand loans or ask for larger deposits of collateral securities; more sales are forced, and the pressure on the banks for loans increases. In short, a general money market panic may come from suddenly curtailing loans at a time when bank reserves are relatively low. The wiser banking policy is to lend freely on good security, but at increased interest rates, thus automatically restricting loans to the more legitimate borrowers.

That the requirements of the law were rigid explains why national bank reserves under the old system did not fall much below a fixed point. But it does not explain another and equally significant fact, namely, that reserve ratios rarely rose much *above* that fixed point. To explain this we must note first that local banks in the United States, as elsewhere, do not find it profitable to keep more cash on hand than the law prescribes or than they need in the ordinary course of business. An unnecessary amount of idle cash is an unprofitable investment. When surplus cash accumulated in the local banks they found it better to send it to large city banks in exchange for interest-bearing deposits. In this way, under the old system, the *surplus* reserves of the country became centralized in the larger cities and especially in New York.[1] Once in the hands of the New York banks, they were quickly absorbed in an increase of their loans and discounts and hence of their deposits.

In this connection, call or demand loans were of especial importance. In New York such loans are very largely made to finance stock exchange speculation and are secured by stocks and bonds pledged as collateral. The interest rate on call loans is much more variable than the rate on time loans. The principal circumstance affecting the call loan rate under the old system was the amount of the *surplus reserves* of the New York banks, that is, the excess of their reserves over the amount required by law.

[1] Under the Banking Act of 1935, this practice is discontinued.

Large reserves meant that the banks could safely expand their loans.

Expansion made call loan rates low; this increased the amount of speculative buying of securities, advanced speculative prices, and thus so stimulated speculation as to increase the demand for call loans. If, however, by reason of an excessive expansion of loans or sudden withdrawals of cash, the surplus reserves of the New York banks were low, some loans might have to be "called."

Since their payment might thus be demanded at any time, call loans, from the point of view of *any one* bank, might appear to be a particularly desirable form of investment. They might seem to constitute for that bank something like an additional or secondary reserve over and above the bank's reserve of lawful money. But, viewed as an aggregate, it is clear that the call loans of the large New York banks had none of the characteristics and answered none of the purposes of a reserve. The calling of loans by one bank would merely increase the demand for credit at other banks. Unable to secure credit with which to hold their securities, borrowers would be forced to sell them; there would be a resulting drop in their prices; to protect themselves, brokers would demand additional "margins" from their customers; the banks would demand that more collateral be put behind their loans. Just as surplus reserves often initiated an expansion of speculation, so a low reserve ratio would force contraction. The money market and the speculative market reacted upon each other in a way that was bad for both. The rate of call loans was normally at least a point lower than the rate on time loans of commercial paper. But under unusual conditions, speculators have had to pay as much as 125 per cent or even more. The major disturbances in the New York money market, even though wholly speculative in their origin, were likely to be reflected in financial conditions throughout the country.

TABLE I. — LOANS AND DISCOUNTS OF NEW YORK NATIONAL BANKS ON SPECIFIED DATES (In Millions of Dollars)

CHARACTER OF LOAN	1906	1912	1920	1928	1933	1938
On demand	303	344	477	984	1772	997
On time, with collateral security	149	223	620	672		709
On time, without collateral security	249	391	1647	1017	1664	1326

Related evils. — Because of (1) the tendency of the surplus reserves of the country to flow to New York, and (2) the way in which they were quickly absorbed there in the extension of bank credit, it followed that the country as a whole, except during certain periods of industrial depression, never possessed any considerable surplus reserves for any length of time. We were ill prepared to meet either sudden withdrawals of cash from bank reserves or any urgent need for large additional advances of bank credit. The banking situation generally had very little *slack* in it.

For example, in the South and West there is a recurrent annual demand for money to be used in "moving" the cotton and grain crops. Harvest expenses have to be paid largely in cash. Most farmers are paid cash for their crops. Banks in the great agricultural regions annually find that at harvest season their depositors increase their cash withdrawals and that borrowers want loans in the form of cash. The banks in those sections, accordingly, withdraw money from the banks in which they have deposits, and under the old system most of this money came directly and indirectly from the New York bank reserves. There was a good deal of justifiable complaint on the part of farmers who found difficulties in converting their personal credit, however good it might be, into immediate means of paying cash. And as it was, the withdrawals were large enough to lead often to difficulties in the New York money market.

The bond-secured bank currency provided for by the national banking law had always been extremely *inelastic*, in the sense that its amount did not respond to the varying needs of trade. The price of government bonds and the increase in the number and size of banks were the controlling influences upon its amount. Many persons were convinced that this inelasticity was the greatest defect of the national banking system. The more serious projects for banking reform broached before 1907 were intended primarily to provide a more elastic note issue.

It is clear, however, that the difficulty created by inelastic currency was in large measure merely one aspect of the larger difficulty of inelastic reserves. If the New York banks had been able to take money freely from their vaults and send it to the South and West each year, in full confidence that it would return in due season, without curtailing the volume of their

loans, the problem of elastic currency would have been solved. Elasticity would have been secured by permitting money to pass from bank reserves into circulation and back into reserves again.

In a similar way, the difficulties associated with the *Independent Treasury System* of the federal government were aggravated by the inelasticity of our bank reserves. Under this system, when the government's receipts exceeded its expenditures, money drawn out of bank reserves collected in the government's vaults; when expenditures were growing more rapidly than receipts the money flowed back to the banks. The strains thus put upon the banking system were less severe than those occasioned by the annual movement of money to the agricultural regions or by occasional demands for gold for export. Under a more elastic reserve system they would have been relatively unimportant.

Absence of centralized control. — It may have occurred to the reader that some elasticity might have been given to bank reserves in the United States if the banks holding the central reserves had made it their practice normally to hold reserves considerably larger than the minimum required by law, — reserves equal to 40 or 50 per cent of their deposits, for example. This would have given a margin sufficient to enable them usually to meet withdrawals of gold for domestic use or for export without suddenly contracting the supply of loanable funds. This is undoubtedly true, but it must not be supposed that such a policy would voluntarily have been followed by the New York banks.

The difficulty was that the banks holding the central reserves were merely large commercial banks, interested primarily in securing maximum profits for their own stockholders and with no ~~one of~~ them *individually* responsible for the maintenance of adequate surplus reserves. For any one bank to have attempted to remedy the situation would have helped but little. It would only have put itself at a disadvantage as compared with its competitors. In order that the banking system of a country may hold any large amount of surplus reserves, *responsibility for the maintenance of such reserves must be entrusted to institutions which will not be interested primarily in profits.*

Steps toward reform. — The national banking system was in some particulars highly successful. National bank notes were always thoroughly sound and depositors, too, were well protected.

But the defects which have just been discussed made the system, in its larger aspects, unsafe. Students of banking problems had for many years urged the need of reform. Some advocated the establishment of a *central bank* such as is found in almost every country of Europe. These banks hold the central banking reserves of their respective countries, hold the government deposits, usually have a monopoly of bank note issue, and are subject to a special measure of government control. But since the days of the second Bank of the United States the creation of one central bank for the whole country had probably been politically impossible. Various plans for securing a more elastic bank-note currency were also urged. But Congress, the business men of the country, and the bankers themselves were for the most part apathetic.

General interest in the matter was finally aroused by the panic of 1907, in which the worst features of our banking system stood out in clear relief. Banks throughout the country found themselves unable to meet the large and increasing withdrawals of money by their depositors and were unable in turn to get money from the banks in which they themselves had deposits. Banks with perfectly sound assets found themselves, for the time being, technically insolvent. *Clearing-house loan certificates* — virtually joint obligations of the banks associated in the clearing house, issued to individual member banks upon the deposit of adequate security — were used (as in former panics) in the payment of clearing-house balances. In many cities clearing-house loan certificates, issued in small denominations, were paid to depositors in lieu of money. Cashier's checks and other credit instruments were also used as money. The total amount of improvised currency issued during the panic is estimated to have been over $500,000,000.[1] The whole situation was such as to impress upon thoughtful men the imperative need of banking reform.

The first tangible result was the so-called Aldrich-Vreeland Act of 1908, which made temporary provision for such emergencies as that of 1907 by permitting national banks to issue notes, under a heavy tax, upon other security than government bonds. The methods utilized were, in part, those which had

[1] A. P. Andrew, "Substitutes for Cash in the Panic of 1907," *Quarterly Journal of Economics* (August, 1908), Vol. XXII, p. 515. For an excellent account of the general situation at the time see O. M. Sprague, *History of Crises under the National Banking System*, Government Printing Office, Washington, D. C., 1911, Chap. V.

been developed by the banks themselves in issuing clearing-house certificates. For several years no notes were issued under this statute, but in 1914 the outbreak of the European war led to large shipments of gold to Europe and Canada and to a small-sized panic in the money market. The issue of emergency currency possibly averted a more serious panic. Altogether, emergency notes to the amount of $386,000,000 were issued by 1,363 different banks. All of these had been retired before the Act expired, by limitation, on June 30, 1915.

The Aldrich-Vreeland Act also created a National Monetary Commission, composed of senators and congressmen, to devise a plan for the general revision of the banking system. The plan recommended by this commission was one sponsored by Senator N. W. Aldrich of Rhode Island. It provided for a hierarchical organization of the banks of the country, the "National Reserve Association," with a central administration at the top. The whole system was to be controlled by the banks rather than by the government. The widespread discussion of the Aldrich plan undoubtedly did much to awaken interest in the problem and to make the adoption of the federal reserve system possible.

The federal reserve system.

A revolutionary change in the banking system of the United States was brought about by the Federal Reserve Act of 1913. Under the provisions of this act the country was divided into twelve districts, and a regional bank, named a federal reserve bank, was established in each district.[1] The system is under the general supervision and control of the government. At its head was the Federal Reserve Board, comprising six members appointed by the President, together with the Secretary of the Treasury and the Comptroller of the Currency. By the Act of 1935, the Federal Reserve Board was displaced by *The Board of Governors of the Federal Reserve System*, comprised of seven members appointed by the President. Treasury officials are not included. The stock of the various federal reserve banks is owned by local banks in the respective districts, called "member

[1] The twelve federal reserve banks are located at New York, Boston, Philadelphia, Richmond, Atlanta, Cleveland, Chicago, Minneapolis, St. Louis, Kansas City, Dallas, and San Francisco. In addition, branches (twenty-five altogether in 1930) have been established in other important cities within the different districts and "branch territories" allotted to them. On Dec. 31, 1935, the number of member banks was 6,011. The number of state banks and trust companies in the system was 857.

banks." National banks were required to become member banks, while state banks and trust companies were permitted to become member banks, provided they complied with certain standards imposed upon national banks by the national banking law. Under the Act of 1933, any incorporated banking institution or mutual savings bank may become a member of the reserve system. The framers of the federal reserve system endeavored to assure representative management of the several federal reserve banks. They provided that each bank should have a governing board of nine directors. Three Class A directors were to be bankers, three Class B directors were to represent commerce, agriculture, and industry, and three Class C directors were to represent the public. Class C directors are appointed by the Board of Governors. The other six directors are elected by the member banks of the district in such a way as to avoid the concentration of voting power in the representatives of the larger banks. The board of directors appoints, with the approval of the Board of Governors, a president, who serves as the chief executive of the bank, and a vice president. Dividends paid to member banks on their stock are limited to 6 per cent. The provisions last noted were adopted for the purpose of preventing the reserve system from being operated for profit, and to give active business men as opposed to professional bankers a large part in the determination of its policy and management.

The federal reserve system was instituted not to make money, but primarily to furnish an elastic currency, to afford means of rediscounting commercial paper — with the view of accommodating commerce and business — and to establish a more effective supervision of banking in the United States. Wisely or unwisely the system was founded on a legislative assumption that the concentration of bank funds in New York City and their absorption in stock market transactions were evils to be discouraged and not a socially wholesome use of bank credit. Out of this assumption have arisen some of the most difficult problems of the federal reserve system. The Board of Governors, it may be noted here, receives advice and counsel from a Federal Advisory Council consisting of twelve bankers, one from each district, elected by the board of directors of the federal reserve bank.

The federal reserve banks hold the reserves of the system. — At first member banks were required to keep part of their reserves in

their own vaults. But as the law has stood since 1917, the only reserves which member banks are *required* to maintain consist wholly of deposit credits on the books of federal reserve banks. Member banks in central reserve cities (New York and Chicago) must maintain in such form reserves equal to 13 per cent of their demand deposits. For member banks in reserve cities, the legal reserve is 10 per cent of demand deposits, and for other member banks, 7 per cent. In addition, member banks, of whatever class, are required to maintain reserves equal to 3 per cent of their time deposits. The amount of money a member bank keeps on hand as till money is now left to its own discretion. It is usually relatively small — generally not more than 5 per cent of demand deposits.

Under the federal reserve system, therefore, the banking reserves of the country have been centralized in much higher degree than before. The ultimate reserves are those of the federal reserve banks themselves. The reserves they hold (in money) must normally equal 35 per cent of their deposits plus 40 per cent of their outstanding circulating notes. These new central reserves are not so rigid and inelastic as the old ones were. In the first place, the Board of Governors may, in case of need, suspend these reserve requirements temporarily, imposing a progressive tax upon the amounts by which the reserves fall below the normal legal level. In the second place, it was to be expected that the federal reserve banks would as a matter of practice hold reserves considerably larger than those required by law. In the third place, the Board of Governors can raise the reserve requirements up to 100 per cent of the original requirements (law of 1935). In May, 1937, the reserve requirements were raised to the maximum limit.

During the course and collapse of the speculative boom of 1919–1920 the reserve ratios closely approached the legal limits of 35 and 40 per cent; but in 1921 an unprecedented flow of gold started to this country, and the reserve ratios advanced to a high level which they maintained until 1932. Despite high reserve ratios, interest rates rose markedly after 1927. In 1929 after successive advances in rediscount rates by the reserve banks and strong expressions of disapproval by the Federal Reserve Board of the "excessive" employment of bank credit in security speculation, a drastic "deflation of the stock market" marked

by all the characteristics of a severe crisis occurred in the last week of October, 1929. During this period, however, the reserve ratio for the entire system practically never sank below 60 per cent. Within the course of a few months the federal reserve system seemed to be operating with that "slack," the absence of which we have described as a marked defect of the old system. It seemed to have elasticity and a banking mechanism which was able to supply a practically unlimited amount of credit for emergency use. The record of the federal reserve banks during the crisis of 1929 and the conduct of the New York banks in particular appeared to warrant the conclusion that the "bank panic" of pre-war days was no longer to be feared. But, within a little more than three years thereafter, without visitation of fire, flood, famine, or pestilence, at a time when there was neither fear of invasion nor threat of revolution, the economic life of the country was paralyzed by the most complete collapse of credit and confusion of banking institutions in its entire history. A bewildering conjunction of circumstances, within the course of a few days, drove the "unparalleled abundance" of gold and currency from the banks, reduced a "most favorable" reserve ratio to a deficit, destroyed the capacity of the banks to perform any of their customary functions of loan, discount, or issue, and shriveled their assets by over 19 billion dollars.[1]

For eight days after the collapse of March 4, 1933, every member bank of the federal reserve system was closed, and in some states and cities the "holiday" was much longer. A discussion of this strange episode of American banking history appears elsewhere in this volume (pp. 326–330); it is sufficient to state here that there were fundamental faults both in the banking system and in the manner of its administration. These faults had been operating insidiously over a period of more than a dozen years and had seriously impaired both the credit and the reserve structure of the system. The Banking Acts of 1933 and 1935, and the Securities and Exchange Acts of 1934 and 1935, have attempted to remedy the more obvious defects.

Rediscounting is the purchasing by one bank of notes and bills of exchange held by another. Although common in Europe, rediscounting had not been frequently resorted to in American

[1] The estimate of Leonard P. Ayres in *The Economics of Recovery*, Macmillan, New York, 1935, p. 43.

banking practice, and there had even been a distinct prejudice against it. But it now plays an essential part in the operations of the federal reserve system. Federal reserve banks may rediscount (for their member banks) short-time notes and bills of exchange "issued or drawn for commercial, industrial, or agricultural purposes." *Notes or bills arising out of trading in stocks, bonds, or other investment securities cannot be rediscounted unless the securities are those of the United States government.* The purpose of this restriction is to prevent the resources of the federal reserve banks from being used to finance speculation, and also to limit their holdings to so-called "self-liquidating paper," which borrowers will be able to repay in the ordinary course of business from the proceeds of the sales of the goods produced or purchased with the aid of the borrowed funds. Besides rediscounting, the federal reserve banks, since 1935, may make advances to member banks upon any satisfactory security, provided such advances are for not more than four months.

These provisions for rediscounting and borrowing are very important. Together with the system of central reserves, they give a high degree of elasticity to the supply of bank credit. When the reserves of member banks become too low to permit them to increase their advances to borrowers, they may replenish them by borrowing from the federal reserve banks or by sending bills and notes to them for rediscount. If the pressure for loans falls unevenly upon the federal reserve banks in different parts of the country, the Board of Governors may permit and even require some of the federal reserve banks to rediscount commercial paper for other federal reserve banks. Just as the reduction in reserve requirements has vastly increased the volume of bank credit that may be erected upon the gold reserves of the country, the centralization of reserves puts them at the disposal of the banks and thus of the borrowers of the country as a whole.

Federal reserve notes are issued by the federal reserve banks upon the security of the commercial paper they have obtained by rediscounting or by purchase in the open market. As eligible paper set aside or "earmarked" for this purpose matures, fresh paper or gold certificates must be put in its place if the notes remain in circulation. The federal reserve banks must, as we have already seen, maintain a "gold reserve" equal to 40 per cent

of their outstanding federal reserve notes.[1] This ratio, like the ratio of reserves to deposits, may, in emergency, be permitted by the Board of Governors to fall below the legal point, although such deficiencies are penalized by a graduated tax.

When the member banks need currency for the use of their borrowers and depositors, they may obtain it by taking the proceeds of their borrowings from the federal reserve banks in the form of federal reserve notes rather than in the form of deposit credits. This means that when the country needs more money for hand-to-hand circulation it can get it, using member banks as intermediaries, by exchanging personal credit instruments for federal reserve notes. The volume of these notes can now expand quite as readily as the volume of bank deposits. Issued in enormous quantities during the war and the years immediately following, federal reserve notes now constitute the largest single item in our circulating medium.

The Federal Reserve Act authorized the federal reserve banks to issue a second type of circulating note known as *federal reserve bank notes*. These notes were meant to be used in a plan to retire the national bank currency then in circulation. The reserve banks were expected to purchase from the national banks the government bonds against which the national bank notes were issued. The bonds were then to become available as security for the new issue of federal reserve bank notes. Because of the reluctance of the national banks to surrender their circulation, the plan was not carried out.

On March 11, 1935, the Secretary of the Treasury gave notice that all outstanding Consols of 1930 and Panama Canal Bonds of 1936 and 1938 were called for redemption on August 1, 1935. This action retired the entire 2 per cent debt of the United States ($674,625,630) which included all bonds lawfully available as security for national bank notes. The national banks received payment for their bonds and have paid into the treasury the funds necessary to reduce their notes. As the notes gradually reach the treasury they are redeemed and canceled. In this way the outstanding distinction of the national banks has been wiped out, the relative importance of the elastic federal reserve

[1] Since the Gold Reserve Act, January 30, 1934, the "gold certificates" issued to the banks by the Treasury in exchange for the forced surrender of gold to the government are substituted for gold in the legal bank-note reserves.

notes has been increased, and the credit control of the federal reserve banks has been broadened.

The federal reserve bank notes have at no time been an important element of the monetary system. It will be recalled that when silver certificates were withdrawn from circulation, under the provisions of the Pittman Act, a special issue of federal reserve bank notes was substituted. A second issue appeared as an emergency measure in 1933. On January 31, 1936, $64,000,000 of these notes were in circulation. In March, 1937, $40,000,000 of federal reserve bank notes were in circulation.

Other functions of the federal reserve banks.

The federal reserve banks, it was contemplated in the law, should be bankers for the federal government. Any or all of the general funds of the government may be deposited with them and they may serve as fiscal agents of the country in various operations. At first, the treasury was slow to take advantage of the opportunity thus given it to use modern and economical methods in caring for its receipts and making its payments. But during the World War the treasury found that it needed the support and co-operation of the federal reserve banks. The banks were the intermediaries through which bonds and certificates of indebtedness were distributed to other banks and to investors. The closing of the sub-treasuries in 1920 meant that they had outlived their usefulness and that the government would continue in the future to receive and make payments through the federal reserve banks.

Open-market operations. — The reserve banks were not confined to dealings with member banks. They were authorized to buy and sell, in the open market, gold coin and bullion, securities of the federal government, the short-time obligations of state and local governments and obligations guaranteed by the United States, farm loan bonds and acceptances or debentures of federal intermediate credit banks and national agricultural credit corporations; cable transfers, bankers' acceptances, and bills of exchange of the kinds and maturities made eligible for rediscount.

These open-market operations are important. If the federal reserve banks could deal only with their member banks and with the federal government, there would be danger that they might become merely "emergency banks," custodians of a surplus supply

of lending power that could be tapped in case of extreme need. Their open-market operations enable them to exercise a steadying effect upon the money market and sustain the government's fiscal policies at any time. They may buy and sell, not primarily for profit but to relieve a situation of strain or to dampen a tendency toward too rapid expansion. Rediscounts must wait upon the desires of the member banks. In their open-market operations, the federal reserve banks may themselves take the initiative. In practice, this initiative is taken and control exercised largely through the purchase and sale of government securities. These operations are now under the direct control of the Federal Open-Market Committee, which is composed of the Board of Governors and five representatives of the federal reserve banks. No federal reserve bank may engage in or refuse to engage in open-market operations except in compliance with the directions and regulations of this committee.

Open-market operations are used by federal reserve authorities to effect several kinds of control: to pave the way for advances or reductions in rediscount rates; to stimulate business or to check business expansion when it threatens to become excessive; to neutralize the disturbing effects of large gold movements on the credit situation, and in general to exercise a stabilizing influence on the money market and to sustain the public credit. During the crisis of 1929 the federal reserve bank of New York purchased more than $150,000,000 of government securities in the course of a single week. Since that time, government bond issues have practically been purchased outright by the reserve banks. At the present time $216,200,000 U. S. bonds are being held in their portfolios.

The federal reserve system during the war. — The federal reserve system was carefully devised. Its purpose was to get rid of the principal evils of the old national banking system. In its first few years the most formidable obstacle to its success seemed to be the lack of cordial support on the part of the banks, especially the smaller banks, of the country. Few state banks and trust companies, for example, became members. Member banks were obliged to subscribe to the capital of the federal reserve banks before the earning power of the latter was assured. They received no interest on their required reserve deposits, and some of them lost customary profits from charges for collections and

exchange. The advantages of the system to them could not be proved until an increased strain upon their own resources forced them to go to the federal reserve banks for help. The war gave the federal reserve system its first severe test, even though its services to its member banks were, in a manner, overshadowed by the greater significance of its services to the government.

The savings of the people fell far short of furnishing the sums the government borrowed. By expanding their own credit — their deposits and their note issue — the federal reserve banks made it possible for the other banks, in turn, to expand their credit, placing it at the disposal of the government and of the purchasers of government securities. Government securities were at first absorbed in large measure by the banks themselves and were taken over from them more slowly by investors. Describing the whole process in general terms, we may say that the federal reserve banks *advanced* the purchasing power which the government needed. The loans of federal reserve banks during this period were made largely upon the notes of member banks supported by the securities of the federal government as collateral.

This expansion of purchasing power was accompanied by a precipitous rise of prices. In March, 1917, wholesale prices were 62 per cent above their level in 1913. Two years later, they were twice as high as in 1913. In May, 1920, they were higher by 147 per cent than in 1913. Federal reserve notes in circulation increased from $89,000,000 in 1915 to $606,000,000 in 1917, $1,911,000,000 in 1918, $2,618,000,000 in 1919, and $3,154,000,000 in 1920. Deposits in the federal reserve system increased from $384,000,000 in 1915 to $2,190,000,000 in 1919.[1] This was inflation, and it had all but one of the usual bad effects of inflation. The one exception was that throughout the period the United States remained on the gold standard. Without the federal reserve system it would have been difficult, perhaps impossible, for the government or the banks to have kept their obligations at a parity with gold.

That inflation went as far as it did may be attributed to the fact that the government's demands were large and that the rate of interest paid by the government upon its enormous

[1] These figures are averages for the twelve months in each year.

borrowings was fixed at a relatively low point. In order to "support the market" for government bonds and to keep their price close to par, the federal reserve banks advanced funds to investors at rates governed by the low rates the government would pay. Because interest and discount rates were held down in this artificial way, there was somewhat more borrowing and less saving by buyers of government securities and by people generally, than if the rates had been higher. The low rates invited the absorption of large amounts of money in an expansion of business activities.[1]

Inflation, therefore, was to be attributed to the enormous outlays required by war and to the fiscal policies followed rather than to the federal reserve system. The existence of the federal reserve system probably minimized its evils. It was better to have an expansion of federal reserve notes than another flood of irredeemable greenbacks.

Brokers' loans, speculation and control. — The federal reserve system, prior to 1933, had in no wise changed the old tendency of surplus funds to drift to New York and to find employment there in financing speculation in securities. The growth of "security loans" before the speculative crash in 1929 is shown by the following table in which reports of New York member banks and reports of New York brokers are combined, probably not without considerable duplication.

TABLE II. — NEW YORK SECURITY LOANS IN 1928 AND 1929[2]

(In Millions of Dollars)

	MAY, 1928	MAY, 1929	INCREASE
Security loans of reporting member banks . . .	7,075	7,218	143
Brokers' loans for "others" reported by member banks in New York City	1,514	2,965	1,451
Brokers' loans for "others" reported to the stock exchange	684[a]	1,188[a]	504
Total	9,273	11,371	2,098

[a] Average figures for end of April and end of May.

[1] Governor Harding of the Federal Reserve Board said before the Senate and the House Committees on Agriculture in December, 1920: "The Federal Reserve Board adopted a policy in order to assist in the war financing which was economically unsound. I say this frankly."

[2] Table is from the *Federal Reserve Bulletin* for June, 1929, p. 360.

The reserve bank authorities met the increased demand for security loans by advancing the discount rate, hoping thereby to discourage speculation and resist inflation. It is generally conceded that the Bank of England, by manipulating the discount rate, has been able to exercise considerable control over speculative activities on the London exchanges. It was believed that the Federal Reserve Board might successfully apply the same method of restraining speculation and credit inflation. Rediscount rates, which at the beginning of 1928 were 3½ per cent in all districts, were gradually advanced until they reached 5 per cent. On February 2, 1929, the Federal Reserve Board made its attitude toward inflation unmistakably clear in a letter to the reserve banks containing the following statement:

> "The federal reserve act does not, in the opinion of the federal reserve board, contemplate the use of the resources of the federal reserve banks for the creation or extension of speculative credit. A member bank is not within its reasonable claims for rediscount facilities at its federal reserve bank when it borrows either for the purpose of making speculative loans or for the purpose of maintaining speculative loans."

For the first nine months of 1929 the stock market responded to the warnings of the Federal Reserve Board and the higher interest rates imposed by alternating flurries of sharp declines and vigorous rallies. The New York banks, with some exceptions, appear to have co-operated in good faith with the reserve authorities and to have reduced their security loans during this period. But this withdrawal of credit was more than counterbalanced by an enormous increase in call and security loans furnished by non-banking corporations, foreign banks, and others. The situation apparently got beyond the control of the federal reserve authorities; the speculative bubble continued to expand until September, 1929, and in October, 1929, it burst.

We cite this chapter of recent financial history primarily to illustrate the thorny path which centralized banking control must tread in the United States. The way to avoid crises is to prevent or moderate the feverish booms which precede them; but it is a difficult way. Speculative frenzy cannot be checked — at least it was not checked in 1929 — merely by warnings and by raising the rediscount rates. And these were the most

powerful methods of control then available to the Federal Reserve Board.

In recognition of the demonstrated fact that raising the discount rate will not check a speculative boom, once a certain momentum has been attained, the Securities Exchange Act of 1934 authorized the Board of Governors of the federal reserve system to exercise a direct control upon the volume of securities-trading. This is accomplished by limiting loans on stock-market collateral to a specified proportion of its market value. In general, this proportion may not exceed 55 per cent and is subject to arbitrary reduction at any time by the board.

The banking crisis of 1933.

The immediate cause of most bank failures is lack of "liquidity" — the inadequacy of cash reserves to satisfy demand liabilities. When a bank runs short of money to pay depositors' checks, it is obliged to "suspend." *The basic cause of bank failures is insolvency.* An insolvent condition exists when the liabilities of a bank exceed the *bona fide* value of its combined reserves and investments. Unless forced to suspend by supervising public officials, banks may continue to operate as long as they can maintain a *liquid condition,* despite diminishing and inadequate investment values.

During the 7-year period, 1926 to 1932, 7,903 banks in the United States failed. This number constituted more than one-third of all active banks which existed in 1926. The year 1933 opened with 237 additional bank suspensions in January. In spite of the serious "statistical situation," reassuring statements from high places of government and finance, to the effect that the "economic condition is fundamentally sound," prevented much public concern until, on February 14, Governor Comstock of Michigan declared a "bank holiday" and ordered all Michigan banks closed. The closing of the Michigan banks started a drain of cash from other regions into the Michigan area and alarmed depositors in all sections of the country.

The large corporations were the first depositors to sense the full import of the situation and to call upon the banks for large amounts of cash. The great manufacturing corporations in Detroit, having exhausted the reserves of the local banks, drew upon the banks in Chicago, Cleveland, Toledo, and Fort Wayne

— not only for immediate needs, but, because of the uncertain situation, for anticipated future needs as well. They demanded *cash*. In the meantime, they were sending nothing back which would serve the banks, either to replenish their reserves or otherwise sustain their credit basis. A great industrial district was taking large commercial funds from the financial institutions of neighboring cities and sending nothing back. This is called one-way banking. No commercial bank can exist on one-way banking. For every "dollar" paid out in cash or credit, a commercial bank must receive concurrently the equivalent of a "liquid dollar."

Soon Cleveland was drawing upon Akron and Pittsburgh, Chicago was drawing on Milwaukee and Minneapolis and a "creeping bank panic was underway." The flexible feature — the "reserve slack" — of the federal reserve system was the safeguard which had been provided to meet this situation. For just such an emergency, the gold reserves of the nation had been pooled under command of the Federal Reserve Board. Member banks drew upon the reserve banks of their districts to meet the anxious demands for cash and they, in turn, drew upon the central reserve banks. Ultimately, the pressure was concentrated upon the great New York banks and the federal reserve bank of New York. All this was exactly what had been anticipated in the structural organization of the reserve system. Now, let us see what happened.

A week before the Detroit banks closed, the federal reserve machinery was functioning normally and distributing liquid reserves where most needed. The great banks of the east had been supplying funds in large amounts to their correspondents in the south and west for several weeks. Between February 8 and March 3, member banks withdrew from federal reserve banks over $1,700,000,000 in *cash*. Out-of-town banks withdrew nearly $800,000,000 from their deposits in New York banks. These cash funds were not retained in the vaults of the country banks, nor were they returned in due course of business to the reserve banks. They were withdrawn by depositors or borrowed, largely by great corporations, and disappeared from active circulation. In January, 1933, the *surplus reserves* of all the member banks of the federal reserve system were nearly $1,500,000,000. Within three months they were reduced to

$400,000,000 — most of this decline occurred during the two weeks following the Detroit collapse.

News of the American banking situation stampeded foreign residents and foreign corporations having credits in this country to sell dollar exchange and cable transfer orders which started an immediate flight of gold to Europe. This created an additional draft upon the bank reserves which was not provided for in the structure of the federal reserve system.

The Michigan bank holiday was followed within a fortnight by similar moratoria in Indiana, Maryland, Arkansas, and Ohio, and within another five days practically every bank in the United States was closed. The New York banks and at least some banks in each of 25 other states remained open until Saturday, March 4, the day of the inauguration of President Roosevelt.

Emergency relief measures. — The first spontaneous attempt to escape the situation foreshadowed by the Michigan moratorium was itself a potent factor in accomplishing the final collapse of the banks. A hurried enactment of laws in several mid-western states provided that during the emergency not more than 5 per cent of bank balances could be withdrawn, but that new deposits would be held in cash and made available for withdrawal on demand. This was the final step necessary to complete the devastation of the bank reserves. When it was realized by individuals and corporations who had concentrated their funds in the more substantial New York banks that, under these laws, *new accounts* afforded a safe and accessible depository for funds, they hastily shifted their accounts back from New York to the inland banks. Upon this situation, Leonard P. Ayres, Vice President of the Cleveland Trust Company, makes the following observation: "It would be an overstatement, but one containing much essential truth, to say that the treasuries of the national corporations transferred bank balances until they closed down the banks of the interior cities for normal functioning, and then they hurriedly again transferred funds until they closed down the New York banks. The easy mobility of our modern credit system has greatly contributed to American business efficiency, but it has constituted a danger to banking not heretofore realized." [1]

On Monday, March 6, the President proclaimed a nation-wide

[1] Leonard P. Ayres, *op. cit.*, p. 47.

suspension of banking activities until the meeting of Congress in special session on March 9. The hoarding and export of gold were also prohibited by proclamation. An emergency bill was prepared by the administration and placed before Congress three days later. It was passed and signed by the President on the same day.

The Emergency Banking Act contained five general provisions:

1. It authorized the President to prohibit the export and hoarding of gold and to require holders of gold to deliver it to the treasury in exchange for other money.
2. It authorized the President to prevent member banks of the reserve system from carrying on any business, not specifically authorized by the treasury, during the period of the emergency.
3. In order to preserve, for the benefit of their creditors, the assets of national banks in unsound or questionable condition, the Comptroller of the Currency was authorized to appoint a conservator for any such bank who would have the status of a receiver. These banks might receive new deposits which were withdrawable on demand. Old deposits, however, remained subject to such restriction as the Comptroller might impose. The conservator was authorized to take such steps as might be necessary to return the bank to its normal functions, or, if its affairs were hopeless, to effect its liquidation.
4. Provisions were made for national banks to strengthen their capital structure by the issue of additional 6 per cent cumulative preferred stock. The Reconstruction Finance Corporation was authorized to invest in such bank stocks, if, in the opinion of the Secretary of the Treasury, such financial aid was necessary to the successful re-establishment of a bank.
5. It provided for the issue of new notes with the title of an older issue of currency, "Federal Reserve Bank Notes." These new notes were, like the older issue, to require no specie reserve and to be issued through reserve banks in the same way as the old ones. They were to be issued not only against government obligations but also against almost any other assets of banks that might be considered expedient by reserve banks.

The reopening of the banks began on March 13 and was provisionally completed on the 15th. A survey of the condition of all banks had previously been conducted in the amazingly short period of four days, and they were roughly classified as "sound" or "doubtful."

Apparently a bank was rated as *sound* when it possessed rediscountable assets in an amount equivalent to its demand deposits.

Sound banks received licenses and were permitted to operate without restriction. Banks not receiving licenses were placed under the management of conservators and operated on a restricted basis or closed.

On March 15, banks representing 90 per cent of the total banking resources of the country and 75 per cent of all member banks were operating without restriction, but a large number of small banks were included in the unlicensed group. Some sections of the country suffered severely for lack of banking facilities long after the emergency had passed. At the end of May, 1933, 1,163 member banks having deposits exceeding $2,856,000,000, and an approximately equal number of non-member banks were still unlicensed.

The total return flow of currency to the banks by March 29, 1933, was $1,185,000,000 and on that date some of the New York banks again held moderate amounts of excess reserves.[1] Up to May 31, 1935, a total of 2,352 banks, holding deposits of $2,758,000,000, were placed in receivership or liquidation.

The Banking Act of 1933.

The Banking Act of 1933 was designed to so amend and supplement the federal reserve law as to minimize the forces which appeared to be responsible for the speculative boom and succeeding panic of 1929, and to avoid the recurrence of conditions which resulted in the collapse of the banks in 1933. The terms of the act may be placed in three groups:

1. The organization and functions of the Federal Reserve Board and the control of the use of bank credit for speculative purposes.
2. The control of affiliations of commercial banks and the separation of commercial and investment functions.
3. Revision of the organization and operation of commercial banks.

Inasmuch as many of the provisions of the Act proved to be ill considered and were subsequently modified by the act of 1935, we mention here only such provisions as appear to have lasting significance.

As a means of restricting speculative activities, the act provided that each federal reserve bank should informally supervise the loans and investments of its members with a view to restricting

[1] Above data are taken from the *Federal Reserve Bulletin* of June, 1933, June, 1935, and the *Monthly Review* of the Federal Reserve Bank of New York for May and June, 1933.

the development of unsound credit conditions. Also, it was provided that the Federal Reserve Board should have power to fix proportions of the capital and surplus of banks within a given district which may be loaned on stock-market securities.

In order to prevent member banks from supporting the stock market under the cloak of "loans for the account of others," they were denied the privilege of acting "as the medium or agent" of others in making loans on the security of stocks and bonds.

A Federal Open Market Committee was created, consisting of one member from each reserve district, to meet four times a year and exercise complete control over open market operations.

Membership in the federal reserve system was extended to Morris Plan banks and other incorporated banking institutions and mutual savings banks.

Deposit insurance was temporarily provided for all deposits up to $2,500. After the first year, the act provided insurance in full on individual deposits up to $10,000, 75 per cent on deposits from $10,000 to $50,000, and 50 per cent on amounts in excess of $50,000. The insurance plan was put into operation by the Federal Deposit Insurance Corporation. Capital stock was to be subscribed jointly by member banks (receiving Class A stock, at par, equivalent to ½ of 1 per cent of their total deposits) and the federal reserve banks (accepting Class B stock to an amount equal to ½ of their surplus). This plan was modified in 1935 limiting the maximum insurable liability on any net individual deposit to $5,000, and displacing stock subscriptions by an annual levy equal to $\frac{1}{12}$ of 1 per cent of all deposits.

Branch banking, which had long been advocated as a means of integrating and standardizing American banking, was theoretically added to the powers of the national banks. However, the operation of this provision is confined to states and cities in which branch banking is authorized by the state laws. Under this restriction, state-wide branch banking is confined to some twelve states.

The regulation of chain and group banking was undertaken by restricting the privileges and increasing the responsibilities of the controlling holding companies. In order to vote the stock of subsidiary banks, the act required a holding company to secure a permit from the Federal Reserve Board. To obtain a permit

the holding company must agree (1) to the regular examination of controlled banks, (2) to the publication of periodic reports of the conditions of controlled banks, (3) not to own or participate in the management of any enterprise engaged in the investment securities business, (4) to accumulate adequate surplus funds, and (5) to declare dividends only out of net earnings.

Investments of national banks for their own accounts are restricted to *bonds* and may include not to exceed 10 per cent of any one issue. The minimum capital requirement of national banks in places of less than 6,000 is increased from $25,000 to $50,000. The payment of interest on demand deposits by member banks is prohibited. The Federal Reserve Board is authorized to fix the interest rates applicable to time and savings deposits in each district.

The responsibility of bank officers was increased in three ways:

1. The Federal Reserve Board is authorized to inquire into the administrative action of any officer or director of a member bank. Officers, may, after due hearing, be discharged by the board for "violation of the law" or for "unsound practices."
2. Officers of member banks may not borrow from any bank of which they are executive officers.
3. Boards of directors of member banks are limited to not less than five nor more than twenty-five members. Each director must own from $1,000 to $2,500 of the bank's capital, depending on the size of the bank.

Double liability of share-holders of the national banking association does not apply in the case of shares issued after the act became effective.

The Banking Act of 1935.

By the terms of this act a Board of Governors of the Federal Reserve System consisting of seven members, appointed by the President for terms of 14 years at an annual salary of $15,000, is created to replace the Federal Reserve Board. Members may not serve a second term. A chairman and vice chairman are also appointed by the President from the board, each to serve in that capacity for four years. The President may discharge a chairman of the board, but no other member during his term of service.

The board of directors of each federal reserve bank shall elect a president for a 5-year term subject to the approval of the Board

of Governors. The president is to serve as the executive officer of the bank and assume the former duties of the federal reserve agent.

Open market operations of the federal reserve banks are subject to control by the Open Market Committee composed of all members of the Board of Governors and five representatives of the federal reserve banks. Purchases must be made in the open market and are confined to direct or guaranteed obligations of the United States.

Discount rates are established by the federal reserve banks every two weeks, or more frequently if deemed necessary by the Board of Governors. Member banks may obtain 4-months advances from their district reserve banks on any satisfactory security at a rate of $\frac{1}{2}$ of 1 per cent above the discount rate.

Reserve requirements of member banks may be raised by majority vote of the Board of Governors in order to control credit expansion, but the increase may not be more than 100 per cent of existing requirements.

The issue of federal reserve notes remains unchanged as regards security, *i.e.*, not less than 40 per cent gold "certificates" and not more than 60 per cent "eligible paper" including obligations of the United States.

Real estate loans by national banks, up to 50 per cent of the value of the property with a maturity of 5 years, are permitted. A bank's aggregate real estate loans may not exceed the amount of its capital and surplus or 60 per cent of its time and savings deposits, whichever is greater.

The deposit insurance provisions of the Act of 1933 are so modified as to limit maximum payments to $5,000 per account. The stock issuing features of the Federal Deposit Insurance Corporation are replaced by an annual levy of $\frac{1}{12}$ of 1 per cent on all deposits of insured banks.

Non-member banks having average deposits of $1,000,000 or more are required to join the federal reserve system by July 1, 1942, in order to retain the insurance benefits of the Federal Deposit Insurance Corporation. Smaller non-member banks are not obliged to join the system.

The Banking Act of 1935 does not eliminate the possibility of a recurrence of the credit irregularities of 1929 to 1933, nor would it be possible to do so without destroying invaluable features of the banking system.

The outstanding result of the act is further to consolidate credit functions in the federal reserve system and to place the system under more definitely centralized control by the Board of Governors. The large powers vested in the board and its inevitable exposure to partisan influences, would appear to rest the ultimate success of the law with the individual wisdom and integrity of board members rather than the specific provisions of the act.

(*References follow Chapter XVIII.*)

CHAPTER XVIII

MONEY AND PRICES

Changes in the value of money.

By the "value of money" we mean the purchasing power of money as reported or expressed by the money prices of other things. Money has, in reality, a large number of different values, expressed by the different quantities of different things it will purchase. If the price of wheat is one dollar per bushel, then one value — the wheat value — of money is a bushel per dollar. Similarly, the purchasing power of money in sirloin steaks may be two pounds per dollar. The notion of the general value of money is simply a useful abstraction, based on a broad view, or average of its different specific values.

Inasmuch as prices are the values of goods expressed in money, the general value of money, expressed mathematically, is the reciprocal of the general level of prices. By well-understood methods of statistics, the purchasing power of money and the corresponding prices of commodities can be measured.[1] It is thus possible to compare the values of money at different times and at different places, and also, the values of different kinds of money. These measurements may be expressed either as *relative values* in terms of specific kinds of goods, or as *average values* in terms of a composite of many kinds of goods.

As an example of relative specific value, it is calculated that the farmer's dollar, in 1928, would purchase about 90 pounds of nitrate fertilizer and, in 1933, a dollar would buy 130 pounds. This measurement of market values shows an increase of 44.4 per cent in the fertilizer value of money and a corresponding fall in the money value, or price, of fertilizer. During the same period, the average wholesale price of 784 commodities declined only about 22 per cent.[2] This shows that the *general purchasing power*

[1] See *Index Numbers*, p. 358.
[2] U. S. Bureau of Labor, *Weighted Index of Wholesale Prices.*

of money advanced less during the period than did its specific fertilizer value.

When we fix our attention upon *changes* in the purchasing power of money, we are able to distinguish between changes that are widespread and general, and changes that affect only one or two commodities. For example, a new invention may decrease the price of a particular commodity, without affecting the prices of other things except (if the demand for the commodity is elastic) by shifting demand from other things to the commodity in question, — such an effect would usually be slight so far as the price of any one of these other things is concerned, for the demand would probably be shifted from many different lines of consumption. Or, if the demand for the commodity in question is inelastic, a lessening of its price may increase the demand for other things. But there are, on the other hand, price fluctuations which are widespread and which show a general trend in one direction or the other, and these we may call, with substantial accuracy, changes in the value of money. What are the underlying causes of these general changes?

The nature of the problem. — Our first impulse, perhaps, is to suggest that there is no new problem here, that the value of money is to be determined in the way that other values are determined. But the task is not quite so simple as that. The analysis of marginal utility formed the basis of our explanation of the shifting of demand from one commodity to another, but it does not help us to explain the demand for money. Marginal utility depends upon the capacity of things to satisfy human wants, and money does not directly satisfy a single human want, except the abnormal wants of the miser. We want money as we want things that money will buy for us.

And when we turn to "supply and demand" we find at first little help. For, when we are discussing the relations between the prices of things and their supply and demand, we usually limit ourselves to the consideration of *one commodity at a time.* That is, we assume that the money price of the one commodity we are considering is alone variable, and that the prices of all other things remain, for the time being, constant. Now the problem of the value of money is the obverse of the problem of the money values of *all* other things. If we were studying the wheat value of money we could assume the sirloin-steak value of money to be

held constant. But our present problem is that of the wheat value of money *and* the sirloin-steak value of money *and* all other values of money. We cannot resort to the strategy of breaking the sticks in our bundle one by one.

The quantity of money and the value of money. — What we have said does not mean that there is no such thing as a "demand for money." Using the word "money" in its broadest sense, including all "rights to receive money" that are used in making payments, it is clear that every sale of a commodity may be viewed as a purchase of money, and every purchase of a commodity as a sale of money. Going a step farther, and remembering that one wants money only because of the things money will buy, we may say that every sale of one commodity is a purchase of the power of acquiring other things. A buyer cares not how much money he parts with in exchange for a definite quantity of goods, except in so far as the money has alternative uses of greater or less importance. The quantity of money — the *number* of dollars in the aggregate supply of the instruments in which payments are made — has no significance apart from the *values* of the dollars.

These two things — quantity and value — are, in the case of money, bound together in a peculiar way. They are, in a very real sense, not only interdependent but (within limits) interchangeable. A smaller amount of money of relatively high purchasing power per unit may meet the needs of both buyer and seller just as well as a larger amount of money of lower purchasing power per unit. This observation underlies what is known as the *quantity theory of money.*

The quantity theory of money. — The principle that the unit value of money is dependent upon the amount of money in use is expressed by the phrase *the value of money is inversely proportionate to the amount of money in use.* This is equivalent to saying "*prices vary directly as the amount of money in use,*" which is what we may call the *crude* statement of the quantity theory of money. A more refined statement of the theory which is now customarily used is — *Over considerable periods of time, price trends vary directly with the volume of money in use, provided other things remain unchanged.*

However, the quantity theory, including the reservations of this definition, does not satisfactorily explain the purchasing

power of money as revealed by general price changes. In the first place "other things" are constantly changing, and in ways and degrees difficult to measure or forecast. Secondly, "considerable periods of time" may be of long or short duration, a condition which greatly restricts the practical usefulness of the theory. Thirdly, "money in use" may be so interpreted as to include monetary bank resources which are used as legal reserves against loans and bank note circulation, or may be construed to mean only money in actual circulation. Fourthly, inasmuch as credit instruments supplement money as customary means of payment and may, in fact, conveniently displace conventional forms of money, credit must be included in the "quantity of money" under the reasoning of the theory. Finally, the rate of circulation, or turnover, of both money and credit, may be variable and any analysis of the relations of money and prices is incomplete which does not take into consideration the *velocity of circulation* of both monetary and credit elements of the medium of exchange.

It is, of course, understood that all of these things which compose the "volume of money" may derive their purchasing power and determine prices only by virtue of their quantitative relation to the *volume of trade*, which measures the amount of money-work to be done. The quantity theory of money, therefore, is an application of the principle of supply and demand, in which the quantity (supply) of money and the demand for money (volume of trade) are brought into balance at the *general price level.*

The equation of exchange.

When we consider the several variable elements — money, credit, velocity of circulation, volume of trade, and price — which enter into the quantity theory of the purchasing power of money, we can show their relations, mathematically, by the use of symbols arranged as an algebraic equation.

Let M represent the total amount of the generally acceptable media of exchange, including metallic money, government paper money, and bank notes in circulation. Let T represent the total volume of trade, or more accurately expressed, the total number of units of commodities and services exchanged for money during the year. Let P represent the *average price per unit* paid for these commodities and services. If, now, we combine these

symbols in accordance with the crude statement of the quantity theory, we have:

$$\frac{M}{T} = P.$$

This formula expresses the implication that, since the amount of money available for merchandising (M) is divided among the total volume of transactions (T), the resulting quotient (P) will represent the coincident unit measure of average prices, or the *price level.*

However, it is recognized that credit instruments, particularly personal checks and bills of exchange drawn against bank deposits, are quite as potent as money as means of payment. Consequently, we let the symbol M' represent these credit media, the available amount of which at any given time is fairly well indicated by the total bank deposits subject to check. The formula now becomes:

$$\frac{M + M'}{T} = P.$$

The obvious neglect of the velocity of circulation of both money and credit requires the introduction of two additional factors to perfect the formula. We therefore choose V to represent the rate of turnover, or velocity of monetary circulation; that is, the average number of times the various dollars in circulation are exchanged for goods or services during the year. Then MV will represent total actual money payments, measured in money units. Similarly, the rate of turnover of bank deposits may be represented by V'. The equation of exchange may now be stated as follows:

$$\frac{MV + M'V'}{T} = P.$$

This is a statement in algebraic symbols that the amount of money in circulation during a given year, multiplied by its annual rate of turnover, together with the average amount of bank deposits subject to check, multiplied by their average annual rate of turnover, divided by the number of units of things exchanged for money or for credit must be equal to the average unit price for the year. Expressed in this way, the truth of the equation is obvious. It is a simple identity. However, it should not be accepted as a complete theory of prices. The arrangement of

its terms does not indicate any necessary order of cause and effect. It is an accurate statement of the combination of material forces which are related to the general level of prices and it, therefore, facilitates their study and analysis. When properly used, it reveals the interrelations of the factors which it represents under changing conditions of supply and demand as respects money, credit, and commodities. Indeed, it affords the best means we have of reviewing and tracing the operation of cause and effect during former periods of *fluctuating prices*. Unfortunately, however, it has been too seriously accepted by some as a reliable key to the future course of prices, and has even been proposed as a reliable guide to the formulation of a planned economy designed to establish a mechanical control of future price trends.[1]

Interrelation of the price factors. — Interesting statistical tests of the equation of exchange in the United States have been made by Edwin W. Kemmerer, Irving Fisher, Holbrook Working, Carl Snyder, and others. These tests tend to confirm the *mutual dependence* of the factors described above, as constituting its principal significance. Change any term of the equation and the magnitude and relations of other terms must change. Increase the amount of money, and, *other things remaining equal,* prices must rise. Increase production and the resulting volume of trade and, *other things remaining equal,* prices will fall. In these operations, the formula doubtless reflects the actualities of the market. But to what extent will a given change of one factor affect another? Will the effect of a given change be confined to one term or distributed among several terms? Will effects be immediate or delayed, and if delayed, how long will be the lag? Will effects be retroactive, or relayed from one factor to another? In related changes, how may we be certain which is cause and which is effect? These are questions which may not be answered by a mere understanding of the equation of exchange. They will

[1] "From the utterances and writings of President Roosevelt since May, 1933, it seems unquestionably to be the case that the object of the Administration in devaluing the dollar was to bring about a rise in substantial proportions in the commodity price level. In May, July, and October, the President had voiced the purpose of the government in this regard in clear and concise terms. Moreover, Mr. Roosevelt's chief monetary advisor, Professor Warren, was known to believe that 'by reducing the weight of gold in the dollar, any desired level can be established.' In view of these facts, the conclusion that devaluation was resorted to as a price-raising device is unmistakable." — F. A. Bradford, *Money and Banking*, p. 91, Longmans, Green and Co., New York, 1935. See also, W. E. Spahr, *The Monetary Theories of Warren and Pearson*, p. 3, Farrar and Rinehart, New York, 1934; George F. Warren and Frank A. Pearson, *Prices*, p. 174.

be answered, if at all, by a careful observation of the interplay of the dynamic factors of exchange under an exhaustive variety of conditions as respects money, credit, and volume of trade. Such tests have not been convincingly determined by concrete analysis, although some progress seems to have been made in that direction.[1]

Some terms of the equation of exchange may be accurately measured statistically, and their changes have been recorded from time to time. A few facts of relativity have been determined, and a number of probabilities will bear statement here, keeping in mind, however, the possible difference between what happens in the long run and in the short run, respectively.

In the first place, M and M' are necessarily connected. Additions to the country's stock of money will distribute themselves, ultimately, between bank reserves and hand-to-hand circulation. An increase in bank reserves leads in the long run to an increase in the amount of bank deposits subject to check. An increase in M, therefore, is fairly sure to result in an increase in M'. Conversely, under the practice of the federal reserve banks in the issue of federal reserve notes against reserves of rediscounted commercial paper and other "eligible securities" purchased on the open market, an increase in M' may result in an increase in M.

In the second place, a sudden increase in the amount of money in circulation may increase T, the total volume of trade, by leading to increased purchases; also, an increase in P will stimulate production and thus further increase T. But, in the long run, the increase or decrease of the total volume of trade must depend upon the natural resources of the country, the productive energies of the people, the state of technology, and the degree to which division of labor has been achieved. It can have little permanent dependence upon the amount of money in circulation.

In the third place, a sudden change in either the supply of money or the volume of trade is likely to affect V and V'. But in the long run V depends largely upon the monetary habits of the people, and changes in such habits, except under stress of extraordinary circumstances, are slow.[2]

Money habits very quickly give way to changed conditions of

[1] Warren and Pearson, *op. cit.*, Chap. XI, et seq.

[2] Carl Snyder, "New Measures in the Equation of Exchange," *American Economic Review*, December, 1924, Vol. XIV, p. 699.

living and new psychological reactions. In recent years, economic conditions which heretofore were rated as "extraordinary" may be said, without exaggeration, to have become the rule rather than the exception. There is also abundant evidence that in different communities (rural as compared with urban, for example) the rate of circulation of money does vary. In communities of dense population, where business is active and means of communication are good, the annual turnover of money is much greater than in communities where conditions are reversed. There certainly will be a long-time trend in V in a community of growing population or one in process of transition from rural to urban life, although no effort has been made to establish this observation statistically. Doubtless also, in communities where industry or business is seasonal — farming sections and pleasure resorts — the circulation of money will show a corresponding seasonal trend.[1]

Another influence has been apparent in recent years which greatly stimulates the circulation of money; namely, depreciation and the fear of depreciation. When the decreasing purchasing power of money develops to a degree sufficient to destroy public confidence in its recovery or stability, people cease to save and tend to spend recklessly. This fact was clearly demonstrated in Central Europe after the war by the active buying of durable goods in amounts beyond existing needs and generous spending for food and entertainment during the darkest days of currency depreciation and general distress.

Although statistical studies do not show any distinctive long-time change or secular trend in the velocity of monetary circulation, it is not safe to neglect the possibility of such changes, certainly, during shorter periods of time, both seasonal and erratic circumstances give rise to very significant changes in the turnover of money.

The statistical studies referred to above do show, however, a marked cyclical connection between rate of turnover of credit and volume of trade. The two move together both in direction and relative extent. From 1920 to 1929, the annual rate of turnover of demand deposits (approximate measure of V') in federal reserve member banks of 141 cities varied from a minimum of 40 to a maximum of 90, and, in 1932, declined to 25, an extreme

[1] E. Kemmerer, *Controlled Inflation*, American Economic Review Supplement, March, 1934.

variation of 360 per cent. A seasonal variation averaging approximately 20 per cent in the rate of credit circulation is also recorded during the period 1920 to 1934.

Uncertain operation of the quantity theory.

The quantity theory of money has given rise to a great deal of controversy. Much of this controversy has been at cross purposes owing to different understanding of the terms and different interpretations of the practical meaning of the theory. Thus P embraces all prices (usually in the form of an average of general prices) and as such must cover not only commodity prices but security prices, wages, rents, and all other forms of payment. These prices frequently move in opposite directions, and the resultant average is almost meaningless. The table below, showing the movement of wages, rents, and prices, illustrates this point. Both the general picture presented in this table and the details concerning it are highly significant.

TABLE I. — MOVEMENTS OF WAGES, RENTS, AND PRICES[1]

GROUP	AVERAGE ANNUAL RATE OF CHANGE, 1922–1927
	Per Cent
Security prices	+ 9.1
Wages	+ 2.8
Food prices, retail	+ 2.4
Equipment and machinery	+ 1.3
Prices at the farm	+ 1.1
Automobile prices	+ 0.9
Hardware prices, wholesale	+ 0.3
Rents	0.0
Realty values	− 0.1
Cost of living items other than food and rents	− 0.3
Transportation costs	− 1.5
Industrial commodity prices at wholesale	− 1.8
Total (index of general price level)	+ 1.5[a]

[a] The average annual rate of change in the per capita circulation of money in the United States during this period was − 2.5 per cent.

Looking at the subject in a practical light, certain conclusions may be stated. The common or popular form of the quantity theory has been used as a political argument to support the thesis that an increase in the supply of money will lead to a rise of commodity prices and a reduction in the stock of money will cause a fall in prices. Thus interpreted, the quantity theory

[1] F. C. Mills, "Price Movements and Related Industrial Changes," *Report of the Committee on Recent Economic Changes*, McGraw-Hill Book Co., New York, 1929, Vol. II, p. 632.

is simply untrue over short periods of time. For instance, when paper money is turned out in enormous volume by government printing presses, as in Germany and Russia after the war, prices usually rise much more rapidly than the quantity of money. In the United States, after the collapse of the speculative boom of 1919, the decline in commodity prices preceded the reduction in the volume of money. After 1921, to take another example, when gold was steadily flowing into this country, a rapid rise of prices was predicted. But the commodity prices did not rise as predicted, whereupon some of the foreign experts complained that the American banking authorities were "sterilizing gold."

On the other hand, in the long run, even the popular or naïve interpretation of the quantity theory is frequently borne out by the facts. A persistent and continued expansion of the monetary media will almost certainly be followed by higher price levels. A long continued and persistent contraction of the monetary media, particularly gold, is likely to lead eventually to falling prices. Thus between 1873 and 1897 the volume of trade increased more rapidly than the supply of money. During that period there was a general fall in commodity prices. Historical illustrations of rises in the price level following increase in the volume of gold or other forms of money have occurred many times and have been noted in the general discussion of money and banking.

The mechanism of general changes in prices. — The quantity theory of money, even when stated in the form of the equation of exchange, tells us nothing about the *process* of general price changes; nothing that is, about the mechanism by which changes in the quantity of money lead to general changes in prices. Just how are these general changes in prices brought about?

Take an artificially simple case. Imagine an isolated community with no foreign trade and with no banks, and using a gold currency. Suppose that a group of men finds a long-forgotten hoard of gold, large even as compared with the existing stock of gold in circulation. Without increasing their own activities as producers the finders are now able to purchase larger quantities of goods. These additional purchases, it is important to note, are the direct result of the increase in the supply of money, and could not have been made without it. The merchants into whose hands the money comes, expend it to replenish their stocks and

for other purposes. And so the money passes from hand to hand, increasing the number of exchanges.

But this increase in the volume of trade cannot be the end of the process. More goods than before are passing into the possession of their ultimate consumers. The country's stock of exchangeable goods is being *depleted* more rapidly than it can be replenished out of the country's normal agricultural and industrial output. In short, the purchasing power of the community, at the old level of prices, is now more than sufficient to buy the current output. Under the pressure of competing purchasers, desiring to exchange money for goods, prices will rise. And if the industrial output cannot be permanently increased, the rise in prices will be proportionate to the increase in the money supply, so that finally the larger supply of money will have brought with it no permanent increase in the number of exchanges.

The conditions under which general price changes occur in actual life are much more complex, and yet there is no reason to suppose that in its fundamentals the process is essentially unlike that which we have just outlined. There is, however, the difference that additions to the supply of money usually find their way at first into bank reserves, where their effect tends to lower the discount rate and to make bank loans easier to obtain. Increased bank lending results in larger bank deposits, and the immediate purchasing power of the community, in the form of its power to draw bank checks, is correspondingly increased. Prices tend to rise, and this will draw a larger amount of money into hand-to-hand circulation. With higher prices people will find it convenient to keep somewhat larger amounts of money on hand as "pocket money." Finally, unless new disturbing factors appear, equilibrium will be reached between the amount of money in bank reserves and the amount of money in hand-to-hand circulation.

It seems probable, then, according to the quantity theory, that the sequence of processes by which an increase in the supply of money actually brings about a general increase in prices may often be (1) larger bank reserves, (2) more lending by the banks, (3) larger bank deposits, (4) more purchases, (5) higher prices, (6) more money drawn into circulation. Prices get their initial upward impetus from the larger bank reserves, but the increase

in the amount of money in circulation helps to support and maintain the higher price-level.

Thus far, however, we have neglected to take account of the very important facts, (1) that the monetary supply is usually tied to gold as a standard of value, and that gold has other than monetary uses; (2) that the production of gold will itself depend in part upon its purchasing power; and (3) that international gold shipments are also partly dependent upon the relative purchasing power of money in one country and another. Leaving the last of these three topics for treatment in another chapter in connection with the general subject of international trade, we pass now to the discussion of the other two.

The relation of the industrial uses of gold to prices. — From the estimates of the Director of the Mint it appears that in ordinary years from a fourth to a third of the world's annual production of gold finds its way into industrial uses. The United States mints and assay offices buy and refine all the gold produced in or brought into this country, and pay for it at a fixed price.[1] By this arrangement there is a constant balancing or comparison of the relative advantages of the industrial uses of gold and its sale to the government.

Under a gold-standard currency, there are two things which help to fix the ratios of exchange between gold and other commodities. Consumers, on the one hand, are constantly weighing the marginal utility of objects made from gold against the marginal utility of other things. Producers, on the other hand, are weighing the relative profitableness of producing things made from gold and things made from other materials. It is clear that gold will be distributed between its industrial and monetary uses in such a way as to make the exchange ratios of gold and other things in the two uses equal. If for example, an increase in the stock of money (whether gold or not) results in increased prices (*i.e.* in decreased values of gold as money), a larger amount of the gold annually brought to the mints will tend to flow into industrial uses, and thus to limit the increase in the amount of money and the consequent rise in prices.

The relation of the expenses of gold production to gold prices. — There is another way in which society makes direct comparisons

[1] $35 the ounce at this writing. The government sells gold for approved industrial uses and for export at the same price.

between the value of gold and the value of other things, expressed in gold-standard money. Mining is subject to the law of increasing expenses, and the tendency of prices to equal the maximum expenses of production per unit obtains in this industry. Not only are there marginal mines, mines which it just pays to operate, but in the most productive mines there are margins, — certain depths, for example, beyond which the expense of mining more than eats up the value of the product. Through the operators of mines, society is continually comparing the cost in labor and capital of producing the things that can be bought with gold. If the gold produced at the margin will purchase things which consumers deem of less importance than other things which might have been produced at no higher costs, capital and labor will gradually be shifted from their marginal use in gold mining to the production of other things. Here, then, as in the case of the balancing between the monetary and industrial uses of gold, we have a direct value-comparison of gold and other things.

Some years ago the Bureau of the Mint undertook an investigation into the relation of the expense of gold mining to the amount of gold produced. The conclusion reached is worth quoting in this connection:

> "In every mining district there are mines producing at good profits, mines producing at small profits, mines barely paying expenses, and mines operated at a loss, but with the hope that they will do better. Every increase in costs would submerge the latter more deeply, add to the list of the unprofitable and probably close some of them. . . . A higher scale of working costs will bring losing experiments to an earlier conclusion, reduce profits, and make mining ventures generally less attractive, and thus diminish the output." [1]

To summarize: Marginal utilities and subjective values are found in the industrial uses of gold. The particular form of the law of normal price that is operative in agriculture also holds true in gold mining (although it has to be stated in a somewhat different way). An increase in the supply of gold diminishes its marginal utility in industrial uses. This is bound to decrease the values of gold as money, on account of the ease with which the supply of gold can be shifted to one use or the other. Such a rise in prices, however, cannot continue indefinitely. The

[1] *Report on the Production of the Precious Metals*, Government Printing Office, Washington, D. C., 1904, p. 41.

increase of prices and wages brings increasing expenses in gold mining, and, unless new gold mines are found or cheaper ways of getting gold from old mines are invented, the advance in prices will be checked.

These things have a steadying influence upon the long-run movement of prices. Tendencies toward extreme rises or falls are held in check by the resulting changes in the expense of mining gold and by the automatic changes in the proportions of the annual gold product that flow into monetary circulation and into industrial uses. It is in these ways that the significance of a gold *standard* as an automatic stabilizer of prices appears.

TABLE II. — PRODUCTION OF GOLD IN THE WORLD SINCE 1841 [1]

PERIOD	ANNUAL AVERAGE FOR PERIOD	
	Fine Ounces	Value[a]
1841–1850	1,760,502	$ 36,393,000
1851–1855	6,410,324	132,513,000
1856–1860	6,486,262	134,083,000
1861–1865	5,949,582	122,989,000
1866–1870	6,270,086	129,614,000
1871–1875	5,591,014	115,577,000
1876–1880	5,543,110	114,586,000
1881–1885	4,794,755	99,116,000
1886–1890	5,461,282	112,895,000
1891–1895	7,882,565	162,947,000
1896–1900	12,446,939	257,301,100
1901–1905	15,603,730	322,619,800
1906–1910	20,971,575	433,520,900
1911–1915	22,212,446	459,171,936
1916–1920	18,943,464	391,596,112
1921–1925	17,454,889	360,824,583
1926–1930	19,650,601	406,180,923
1931–1934	25,008,769	516,931,245

[a] Converted at the old U. S. price — $20.67 the ounce.

The increase in the production of gold. — Although probably more gold was produced between 1850 and 1875 than from 1492 to 1850, yet, as Table II shows, the annual production of gold since 1896 has been from two to three times as large as it was between 1850 and 1875. Most of this great output of gold, as Table III indicates, comes from relatively few countries. At present the British empire supplies over 70 per cent and the

[1] From 1841 to 1885 the estimate is from a table compiled by Dr. Adolph Soetbeer, for the years 1886 to 1934 the estimates are those of the Bureau of the Mint.

TABLE III. — RECENT PRODUCTION OF GOLD IN DIFFERENT COUNTRIES [1]

COUNTRY	1897	1904	1920	1926	1934
Africa	88	129	283	341	383.8
Australia and New Zealand	97	132	36	16	39.1
United States	86	121	77	70	85.3
Russia	35	37	2	31	132.6
Canada	9	25	24	55	92.4
British India	12	18	14	12	10.0
Mexico	11	19	23	24	20.5
China	9	7	5	3	16.4
Japan	—	—			14.7
Colombia	—	—			10.7
Chile	—	—			7.4
All others	26	35	40	47	55.8
Total	355	523	504	599	868 7

United States (including Alaska) less than one-eighth of the total product.[2] The causes of this enormous increase were, in part, the opening up of new gold fields in Canada, Alaska, Colorado, and especially in South Africa, and in part improved methods of extracting gold from low grade and refractory ores, in which connection the development of the "cyanide process" was of special importance. Dredging for gold in the beds of rivers which drain gold-yielding lands was a development of considerable importance. Notwithstanding the decrease in the value of gold, the bulk of the gold produced in California in recent years has been from deposits that thirty or forty years ago were generally considered worthless.

The effects of this large output were felt in both Europe and America in a general increase in both prices and wages. In the United States, for example, the general level of wholesale prices in 1913 was higher by 50 per cent than in 1897. That increase was small, however, as compared with what occurred during and immediately after the World War. In May, 1920, the general level of wholesale prices in the United States was 147 per cent higher than in 1913. In other countries the increase was even greater. Not gold production but the expansion of paper currencies and of bank credit was responsible for this extraordinary rise in prices. The production of gold, in fact,

[1] From *Reports of the Director of the Mint.* The figures are given in thousands of kilograms.

[2] Russian production unofficially reported as $158,000,000 for 1935

declined, owing to the increased expense of gold mining due to the rise in prices. In 1913–1915 the annual output of gold exceeded all previous records. Then it fell off rather rapidly until 1922, when it steadily increased, until, in 1936, it reached a new high of 27,930,463 fine ounces. It is probable also that the world's stock of monetary gold per capita has increased slowly in recent years. But neither the increase in total product nor that in monetary gold per capita has been as great (except in depression years) as the annual increase in the volume of production or trade.[1] Whether this condition will lead to a fall in prices probably depends upon the volume of bank credit and credit money based upon this gold. So far as prices are concerned, credit probably exercises a more direct influence than gold. The volume of credit is subject to conscious control in a sense in which the quantity of gold is not. However, the important fact remains that the effect upon prices of rapid and sudden changes in the volume of either monetary gold or credit is automatically cushioned by compensating changes in the velocity of circulation of money and in the rate of turnover of credit in the form of bank deposits.

Monetary inflation.

The general movements in prices that follow upon changes in the output of gold usually take the form of steady trends upward or downward through fairly long periods of years. Sharply contrasted with these slow oscillations that result from the play of the varied forces of supply and demand are the violent upheavals brought about by arbitrary expansion and contraction of the volume of the media of exchange. Metallic money does not lend itself, except by debasement, to such manipulation. But paper money is a more pliable instrument, subject to increase or decrease in quantity according to the needs or caprices of the governments which issue it.

Inflation is an increase in the currency sufficiently large to bring about, within a relatively short time, a marked rise of prices. Monetary inflation also implies expansion of the currency to a degree beyond the point of security upon the basis of the standard

[1] Total coinage of the United States to 1936 approximated 6.1 billion dollars. Of this sum, 4.5 billions was gold, 1.6 was silver. Of the silver, over 88 per cent was coined after 1875, during which time the market price of silver varied from $.34 to $1.30 per ounce. At the old mint ratio of 16 to 1, the coinage value of one ounce of silver was $1.292. At prevailing market prices of silver bullion the treasury has, since 1875, realized an approximate net "profit" on its silver purchases and coinage of about 50 per cent.

money. As paper money is generally the instrument, so extraordinary national expenditures, resulting in unbalanced budgets, are the most important cause of inflation. War, for example, calls for expenditures vastly greater than can be met by the ordinary revenues of the nation. In addition to debasing the currency by reducing the gold equivalent of the standard unit, there are, in general, three different ways in which additional funds may be secured: (1) by levying heavier taxes; (2) by borrowing, — as, for example, by selling interest-bearing bonds; (3) by issuing non-interest-bearing promises to pay and putting them into circulation as money. Contrast the economic effects of the first method and the third. The first method need have no inflationary effect upon the general level of prices. The third method, on the other hand, is usually accompanied by inflation. We shall try to make this important distinction clear.

Taxes *transfer* purchasing power from taxpayers to the government. The money incomes of the taxpayers of the country are reduced in nearly the same amount that the funds at the disposal of the government are increased. The country's aggregate demand for goods and services is not increased. The government is able to spend more, but only in so far as taxpayers are able to buy less. Particular prices will change, and there will even be perturbations and maladjustments of the general system of prices — for the government's demand will be concentrated on a range of commodities — but there need be no general rise of prices as a whole. Conceivably, it is true, men might borrow money with which to pay their taxes, and such borrowings might lead to an expansion of bank credit. But, in practice, banks generally do not lend any large amounts for tax-paying purposes. If taxes are unduly heavy, however, men may be forced to borrow more for *other* purposes.

The effects of supporting government expenditures by issuing inconvertible paper money are quite otherwise. Such issues *increase* the number of dollars (or other money units) that are offered for goods and services. The government, provided with new money of its own making, comes into the market as a competing buyer of goods and services. Prices are bid up to the point where the money outlays of individual buyers plus the expenditures of the government just suffice to pay for the total national product. This method of public financing thus

involves a disguised form of taxation. Money is not itself transferred from individual incomes to the government. Its *purchasing power*, however, is diminished and, in a manner, transferred.

Individual money incomes, in fact, are promptly *increased* by the exact amount of the government's money outlay. Those who first receive money from the government pay it out again, adding to the money incomes of others, and increasing the demand (measured in money) for goods and services of various sorts. In this way, if the new money remains in general circulation, it tends to bring about an increase in the general level of incomes and prices. If, after a period of inflation, the currency is stabilized, the general price system will ultimately be adjusted to a new and higher level. But, during the period of transition, much injury will have been done. Persons living on fixed incomes will have suffered. Wages, for a while at least, will not have advanced rapidly enough to keep pace with the rising cost of living. Creditors will have lost part of the value of their capital. Rising prices will have given a temporary stimulus to business, — to be followed by reaction. Some business men will have been in a better position than others to take advantage of the rapid shifting of demand. New fortunes will have been made. In short, the burden of the disguised taxation to which reference has been made will have been unevenly and unjustly distributed. Such, in general, it will be remembered, were the phenomena of the greenback period, of the paper-money periods in our colonial history, and of more recent experiments with inflation in European countries.

It is unlikely that the rise of prices resulting from the creation of paper money will be exactly proportionate to the increase of the currency. Various disturbing factors may prevent such an outcome. Three of these factors are especially important. In the first place, if gold is in general circulation, the rise of prices, by reducing its purchasing power, will drive some gold into other uses. In so far as paper money merely displaces gold it does not constitute a net addition to the volume of the currency. Secondly, as in the United States during the period following March, 1933, much of the newly created money may not remain in circulation, but will find its way into the latent reserves of the banks and the treasury. Thirdly, the progress of inflation will

inevitably be attended by certain changes in the current of the country's foreign trade. Inflation does not spend all of its force upon a country's domestic price level. This, however, is a matter which must be reserved for fuller discussion later.

Government loans and inflation. — Taxation, we have seen, transfers purchasing power, while paper money issues swell its volume. Borrowing, by the sale of government bonds might seem, so far as its effect upon prices is concerned, to be rather more like taxation than like paper money inflation. For does not the lender (the buyer of government bonds), like the taxpayer, merely transfer funds to the government? Such would in fact be the case if the loans made to the government always came from the actual savings of the lenders, — that is, from income which would have been spent rather than saved if it had not been for the government's borrowings.

Individual investors in government bonds are not able to take them in large quantities except by the aid of the banks. Often a considerable part of the purchase price is advanced by the banks in the form of deposit credits, the bonds being used, perhaps, as collateral to secure the necessary loans. Or the bonds may be paid for with funds which would otherwise have been placed at the disposal of other borrowers. The needs of these other borrowers can then be met only by an expansion of bank credit. Or the banks may themselves subscribe for the bonds and enter the purchase price on their books as a "deposit" to the credit of the government. Government checks are then drawn against the credit and circulated.

It follows that large offerings of government bonds can be absorbed by the market only by the expansion of bank credit, except in so far as the marketing of the bonds results in (*a*) the curtailing of consumers' expenditures, or (*b*) the diminishing of the amount of money invested in business undertakings — aside from those undertakings that are receiving their sustenance from the increased outlays of the government. In practice, some part of the money advanced to the government is drawn from really *new* savings or from funds diverted from productive enterprises, but in larger part such advances are effected by means of the expansion of bank credit.

In fundamentals, the phenomena of inflation are the same, whether inflation comes through the creation of government paper

money or through the expansion of bank credit.[1] The increase of purchasing power (measured in money units) raises prices; rising prices make expenditures larger, thus calling for an increase in the rate at which paper money is being issued or bank credit is being created. Inflation, once begun, tends to increase in a cumulative way, each step in the process calling for yet another step. Commonly the increase in the volume of paper money or of bank credit becomes so great that governments or the banks, as the case may be, are unable to redeem their obligations in gold upon demand. With the suspension of specie payments the only certain obstacle to further inflation is removed.

During the World War only a favorable balance of international payments and the existence of the federal reserve system, through which gold reserves were mobilized and economized, saved the United States from suspending specie payments. Other countries engaged in the war were not so fortunate. The general measure of the degree of inflation between 1913 and 1920 and of its results is given by the figures in Table IV. Even after 1920, in those countries which, because they lacked either the will or the means, failed to employ heroic methods to restrict or limit inflation, it grew at an amazing rate. In Germany the amount of paper marks (bank notes) in circulation had reached, at the end of 1923, the meaningless total represented by 74,954,803,000,000,000,000, and this inconceivable amount of currency had a value of only 722 millions of gold marks on the basis of dollar exchange. In March, 1924, the paper circulation (government notes) of Russia had to be expressed in the incomprehensible magnitude of quadrillions (768,000,000,000,000,000 rubles). A subsequent epoch of currency and credit inflation, the consequences of which are not yet fully apparent, followed the devaluation of the pound and the dollar in 1931 and 1933 respectively and of the gold standard currencies of Europe in 1936.

The usual object of inflation is not to increase purchasing power for its own sake. But more money is desired either to increase the purchasing power of the government or of some politically favored economic or social group. In times of emergency, particularly in case of war, the requirements of government are excessive and heavy taxation is unpopular. The open sale of

[1] The most important difference is that government paper money may itself be used in bank reserves, thus affording the basis for a proportionately larger expansion of bank credit.

TABLE IV. — INFLATION DURING AND AFTER THE WORLD WAR

COUNTRY	MONETARY UNIT	GOVERNMENT NOTES		BANK NOTES		DEPOSITS IN COMMERCIAL BANKS		WHOLESALE PRICES 1920÷1913
		1913	1920	1913	1920	1913	1920	
France . . .	Franc	—	—	5,714	37,902	5,977	17,500	5.1
Italy	Lira	499	2,545	2,283	19,731	2,951	25,781	6.2
United Kingdom	Pound	—	368	35	119	1,071	2,549	3.1
Germany . . .	Mark	149	316	6,083	81,071	9,642	83,891	14.9
Canada . . .	Dollar	160	351	105	229	1,067	2,136	2.5
United States .	Dollar	343	339	726	4,017	12,750	31,148	2.3

The figures, except for prices, are in millions. The wholesale price figures are index numbers; that is, 1913 being taken as unity, the price level of 1920 is expressed proportionately. In the case of the United States, the figures relate to the middle of the year specified; for other countries they relate, in general, to the end of the year. The price figures, however, are annual averages. Some of the figures, especially those for deposits, are not exactly comparable as between different countries. The increase shown in Canadian Dominion Notes is not especially significant, for most of them were held in bank reserves.

government bonds, in a way which reduces the private funds of the buyers, also is subject to limitations. The two remaining means of obtaining funds for the government are (1) the creation for its own use of inconvertible paper currency, and (2) the control of the banking system as to create an artificial market for government bonds. In the first instance, the currency system ceases to be linked to a metallic standard and current money is not convertible into gold or foreign exchange at established ratios. In the latter case, an expansion of bank credit, usually in the form of circulating bank notes, is authorized. These instruments of bank credit are made directly or indirectly exchangeable for government bonds and constitute a *concealed* inflation of the currency. The possession of government bonds and national currencies inflates the "legal reserves" of the banks and enables them to expand further commercial and industrial loans and their deposit liabilities.

Deflation. — How can a government which has grossly inflated its currency ultimately get back to a gold basis? By flat repudiation of the inflated issues? By taking the costly and heroic measures required to redeem the inflated issues in gold at par, as Great Britain did after the war? Or by an intermediate course, such as that taken by France in 1925 by redeeming its paper money at about $\frac{1}{5}$ of the gold content of the pre-war franc?

In short, what are the methods and the results of deflating swollen currencies?

By deflation we mean an arbitrary or planned decrease in the volume of money or of bank credit, accompanied by falling prices. The most important *object* sought to be attained by deflating the currency is the restoration of a stable monetary standard, with the advantages such a standard gives in the transaction of domestic and foreign trade. The *methods* employed to secure deflation must be the opposites to those which bring about inflation. In particular, government paper money must be retired with funds secured by taxation. Bank credit must be reduced by the liquidation of the government's debts to the banks by the increase of actual savings within the country. Here again the one essential instrument is taxation.

Deflation may also be accomplished, in effect, by the complete or partial repudiation of the obligations of the government or of the banks. Partial repudiation occurs when the government or the banks redeem their obligations, but at a discount or in a monetary unit reduced in size. The morality of repudiation has been much discussed. Can it be right for a government to dishonor its own obligations? One is likely at first to reply promptly in the negative. But further consideration is sure to suggest to us that something is to be said on the other side. As we have seen, inflation is accompanied by a heavy burden of disguised taxation, unequally distributed. Some few people gain, many others lose, during a period of rapidly rising prices. Even if the depreciated currency could quickly be brought back to par by adequate provisions for redeeming it, a new series of burdens and injustices would be created. Heavy taxation would be necessary, and it is wholly unlikely that the bulk of its weight would fall upon those who have profited rather than lost in the period of inflation. The falling prices and changing incomes that accompany deflation would undoubtedly tend, in some slight measure, to redress the balance; that is, to benefit those whom inflation had injured. But the compensation would be partial and inadequate. The wrong done by inflation cannot be undone by deflation.

Complete repudiation, if it comes while the depreciated currency yet retains any value, is itself equivalent to taxation so imposed that its direct burdens fall upon those who hold money or credits payable in money. Partial repudiation may involve nothing

beyond the recognition, legalization, and attempted stabilization of an existing status. Such would be the case, for example, if arrangements were made for redeeming a paper currency in specie, with a monetary unit so chosen as to be worth about as much as a unit of the depreciated paper currency. In practice, it would probably be better to make the specie monetary unit a little larger, so that the paper currency would be redeemed at a slight premium as compared with its depreciated trading value.

The right policy with respect to deflation or repudiation has to be determined, after all, in the light of actual economic and political possibilities. Thus, where the amount of deflation and consequently the degree of depreciation is not forbiddingly large, the restoration in full of the old monetary standard is undoubtedly desirable, from the point of view of both ethics and sound economic policy. Where inflation has gone so far that deflation is impossible, partial repudiation, involving "devaluation" and the creation of a smaller metallic monetary unit, is the best alternative. The restoration of a specie standard and the stabilization of the currency is something to be achieved as promptly as possible. Finally there are, as we have seen, cases in which any policy but complete, or practically complete, repudiation may be dismissed as impossible. Again, the sooner the certainty of such an outcome is recognized and acted upon, the better.

In general, it may be said that the pursuit of a policy of inflation necessarily implies an *unbalanced* national budget, that is, an excess of expenditures over revenues which must be covered by the issue of currency notes, or the sale of government bonds, or "treasury profits" resulting from the devaluation of the monetary standard. On the other hand, the process of deflation necessitates a surplus of revenues over disbursements which will enable the government to call in and cancel its circulating notes and to pay off its funded indebtedness. Government loans from banks are paid and the banks must use the proceeds to retire their own outstanding obligations.

In the inflation and deflation of credit originating in connection with transactions in private industry and trade, the movement is similar to that of coincident government procedure. Inflation swells commercial and industrial loans and the deposit liabilities of the banks to their customers. Deflation involves the repay-

ment of loans, the reduction of discounts, and a withdrawal of deposits.

Index numbers.

General changes in prices, wages, production, and other economic phenomena which can be measured numerically are indicated statistically by the use of index numbers. An index number, in the most general sense, is a number which *varies with some group or complex of variable items, and whose variations can therefore be taken as representing or indicating the other variations.* In studying the variations of the prices of any specific commodity, we need no index number; but when we have to deal with the price variations of many commodities, we find the use of index numbers necessary.

A common way of forming index numbers of prices is to calculate arithmetic averages of the relative or percentage changes of the prices of the different commodities. By this method the price of each commodity at different successive dates is set down as a *per cent* of its "base" price, *i.e.* of its price at some one specific date (or of its average price during a certain period). In this way, known as the *method of relatives*, index numbers of the price of fruit might be constructed as follows:

TABLE V. — THE CONSTRUCTION OF INDEX NUMBERS

DATE	ACTUAL PRICES (CENTS PER DOZEN)			RELATIVE PRICES			INDEX NUMBERS
	Bananas	Oranges	Peaches	Bananas	Oranges	Peaches	
Basing date . .	15	40	25	100	100.0	100.0	100.0
One month later .	20	50	20	133	125.0	80.0	112.7
Two months later	21	45	30	140	112.5	120.0	124.2

Index numbers constructed in this way are not always trustworthy. Suppose that wheat advances from $1 to $2 per bushel while at the same time corn falls from $2 to $1 per bushel. Assuming that wheat and corn are equally important, it is clear that an index number should show no net or general change in their prices. And yet, by the method we have illustrated the new price level would be 25 per cent higher than the old one. Or if the later period be taken as the base, a *fall* of prices of 20 per cent (*i.e.* from 125 to 100) would be indicated. In general, when the

earlier of any two periods compared is taken as the base, the method exaggerates a rise of price and understates a fall. When the later of the two periods is taken as the base, the method understates a rise and exaggerates a fall. For these reasons it is more accurate to use a geometric average (the nth root of the product of the relative prices of n commodities). The geometric mean of the relative prices of wheat and corn, in the example as given above, is $\sqrt{200 \times 50}$, or 100 — thus indicating, as it should, no general net change of prices. However, because of the difficulty of calculating the geometric mean, use of the arithmetic average is generally favored. It is sufficiently accurate for most purposes.

In the actual making of index numbers the prices of from fifty to several hundred commodities are used, — although for some purposes a smaller number may suffice. If the most accurate results are desired, *weighting* the different prices in accordance with the relative importance of the different commodities is necessary. Accurate weighting is especially important in forming index numbers from a small list of price quotations. If a very large list of prices is used, errors due to the lack of weighting or to imperfect weighting tend to offset each other, — for there is no necessary connection between the importance of a commodity and the degree to which it has risen or fallen in price. But even with a large and thoroughly representative sampling of prices, the highest degree of accuracy cannot be reached without careful weighting. Large variations in the prices of unimportant commodities, and small variations in the prices of important commodities must be given their due importance, and no more.

The use of *weights* makes it possible to dispense with relative prices and to construct index numbers of the *aggregative* type. If, for example, we think that twice as many bananas as peaches are ordinarily used, and three times as many oranges as peaches, we compute a *weighted sum* for the first date, as follows: .25 plus $(2 \times .15)$ plus $(3 \times .40)$, or \$1.75. For the second date the weighted sum is \$2.10, and for the third date \$2.07. These sums or aggregates may then be expressed as per cents, using whatever date we please as the basis of comparison. Making the first date the base, our index numbers are 100, 120, and 118. Aggregative index numbers, it has long been recognized, are especially appropriate instruments for measuring changes in the cost of living.

So used, their components are the retail prices of foods, fuel, and other commodities, together with the cost of rent, lighting, etc., all weighted in accordance with their relative importance in family budgets. The one difficulty is that as prices change consumers buy more of some things and less of others, so that the weights appropriate for one period are inaccurate at another period. This difficulty can be surmounted by, first, ascertaining what the index number of the cost of living in the second year would have been if the quantities of different goods consumed had

TABLE VI. — INDEX NUMBERS OF PRICES IN THE UNITED STATES, 1910–1936 [1]

YEAR	GENERAL WHOLESALE PRICES		PRICE OF FOOD			
			Wholesale		Retail	
	Base Year, 1913	Base Year, 1926	Base Year, 1913	Base Year, 1926	Base Year, 1913	Base Year, 1926
1910	101	71	101	65	93	58
1911	93	65	97	62	92	57
1912	100	70	104	67	98	61
1913	*100*	70	*100*	64	*100*	62
1914	98	68	102	65	102	63
1915	101	71	105	67	101	62
1916	127	89	121	78	114	71
1917	177	123	167	107	146	91
1918	194	136	188	120	168	104
1919	206		207	132	186	116
1920	226	153	220	141	203	123
1921	140	98	142	91	153	95
1922	138	92	138	88	142	88
1923	144	73	145	93	146	91
1924	140	98	142	91	146	91
1925	142	99	156	100	157	98
1926	143	*100*	156	*100*	161	*100*
1927	136	95	151	97	155	96
1928	138	97	158	101	154	95
1929	136	95	156	100	157	97
1930	123	86	142	91	147	91
1931	104	73	113	75	121	74
1932	92	64	95	61	102	62
1933	93	65	94	61	100	60
1934	107	75	110	71	105	67
1935	114	80	131	84	109	73
1936	116	81	128	82	112	74

[1] United States Department of Labor, *Monthly Labor Review*.

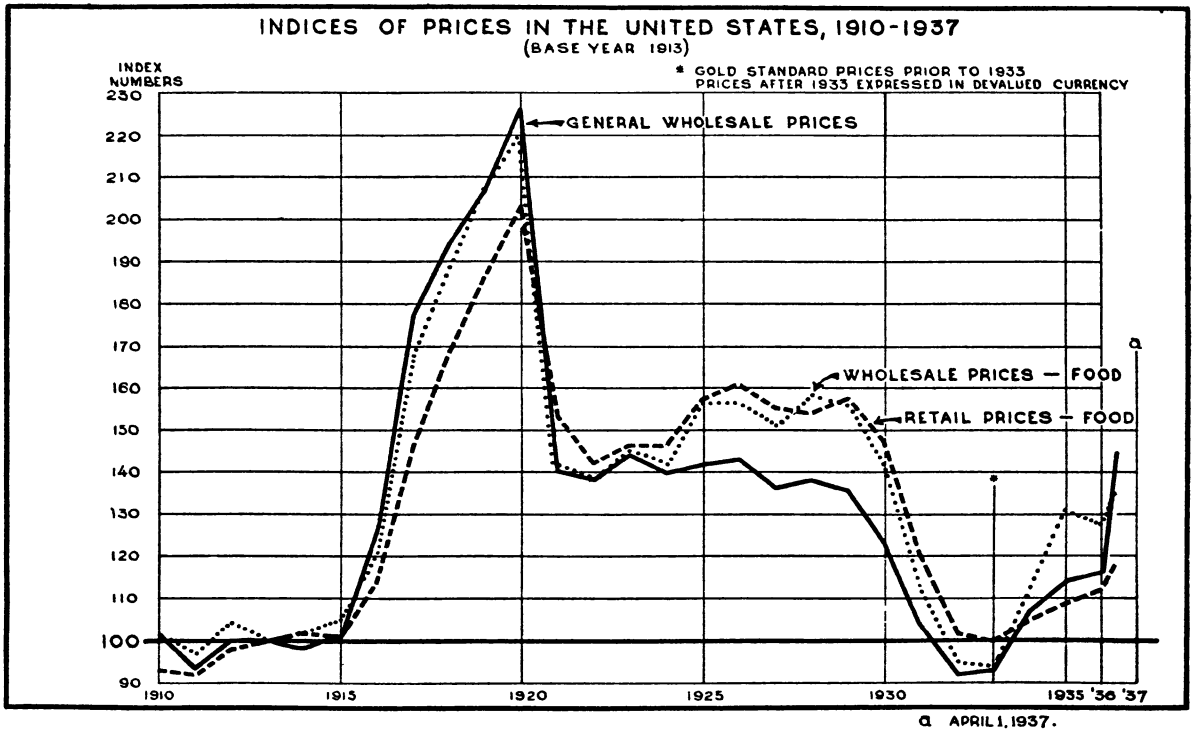


FIG. 1. (Data from United States Department of Labor)

remained unchanged; second, ascertaining what it would have been if quantities of goods consumed in the first year had been what, in fact, they were in the second year; and, third, taking the mean of the two results. Or, a single index number may be computed, using as weights the sums of the weights indicated by the budgets of the first year and second year respectively.

Aggregative index numbers, it has been found, may be advantageously used also for measuring general changes of wholesale prices, of the quantities of goods produced or consumed, of the volume of trade, and of other economic phenomena. Wholesale prices, it may be needless to add, should not be weighted in accordance with the importance different commodities have in consumers' budgets, but rather in accordance with their importance in production or exchange. The careful student of fluctuations in the value of money will not content himself with index numbers of the general movement of wholesale prices. He will want to observe, for example, the way in which certain types of commodities rise and fall in price more rapidly than others, how world prices and domestic prices are related, how the prices of agricultural products change as compared with the prices of manufactured goods, and how wholesale prices, retail prices, wages, and the cost of living are interrelated. For most of these purposes, the method of relatives is to be preferred in the construction of index numbers. By this method relative changes in individual items may be studied apart from the composite indices. The construction and use of index numbers are full of subtle difficulties, some of them mathematical, but more of them demanding primarily a clear understanding of the economic facts and problems involved.

Index numbers are most advantageously presented in the form of chronological graphs. Charts composed of such graphs enable the reader to follow easily the rise and fall of changing economic and social conditions. They reveal, at a glance, the relative order and magnitude of the several "variables" which are being studied, and frequently suggest possible causal relations which are not obvious in the tabulated data. Figure 1, on page 361, is a graphic representation of the price data compared in Table VI.

A popular use of index numbers developed in recent years is the construction of *composite indexes* which are used as bases of business forecasting. The many constituent series of index numbers

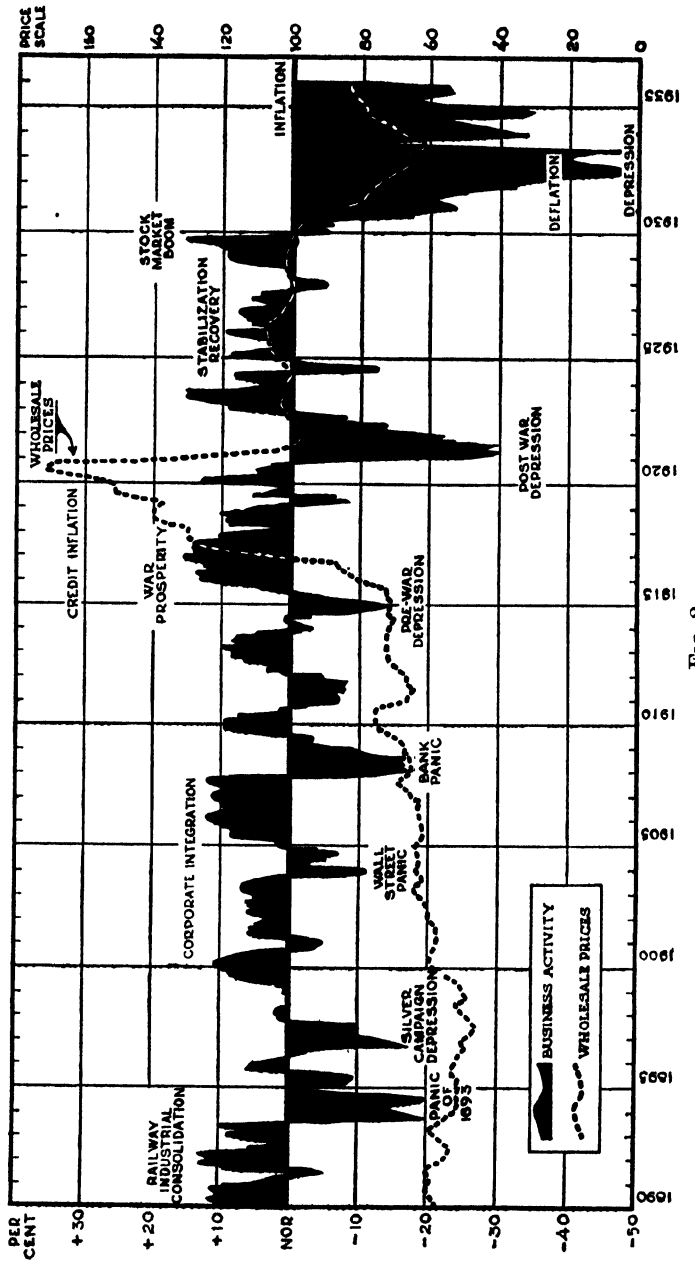

PRICE SCALE
150
140
120
100
80
60
40
20
0
PER CENT
+30
+20
+10
NOR
-10
-20
-30
-40
-50
1890
1893
1900
1905
1910
1913
1920
1925
1930
1933
RAILWAY INDUSTRIAL CONSOLIDATION
CORPORATE INTEGRATION
CREDIT INFLATION
WAR PROSPERITY
STOCK MARKET BOOM
STABILIZATION RECOVERY
INFLATION
DEFLATION
DEPRESSION
WHOLESALE PRICES
SILVER CAMPAIGN
PANIC OF 1893
DEPRESSION
WALL STREET PANIC
BANK PANIC
POST-WAR DEPRESSION
POST WAR DEPRESSION
BUSINESS ACTIVITY
WHOLESALE PRICES

FIG. 2

which are combined into composite indexes of "business conditions" and the "trend of economic cycles" include freight car loadings, pig iron production, bank deposits, factory employment, bituminous coal production, electric current consumption, foreign trade, unfilled steel orders, building construction permits, wholesale prices, and stock and bond prices.

Such *business barometers* have become a recognized essential of the financial pages of the daily press and of the periodic publications of many business, professional, and educational institutions. Figure 2 presents a composite chart of *Business Activity* in the United States from 1890 to 1935, together with indexes of coincident movements of wholesale commodity prices, prices of railroad stocks and bonds, and prevailing commercial paper bank rates.

The theory of managed currency.

With the possible exception of recent experiments in Sweden, Great Britain, and the United States, experience with managed currencies has been confined to emergency situations of a transient nature and to political efforts to exploit the currency for the pecuniary benefit of particular economic groups. There are, however, certain general principles of currency management which are of academic interest and which deserve consideration.

It is commonly observed that rapid or extensive price changes work unavoidable hardships upon certain individuals and economic groups and confer unearned benefits upon others. Rising prices are notably favorable to debtors, since their obligations may be liquidated with less purchasing power than was received when the debts were incurred. Conversely, falling prices favor creditors to the detriment of their debtors. Erratic price fluctuations in either direction interfere with accurate business forecasting and thus burden commerce and all forms of contracts with a more or less embarrassing element of speculation. In spite of the "relative stability" of the gold standard, there have been considerable changes in the rate of gold production and in the monetary demand for gold which were doubtless reflected in contemporary price levels. Price changes are also traceable to the advanced technology of production, to erratic features of demand, and to modified credit conditions.

With the development of credit economy in co-ordination with

commodity standard currencies, financial crises and business depressions tend to become more frequent and more intensive. In the opinion of some, these devastating conditions are due to uncontrolled price movements. It is proposed, therefore, that some substitute be found for the automatic system of price determination which would remove the hazard of changing price levels.

At least three theories are advanced as to what the behavior of an ideal standard of value ought to be — assuming that the variations of price levels are dependent upon the standard.

The stable consumption price level is based upon the assumption that the standard unit should be so constituted as to have a constant purchasing power in terms of consumption goods and services. To meet this requirement it is proposed that a "tabular standard" be devised which will be legally endowed with an exchange value equivalent to a prescribed and statistically determined composite of consumer utilities — "A dollar that will buy just as much next year, or ten years hence, as it buys now." The chief interest in a tabular standard of this kind centers in the possibility of making contracts of indebtedness which are payable in purchasing power equivalent to that of the original obligation.

The stable income level advocates a co-ordinated management of prices, wages, and salaries which will insure a stable average income. Under this system the total amount of money would be kept proportionate to the population. If the population were to increase more rapidly than production, the price level of goods would tend to rise. If, on the other hand, production increases more rapidly than population, the commodity price level would tend to fall.

A gently rising price level is advocated as a wholesome stimulus to business. This conclusion is deduced from the observation that periods of prosperity are usually accompanied by rising prices.[1] It is argued that, while justice to creditors and other recipients of fixed money incomes may appear to demand a stable income standard or a stable consumption price level, they are primarily interested in the safety of their source of income which is dependent upon business success. Since it is the entrepreneur

[1] Wesley C. Mitchell, *Business Cycles, The Problem and Its Setting*, Institute of Business Research, New York, 1927, pp. 410–411.

who takes the risk of business success or failure, it is therefore not unreasonable that he should profit somewhat at the expense of creditors when successful.[1]

The compensated dollar theory.

The several criticisms of currency systems based upon physical standards of value, whether these standards be of gold, or of silver, or a bimetallic union of gold and silver, all converge upon *price fluctuations* and their deleterious economic and social effects. To satisfy these criticisms, therefore, the problem becomes a search for a monetary structure which, in its practical operation, will insure price stability or can be depended upon to maintain predetermined price trends.

In the beginning, it is obviously necessary to disclaim any possibility of stabilizing prices of individual commodities or distinctive services. The admitted operation of the *law of supply and demand*, as the major factor in determining the changing values of thousands of different kinds of goods, clearly eliminates any rational proposal of regimenting individual values into a frame of stability or prescribed course of concerted trends. The most that can be hoped for is to deal with the average of values, to measure the resultant, or "level," of their combined upward and downward movements from time to time, and to determine the "moment," that is the direction and speed, of their integrated trends at any given time.

If, then, a flexible standard of value can be devised which will absorb, or compensate by its resiliency, the variations of this trend of composite values, the net result would be a uniform and tranquil course of average prices. Concretely expressed, the problem is to construct a mechanical monetary system which will resolve a vast number of variables and erratic commodity values into a smooth trend of average market prices.

The theoretical structure of such a resilient standard of value was worked out by Professor Irving Fisher some twenty-five years ago, and was characterized by him as the "compensated dollar." Professor Fisher suggested that the standard dollar be not composed of a fixed amount of gold, as has been customary, but of a fixed purchasing-power measured in gold. This can be arranged, says Professor Fisher, by calculating the present trend of average

[1] Bradford, *op. cit.*, p. 648.

market prices in terms of the present dollar, having a theoretical content and value of, let us say, $\frac{1}{35}$ of an ounce of pure gold. If the price trend is shown to be upward, the rise will be checked by a lawful increase in the gold content of the dollar, thus stabilizing the purchasing-power of the dollar. Coincidentally, the pecuniary relations of creditors and debtors, the investment values of bonds and insurance policies, the purchasing-power of salaries and fixed incomes, and the standards of living of fixed wage groups would be stabilized. This assumes, of course, that the theory would work out in practice.

It is argued by the advocates of the compensated dollar that it constitutes the key to a successfully managed currency. If it be desired to advance prices, official reduction of the gold equivalent of the dollar would, it is argued, result in a rise in the price level and, likewise, a more or less proportionate rise in individual prices. With equal facility, a lowering of prices could be accomplished when deemed desirable.

It is not proposed that the Fisher dollars should be actually coined. They would be represented in the circulating currency by gold certificates in various denominations. These certificates would be redeemable at any time in such amount of gold as should constitute their lawful bullion equivalent at that time. The gold equivalent of a $1 certificate at any time would be designated as a "bullion dollar." Gold would likewise be purchased at the mint for reserve purposes at the prevailing legal rate and paid for in gold certificates.

For the most part, interest in the compensated dollar remains purely academic. Its principal defects reside in the practical limitations of the theory of index numbers, the inertia of custom in price fixing and the use of money, the certain failure of a variable standard to meet the needs of foreign trade, the strong inducement to speculation in gold, and the doubtful adequacy of executive wisdom and integrity necessary for its successful administration.

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CHAPTER XIX

FOREIGN TRADE

In approaching the study of foreign trade one must realize that commerce is primarily a basic economic activity which involves the interchange of goods and services either in one place or between different places. When trading is confined to one place it is *local trade,* when trade is being carried on between different places it is *interregional trade.* When interregional trade is confined within national boundaries it is *domestic trade.* When it traverses national borders it becomes *international trade,* or more commonly foreign trade.[1] When trading regions are separated by national borders, economic considerations which apply, in general, to interregional trade usually are subject to modifications which are political in character and apply specifically to *international trade.* We shall, therefore, first examine the economic conditions and principles which apply, in general, to interregional trade. Subsequently, we shall examine specific political considerations which may become effective in international trade and which modify or otherwise affect natural or normal conditions and principles of interregional trade.

Diversified production.

Economically, primitive communities find it necessary to produce within the borders of each community a major part, at least, of all the goods and services required to sustain the population.[2] Such communities are said to be more or less self-sufficient and independent of economic resources beyond their control. When such communities are small, their industries are widely diversified and their trade is local. As communities

[1] A distinction between foreign trade and international trade arises when dominions or foreign possessions are involved. British trade with Australia or Canada is foreign but not international. A distinction is then made as between "international trade," "Empire trade," and "domestic trade."

[2] It does not necessarily follow that an economically primitive community is socially deficient.

increase in population and expand geographically, specialization in production and regional trading of a domestic character develop.

Conditions of diversified production and self-sufficiency generally prevail in the absence of convenient means of transportation and markets. Lack of transport, however, no longer imposes diversified production and self-sufficiency upon many civilized communities. Nevertheless, there are some social groups, usually religious, in most countries which have chosen to live within economically self-sufficient communities. Of much more importance is the fact that some nations, as a matter of expedience or necessity, have endeavored to pursue a policy of national economic self-sufficiency. Such a policy involves, of course, a diversified production within the country sufficient to the needs of subsistence, and in addition such social requirements as are generally assumed essential to the progress of civilization. It implies, also, the loss of many economies in the division of labor and utilization of natural resources, and the consequent benefits of interregional trade beyond the national borders.

Regional specialization.

In contrast with regional diversification and self-sufficiency is the technique of regional specialization and interregional trade. The more essential factors which determine *what goods may be produced* in a given locality, and *which goods can be produced more cheaply or more advantageously* there than in certain other localities, are (1) natural resources, (2) climatic conditions, (3) character of the population, and (4) available means of transport. These factors are effective, not only in bringing about the normal division of labor, location of markets, and development of transport in any region, but when organized into industries, become the basis of specialization in production and interregional trade.

The development and utilization of many remote natural resources are completely dependent upon the commercial opportunities of interregional trade and, conversely, many prosperous social communities and some nations could not possibly exist without obtaining by interregional exchange the essential and strategic products which flow from specialized industries abroad. Diamonds from South Africa, the rubber of India, the nitrates of Chile, and the petroleum of Mexico would have little

value if confined to local markets. The residents of industrial cities would be without means of daily subsistence and the great municipal centers of commerce would cease to exist if outlying regions did not specialize in meats, fruits, vegetables, and dairy products readily and easily exchangeable for industrial products through interregional trade.

Interregional trade among localities of widely varying climatic and physiographic conditions is fundamental to the growth of populations and to the progress and maintenance of civilization. To the economist, however, this obviously necessary and automatic interchange of exotic products is not the only important or interesting feature of trade. The more significant problems of interregional trade are concerned with *goods which are or may be produced locally, but nevertheless are brought in from other regions.* For example, the Atlantic coast states could produce their own wheat, but most of their breadstuffs are grown west of the Mississippi. The western states could manufacture their own textiles, but most of their clothing is shipped from the east. The United States could produce all the sugar it requires, but instead it imports a part. In each case, the quality of the product is about the same, the cost of production usually is less, and the price probably is lower, but the total costs of production and the average consumer price will be less. The resulting interregional exchange is mutually advantageous to both producers and consumers.

The principle of differential costs of production.

The most obvious reason for importing goods from other regions is that their costs of production are less than in the locality to which they are sold. The merchants of each region, therefore, search for goods which they require in other parts of the country where they are produced most cheaply, and seek markets for their home industries where such commodities can be produced only at higher costs. Thus, in the absence of artificial restrictions, each region normally and automatically adjusts its trading arrangements so as to employ its resources in those lines of production in which it is able to produce at low cost and seeks to exchange its surplus for other required goods more cheaply produced elsewhere.

The operation of the principle of differential costs of production in interregional trade may be illustrated by assuming hypothetical

conditions of producing and exchanging wheat and corn in two mid-western states which we will call A and B.

Both wheat and corn are successfully grown in states A and B, but the costs of production vary somewhat because of different soil and climatic conditions. Farmers, on the average in State A, succeed in producing 10 bushels of wheat for an expenditure of $5 and also, at a cost of $5, can produce 20 bushels of corn. In State B, an expenditure of $5 will produce, on an average, 12 bushels of wheat or 18 bushels of corn.

In the independent production of wheat and corn (disregarding other farm crops), we have in the two states the following results.

State A, at cost of $10, produces 10 bushels of wheat and 20 bushels of corn;

State B, at cost of $10, produces 12 bushels of wheat and 18 bushels of corn;

A and B, at cost of $20, produce 22 bushels of wheat and 38 bushels of corn.

If A, having a differential advantage in producing corn, specializes in that grain, and B, for like reason, specializes in wheat, the result would be:

State A, at cost of $10, produces 40 bushels of corn;

State B, at cost of $10, produces 24 bushels of wheat;

A and B, at cost of $20, produce 40 bushels of corn and 24 bushels of wheat, — a net gain of 2 bushels of wheat and 2 bushels of corn and a saving of $1.35, or a reduction in average costs of $6\frac{2}{3}$ per cent.

On the basis of concrete differential costs, similar to the figures used in the illustration, specialization in corn in State A and in wheat in State B, and interregional exchange of convenient proportions of the two crops would prove mutually advantageous. No doubt this fact is effective in determining the approximate boundaries of corn-specializing regions centering in Iowa and the wheat-growing areas farther west.[1] It has certainly been a major factor in promoting the prosperity of the people and the wealth of the nation since the several states were organized economically and politically into a free-trading Union.

[1] In the illustrations, no account has been taken of transport charges which in practice would be added to costs of production in calculating the differential advantage in any instance.

This principle of differential costs is properly emphasized as the fundamental basis of regional specialization and of interregional trade. The principle is, of course, extended to national specialization and international trade as well. Indeed, the so-called "flexible provision" of the Tariff Act of 1922, by which the President, acting on findings of the Tariff Commission, is authorized to adjust customs duties so as to *equalize costs of production* here and abroad, is based upon this principle.[1]

The most significant fact in modern economic life is that the productive advantages of different localities stimulate regional specialization in production and the mutually profitable exchange of the resulting surplus product through trade. It is self-evident that the specialized production of goods which has prevailed in recent years has increased enormously the potential amount and variety of goods available for the satisfaction of human wants, and has made possible higher standards of living and an increasing accumulation of wealth in the form of durable goods. Unfortunately, political considerations have so blocked the channels of trade that the economic benefits of this technological progress have not been realized.

Important as the principle of *differential costs of production* is, as a basis of specialized production and trade, it may not always be depended upon as a certain guide, or even the most important consideration, in determining the course of interregional trade in any given instance. Differential advantages such as are illustrated above although actually existing may not always be apparent. It does not require wide observation to discover numerous regions which seem to enjoy no resources which are notably superior to those of other localities. Some seem rather to suffer differential disadvantages. Among our own states, there are several which have no superior endowment of resources of any kind and some are distinctly inferior in practically all fields of production. In every state there are counties notably poor in resources. There are also nations among the most advanced in the qualities of civilization with little opportunity for industrial specialization and trade upon the basis of superior resources and differential costs. If the principle of differential advantage in production were the only determinant of successful industry and

[1] This provision of the Tariff Act illustrates the operation of "artificial restrictions" upon the normal and automatic flow of interregional trade.

trade, all such regions would be either uninhabited or notably inferior in their economic and social standards. This situation, nevertheless, does not prevail. In fact, the reverse is frequently the case. We observe some richly endowed regions with highly specialized industries which, however, remain low in the scale of economic welfare and social progress. We also observe regions where high-cost production prevails which carry on a brisk and profitable trade with regions of generally low-cost production, and not infrequently the regions of meager resources and high costs appear to prosper even in greater measure than do regions of abundant resources and low costs. The explanation of this situation resides in a second principle of interregional production and trade which we shall designate as the "principle of relative advantage in production."

The principle of relative advantage in production.[1]

A situation quite in contrast with that discussed above appears when we examine the possibilities of interregional trade between two localities one of which is distinctly inferior in resources and all-round industrial productivity to the other. Some find it difficult to believe that mutually profitable trade can exist between two regions in one of which costs of production and prices of everything are higher than in the other.

We may assume without departing far from actualities, that two states are both fitted by conditions of soil and climate to produce wheat and corn, but that one of them, which we will call State C, is more favorably circumstanced with respect to the production of both grains than the second State D. At an expense of $5, farmers in State C produce, on an average, 12 bushels of wheat and at an equal cost of $5 they can grow 22 bushels of corn. The less favored farmers of State D, at a cost of $5, average only 10 bushels of wheat or 12 bushels of corn. Under these circumstances, and disregarding other farm activities, the expenditure in each state of $5 on corn growing and $5 on wheat would result as follows:

State	Cost	Wheat	Corn
C	$10	12 bushels	22 bushels
D	10	10 bushels	12 bushels
Total C and D	$20	22 bushels	34 bushels
Average cost per bushel		45.4 cents	29.4 cents

[1] This topic is treated by most authors under the title "The Law of Comparative Costs" which is made to include both "differential costs," which are absolute differences

In State C the relative cost of production of wheat to corn is as 22 is to 12 (183 per cent). In D, the relative cost of wheat to corn is as 12 is to 10 (120 per cent). That is to say, in C, the cost of producing wheat in comparison with corn (183 per cent) is higher than the relative cost, in D, of producing wheat in comparison with corn (120 per cent). Conversely, in D, the relative cost of producing corn to wheat, 10 to 12 (83.3 per cent) is higher than the relative cost, in C, of corn to wheat, 12 to 22 (54.5 per cent).

If, therefore, each state specializes in that grain the relative cost of which within the state forms the lowest ratio with the relative cost in the other state, and the products are exchanged in required amounts, a mutual benefit will result. In the present instance, C will produce corn and D will produce wheat, with the following result:

State	Cost	Wheat	Corn
C	$10	—	44 bushels
D	10	20 bushels	—
C and D	$20	20 bushels	44 bushels

Applying the average unit costs of production which prevail in the absence of specialization and interregional trade, we now have at a total cost of $20 —

20 bushels of wheat at 45.4 cents =	$9.08
44 bushels of corn at 29.4 cents =	12.94
Total	$22.02

which constitutes a saving of $2.02, or 10.1 per cent. By the process of specialization and interregional exchange this would be a "profit" distributed among the producers of the two states.

In the above conventionalized illustrations, conditions have been simplified somewhat beyond reality, but the principle of relative advantage in production as a sound basis of profitable interregional exchange is firmly established in both theory and practice. Specialized production and trade under the operation of this principle tends to develop slowly. For this there are, at least, three reasons. In the first place, it is comparatively easy for producers and merchants to visualize the difference in production costs of a commodity *here* and *there* and to calculate

between the production costs of one commodity in each of two different regions, and "relative costs," which are *ratios* involving production costs of each of two commodities in each of two regions.

the *direct differential advantage* which will result from interregional trading in that commodity. But when the solution of the problem involves a rather accurate industrial survey of the potential trading regions and the use of the mathematics of ratio and proportions, the academic procedure of discovering and estimating the potentialities of *relative advantage* in production are often discouragingly difficult. Secondly, established industries and customary methods of industry and channels of trade are difficult to readjust fundamentally, except over a long period of time, or after a catastrophic economic or political disturbance has destroyed the prevailing equilibrium of the established order. Thirdly, when the readjustments of specialization and interregional trade actually are undertaken, the process as a whole is subject to the law of diminishing returns. Initial profits of production and trade sometimes stimulate excessive production for export, force lower prices for export goods, and defeat the enterprise before industry and trade of the two regions are brought to mature equilibrium.

Summary.

From the above analysis, we may restate in brief three principles of interregional trade:

1. *The exchange of indigenous products between regions, the respective basic resources of which are in part unique, is particularly beneficial economically to all trading regions, and is essential to the economic survival of many.*

Products not indigenous to the United States which are essential commodities and must be imported, include nickel, platinum, uranium, manganese, tin, chromium, vanadium, rubber, coffee, tea, cocoa, sisal, silks, many drugs, and most precious stones. Some of these products are necessary munitions of war and are therefore designated as "strategic commodities." Of the latter, it is customary to maintain a considerable "defense reserve" in case an adequate supply might not be procurable in time of emergency.

2. *The interchange of commodities "the production of which is accomplished in different regions at reciprocally differential costs" is of mutual advantage to both regions.* This type of interregional trade tends to stimulate industrial specialization and therefore strongly motivates technological development and social progress.

The principle of differential costs of production is particularly active in stimulating trade between new regions where raw materials are plentifully and easily extracted and regions in which the arts and crafts have reached maturity.

3. *The advantageous interchange of high-cost products of a poorly endowed industrial region for the low-cost products of a more favorably circumstanced region is made possible under the operation of the principle of "relative advantage of production."* Trade of this kind has at times greatly stimulated technological progress and has enabled regions relatively barren of natural resources and sometimes overpopulated to survive and to maintain advanced standards of well-being. Such regions do not, however, greatly improve their status as respects the virility of their physical resources or their prospect of population growth. When this economic condition is so extended as to include a nation, as a whole, the perpetuity of that nation may depend upon the successful maintenance of its foreign trade. Several European countries and at least one Oriental nation may be counted in this category.

In general, we may conclude that the three typical circumstances of specialized production and interregional trade promote economy in the utilization of the economic resources of the earth and advances the well-being of humanity. Industrial society enjoys a greater income in the form of consumable goods and increases its wealth of durable goods. Also, each region becomes better equipped technologically for less laborious and more efficient development of its resources than otherwise would be possible.

International Trade

Economically speaking, international trade does not at first appear to present a significantly different category of commerce than that which we have discussed as interregional trade. Seemingly the only distinction rests upon the incidental fact that the transport of interchanged goods traverses the political boundaries of sovereign nations. But there are coincident facts — economic, political, and social — which are of great importance in the determination of the nature and extent of international trade. They require constant and very careful consideration.

In most nations there is a much closer co-ordination between political policies and economic policies than has customarily

prevailed in the United States. For example, the *laissez-faire* principles of normal interregional trade which we have outlined above may be modified or entirely nullified by national and international political considerations — by what are called "politico-economic policies." Tariffs, subsidies, quotas, and embargoes evidence the operation of such policies in disturbing the course of normal economic activities.

There are also peculiar and sometimes very interesting social contrasts embedded in the habits and customs of peoples who are foreign to each other. Their economic relations are influenced by their prejudices, traditions, and religious differences. These differences are reflected in the kind and character of the goods they produce and the goods they desire, and also in the manner of their merchandising and their customary facilities of trade. There are among foreign peoples peculiarities of racial character and psychology which change entirely the order of economic logic and the relativity of social values as we see them. Consequently, *interracial commerce* presents a variety of conditions, each of which heavily "weights" the principles of trade which generally prevail among occidental regions.

Among political factors which have been effective in modifying the operation of the principle of differential costs, perhaps the most outstanding over a period of a century is the American tariff policy. The tariff was inaugurated in 1792 as a *revenue measure* at *ad valorem* rates approximating less than 8 per cent on a small schedule of items. By 1824, it had advanced to 25 per cent as an *infant industry protective measure* designed to compensate the unfavorable differential costs of infant domestic industries by intercepting destructive competition from mature industries abroad. Soon thereafter the theory of equalizing the differential disadvantages of infant industries was superseded by the *general protective tariff* which broadened the schedules to include practically all manufactured articles whether produced in this country or not and advanced the rates which, in some cases, reached 50 per cent *ad valorem*. Following the Civil War a fourth argument favoring higher tariffs and broader schedules appeared in the theory of using tariffs against foreign products in such a way as to equalize differential advantages among different domestic industries. It has been seriously undertaken, for example, to so adjust the tariff schedules as to "equalize the production costs of

factory products at home and abroad," and at the same time to equalize the pecuniary opportunities of manufacturing and agriculture at home.

American tariffs have from time to time provoked other nations to impose countervailing penalties upon our trade, including tariffs, quotas, and quarantines. However, because of urgent requirements for our wheat, cotton, copper, and petroleum, European countries have, until recently, been obliged to yield to our tariff exactions and, with few exceptions, to leave their markets comparatively free to us. This situation is rapidly changing. The United States tariffs are maintained, but European markets are undoubtedly requiring less of our goods and are consequently less anxious to sell their goods to us. There are several reasons for this change. For one, the slowing population growth and the revival of agriculture in Europe have about solved the food problem in many districts. Colonial development is rapidly adding to the European supply of both food and textile materials at the expense of the American meat, grain, and cotton market. France, formerly one of our best wheat customers, now with the aid of her African colonies, produces a surplus. Cotton, grains, and meats are being produced for export in South America in rapidly increasing quantities on low-rent land and with low-cost labor. Great Britain, a dependable buyer of our wheat, cotton, and tobacco in former times, is expanding the production of these commodities and others within the Empire in quantities which promise soon to be sufficient to meet all of her requirements. Under the Empire trading pact, formulated at the Ottawa Conference in 1932, and subsequent reciprocal trade arrangements, facilitating the interchange of "Empire products," Great Britain, her dominions, and her dependencies are in the way of becoming economically self-sufficient within the industries of the Empire. They also have learned how to use the historic American tariff barrier against external competition.

Japan, within the memory of men still living, was entirely closed to foreign trade. Today, Japan challenges the world on low-cost production, technological progress, and cheap labor. Overpopulated and lacking raw materials, Japan's political policies have turned to economic expansion and mercantilism. As long as her working people remain content with hard labor and plain and sanitary living, as long as they remain loyal to an autocratic gov-

ernment and an imperious religion, and as long as they retain pride in the traditions of an untainted race and undefeated nation, Japan will not lack for a profitable position among the trading nations of the world. The same may, in large part, be said with respect of the influence of intensified politico-economic policy in determining the future course of both domestic and foreign trade of Italy, Germany, and Russia.

Social aspects of trade.

The economic behavior of peoples and nations is often so controlled by racial bents, imperious forms of religion, repressive traditions and customs as to influence the nature of their industries and trading habits. No estimate has been made of the total force of social habits, customs, and conventions which enter into the determination of our economic activities, but there can be no doubt that the nature of our industries and the nature and volume of foreign trade are increasingly subject to its influence. In our own country, which probably is less subject to such forces than most others, the conventions of styles and fashions are powerful incentives in the determination of the nature of our production and of our foreign trade as well.

Good will and trade.

There are considerations of personal, social, and national *good will*, and likewise of *prejudice*, which unavoidably enter into economic life and are especially obvious in trade relations. The generally prevailing good will among nations which existed a generation ago has been in recent years superseded by ill will, prejudice, political rivalry, and suspicion. In this humus lie the roots of modern nationalism.

When the United States was a youthful, democratic, prosperous, and hospitable nation, provincial and inoffensive, except in the then negligible matter of the tariff and the Monroe Doctrine, a warm sentiment of good will throughout the world contributed favorably to our foreign relations including international trade. But since the World War this almost traditional international good fellowship has substantially changed. Our entrance into the war probably brought defeat to erstwhile friendly nations which had contributed substantially to our development and security in earlier times. Our diplomatic policy after the conclusion of the war was a disappointment to our victorious allies in several re-

spects.[1] But a more impressive cause of unpopularity abroad than either of these attaches to the almost accidental position in which we have found ourselves as the ultimate creditor of both former enemies and allies and also of a number of neutral nations. The United States is not only the world's creditor to an amount which reasoning and understanding men agree cannot be paid within the life-span of the present generation, but its treasury possesses the greater share of the world's gold, the only "liquid" means of international payment.[2] Furthermore, in response to apparently serious suggestions of European nations that they be permitted to reduce their indebtedness to us by building up a balance of trade subject to credit against their obligations, we have raised a prohibitive tariff barrier against their goods. One must frankly admit, that, all legal and ethical advice and argument to the contrary, the United States can scarcely hope for any considerable display of co-operation and good will from Europe in international relations for a long time, possibly not until another international cataclysm, sufficient to erase the pecuniary accounts of the last debacle, is upon us.

Delivery costs and the principle of differential advantage.

In order to simplify the principle of differential advantage in production, the item of transport and other incidental costs was disregarded in the illustrations used above. However, in an analysis of interregional trade, either foreign or domestic, an accurate accounting of production must cover all *expenses of delivery* which will include transport, insurance, and brokerage and sometimes additional expenses of storage, inspection, grading, excise taxes, and license fees. In case of uncertain money values due to unstable currencies, an additional indeterminate item of "loss or gain on exchange" appears.

With exception of the latter item, all transport and incidental costs of delivery can be ascertained for a *considerable* future period and are properly included in "production costs" when differential advantages are being calculated. Transport costs, especially of heavy and bulky goods, frequently enter into the determination of differential advantages with even greater weight

[1] Particularly the non-support of the Treaty of Versailles and indifference to the League of Nations.

[2] The gold stock of the United States January 2, 1937, was $11,251,000,000 (321,630,000 ounces), which amounts to over half of the total world supply of monetary gold.

than do initial production costs. The completion of the Erie Canal in 1825 provided a tremendous stimulus to foreign trade. A generation later the Mississippi steamboats had made New Orleans a metropolis of trade. The extensive construction of railways in the United States following the Civil War so cheapened delivery costs from the interior of the country to the seaboard and to foreign markets that our foreign trade and profits therefrom were greatly increased. The opening of the Panama Canal in 1914 so reduced the cost of shipping Pacific coast products to the eastern states and to Europe as to increase the volume of trade flowing to and from the western states. The recent development of highway traffic which can be served by trucks and busses at lower costs than by the railways, within definite limits as to distance and conditions, is a potent factor in the present readjustment of regional production and interregional trade.

The relocation of industry so as to reduce necessary transport to the *shortest and cheapest average composite haul of raw materials and finished product* is a noteworthy present-day tendency. An outstanding illustration is the gradual transfer of the heavy steel industry from the old Pittsburgh district to the more strategically located district centered upon Gary, Indiana. If there should be a continued recession of foreign trade, there will doubtless be a redistribution of regional production westward with a view to reducing transport costs in domestic trade. What has just been said in respect of the relation of delivery costs to the *principle of differential advantage* in production and trade, applies in like manner to the *principle of relative advantage* between low-cost and high-cost regions.

Diminishing returns in foreign trade.

In most industrial countries many kinds of goods are produced and *diversification* rather than *specialization* in production continues to prevail. Why, under the operation of the principles of differential advantage and relative advantage, does it not come about that each region should specialize in the production of some one commodity or a very few commodities for which it seems best fitted, and secure all other goods essential to its needs in trade?

There are several contributing answers to this question. There are many products which cannot be produced independently. Agriculture, for example, requires a "rotation of crops" if the

fertility of the soil is to be preserved, so at least three commodities must be produced, only one of which may be an advantageous export crop. One-crop farming in tobacco, cotton, and corn has been tried and ruined the soil resources of several states before it was realized that the principle of differential costs does not hold in the long run unless the basic resources are conserved. There are many industries which cannot be carried on without the accumulation of by-products, and usually the presence of these auxiliary products accounts for the differential advantages which make profitable trade possible. Gold is seldom mined without valuable by-products, including silver. Silver is seldom mined without a by-product of lead. In the United States a large portion of the annual output of gold is a by-product of copper mining. Again, profitable specialization in one region invites the exploitation of similar opportunities and consequent competition in other regions. If such potential competition becomes effective, the first region might find itself without a market and devoid of other industries. An industrial community, if possible, "should always have more than one string to its bow."

In clearly advantageous cases of specialized production, it is usually observed that a point in the annual volume of output is reached where the profitable differential or relative advantage begins to disappear. Either costs become higher, or trade demand fails to keep pace with production and prices fall, resulting in declining trade advantages. These are symptoms of the operation of the *law of decreasing returns*. Sooner or later all industries in their growth enter the zone of increasing unit cost. Also mass production in any line tends to create a saturated market and lower prices. The combined threats of rising costs and falling prices definitely circumscribe the opportunities of specialization and foreign trade.

The United States a few years ago enjoyed a decided advantage in the production of cotton and wheat and a tremendous surplus was produced and exported each year. However, rising costs of production, together with the operation of a system of artificially sustained prices, has reduced the margin of differential advantage in foreign trade to the vanishing point. During 1936, with a surplus of wheat in our granaries, a considerable quantity of low-cost Canadian wheat was imported into this country over a high-

tariff wall. During the same year Canadian, Argentinian, and African wheat displaced American-grown wheat in some foreign markets. There is disturbing evidence, also, that foreign-grown cotton may soon successfully compete with the American product in the world's market.

The trend toward equalization in trade.

The operation of the principle of competitive equilibrium[1] is more clearly demonstrated in foreign trade than in any other field of production and marketing. This is so because the forces of demand and supply on the world markets, for any product at any time, are comparatively direct and definite. They are seldom complicated by the intricacies and trickery of speculation. The number of potential buyers of any commodity is confined to representatives of countries actually requiring the goods in definite amounts. Sellers are confined to representatives of countries having a surplus for which they have no use except as a means of securing other required goods. The number of countries thus represented on any market for any commodity is relatively small. In the absence of restrictions on the admission to the markets of sellers and buyers representing available surpluses of goods and unsatisfied requirements for such goods, and assuming that a common or international standard of value is available by which prices may readily be expressed and compared, an *equalization of demand and supply at a price* should logically result.

There is always a tendency for a surplus of goods to be produced where costs are relatively low, to be sold where their production costs are relatively high. If trade is restricted, local prices will approximate costs of production in all regions and no surplus will be produced. If trade is not restricted, goods will be moved from low-price regions to high-price regions. The consequent reduction of supply in low-priced markets and satisfaction of demand in high-priced markets will always tend to bring prices in all markets into equilibrium. Prices thus established will not be equal, but will tend to differ only by the variable costs of delivery from the markets of low prices to the markets of higher

[1] *In theory, therefore, under assumed conditions of unrestricted marketing, the difference in price of any commodity in different markets tends to equal the cost of delivery of the commodity from the markets of lower price to the markets of higher price.* This theory, long generally accepted, is presented in detail by John Bates Clark in *The Distribution of Wealth.*

prices. Thus, differences in prices are the natural cause of the flow of goods from one place to another. The flow of goods tends to increase until the prices, including delivery costs, are brought into equilibrium. The tendency of trade, therefore, is to attain a normal equilibrium at variable regional prices. The variation in price of any commodity should be directly proportional to the expense of its delivery from the lowest-price region to the point of sale. In practice, however, foreign markets are seldom unrestricted, and delivery costs are, therefore, generally reduced to a minor role in the determination of variations in the price of a commodity in different markets.

Restraints upon international trade.

In the preceding pages of this chapter it has been shown that interregional trade is a logical result of three typical situations pertaining to production of like goods in different regions. The three situations are:

1. The practical impossibility of producing certain commodities in some regions and the consequent necessity of trading indigenous products for required exotic products.

2. When a comparison of costs of production of a variety of commodities in different regions shows that in one region *A* certain goods are produced at a differential advantage (lower unit costs) than they are produced in other regions, *B* or *C*, while in regions *B* or *C* certain other goods are produced at a differential advantage in comparison with region *A*, there will be an exchange of goods more cheaply produced in *A* for goods more cheaply produced in *B* or *C*. In this situation, successful trading may require "triangular" exchange, *i.e.* *A* to *B*, *B* to *C*, and *C* to *A*.

3. When the costs of production of all commodities in one region *C* show a differential advantage in comparison with production costs of all like commodities in another region *D*, but when the relative costs of any two commodities in *C* differ from the relative costs of like commodities in *D*, a profitable exchange of goods may take place. The kinds of goods occupying the least favorable positions in the respective cost ratios of the two regions will be exchanged.

International trade will inevitably spring from any or all of the above typical conditions of comparative production among nations unless prevented by natural or artificial restraints upon

commerce. The only *natural restraints* upon international trade are either in the nature of the goods themselves or the difficulty and hazard of the transport of goods from place to place. In some instances the restraint is complete — some wine will not "bear shipment," some products cannot be preserved, some plants and animals will not live, many types of goods are too bulky, or too fragile or too complex to be moved — but, in most cases, natural restraints of trade are reducible to "expenses of delivery." The proper disposition of natural restraints is a simple matter of accounting which includes delivery costs with initial production costs — a sound practice in any kind of business.

Artificial restraints upon international trade which prevent the normal interchange of goods among nations, under conditions which would tend to bring production and consumption into equilibrium upon the highest level of average economic welfare, are numerous.

For the purpose of present analysis, artificial restraints may be classified as economic, social, and political.[1] Economic restraints in international trade are for the most part comprised within the terms "monopoly," [2] "unfair competition and trade practices," [3] and "defense of vested interests." These restrictions, in their relations to domestic trade, have been discussed in other chapters. They function within the field of international trade in exactly the same way as they operate in domestic commerce. However, governments themselves are usually parties to the acts of restraint of international trade and there is no question of constitutionality or statutory limitations in the determination of their policies. There are treaties, of course. Indeed, the vast majority of treaties pertain to international trade. But most trade treaties, aside from the innocuous "most favored nation clause" [4] are of a nature to restrict rather than promote open markets.

Political restraints are made effective by national policies which presumably result from legislative or administrative efforts to protect and promote the general welfare or to promote the interests of selective groups within the nation. It is a common

[1] Such a classification is, of course, not very scientific because its categories are not mutually exclusive. The traditional definition of economic, social, and political elements, while sufficient to indicate typical differences, is not adequate to distinguish all qualities. The result is considerable overlapping within the classifications.

[2] See p. 621. [3] See p. 639.

[4] A notable tendency in recent trade treaties is the omission of the "most favored nation clause."

practice to place tariff duties upon imports and exports [1] for the purpose of providing public revenue. Political restraints, also, spring from nationalistic rivalries as a result of which restrictions are imposed upon trade by one nation in the hope of gaining at the expense of others. National thrift and economy frequently give rise to prohibitions upon the export of "necessities" and "comforts" and upon the import of luxuries.[2] The export of "strategic commodities" and arms to potentially unfriendly nations is frequently subject to restraint. Preparedness for war usually requires the fostering of certain industries within the nation and consequent restrictions upon the import of competitive products. The co-operation of neutral nations to restrict trade with belligerent nations, as a humanitarian policy in the interest of peace, has recently been seriously undertaken. The practicality of successfully managing such a project remains to be demonstrated. Several nations, in recent years, have placed restrictions upon imports in the belief that such a policy was essential to the protection of their gold reserves and the control of their monetary systems. Some have manipulated their currency and credit systems with the object of increasing exports and decreasing imports.

The exercise of political influence in the control of trade is not confined to restrictions upon the movement of goods, but often takes the form of bounties or subsidies paid by the government to production and transport corporations in order to promote movement of goods into foreign trade, or to strengthen means of successful competition in the foreign trade, or to strengthen the means of material defense in case of "emergency." In the United States we are familiar with railway subsidies, ship subsidies, and air-mail subsidies. Subsidies are now paid to shipowners and to operators of air lines for the purposes of encouraging the development of the "merchant marine," and perfection of a national and international air-mail and passenger service. A half century ago, magnificent areas of land, and considerable amounts of cash and guaranteed bonds, were granted to the railways to aid in their development and, thus, to facilitate foreign and domestic trade. Subsidies and bounties may be bestowed either directly or indirectly. However, since they can be paid only with public funds ultimately coming from the pockets of the

[1] By constitutional provision, export duties are prohibited in the United States.
[2] Such prohibitions have obtained in Germany and to a less extent in France since 1919.

taxpayer, and because they are obviously a public burden placed upon all for the benefit of a favored few, a somewhat veiled method of payment is usually thought to be expedient. The grant of "public lands" to the railways did not, at the time, appear to be a levy upon the public treasury. It was a gift from the *public domain*, much of which was not used to aid railway construction; but, nevertheless, a large part of it found its way into the private fortunes of railway and real estate speculators. Air transport and ship subsidies are so managed, through the government mail-contracts and methods of accounting, that the amount and incidence of the financial burden can scarcely be determined.

Recent proposals in promotion of export trade include a form of bounty to be paid to exporters known as "equalizing fees." By this arrangement, a certain proportion of the so-called "surplus domestic product" of industry is to be withdrawn from the home market, thus reducing the available supply and raising or "maintaining" domestic prices. It is proposed to export the supply so withdrawn "for what it will bring" on the foreign markets. Presumably, the export price will be lower than the domestic price. In order that the export producer shall ultimately receive the equivalent of the domestic price, an equalizing fee equivalent to the difference between the foreign and domestic price is to be paid to the producer by the government.[1] This plan of disposing of surplus abroad is, in principle, identical with the practice of "dumping." It was as a defense against dumping, by British manufacturers, that the American protective tariff was set up. The practice of dumping in our domestic market is held to be a violation of "fair trade practice."

Of the several motives of political *restraint* and *stimulation* of international trade indicated above, two are fundamentally and historically outstanding. They probably will remain effective as long as the principles of national sovereignty endure. They are (1) the *doctrine of equality of opportunity among nations* and the consequent persistent demand, on the part of "repressed" nations, for a "place in the sun"; (2) the *inherent racial and national ego of self-superiority* and the consequent urge to attain self-sufficiency and "deserved" recognition and leadership.

[1] This plan, as applied to agriculture, has been before Congress for several years and is strongly favored by certain groups.

Is labor a commodity subject to exchange?

Thus far we have avoided the discussion of the role of labor in our analysis of foreign exchange. In the informal language of industry, especially in these days of collective bargaining, labor is often spoken of as a "commodity" which is bargained for, bought and sold at a price. This figurative manner of speech is not in keeping with either the origin, the nature, or the function of labor. The frequent and loosely phrased reference to labor, and to a thing to be owned, bartered, used, and controlled as a *purely private possession*, is both inaccurate and unfortunate. We prefer here, as elsewhere in this volume, to retain labor in its fundamental economic character as a *natural factor of production* and not to disguise it as merchandise.

It is true that, where slavery obtains, labor is owned and some laborers are bought and sold at a price; but, in general, *workmen are not produced for the market to be sold at a profit.* Their existence is beyond the scope of planned production. They are *inherently productive*, and their services are hired and are paid for, not as commodities, but as productive power. Unlike slaves, modern workers are their own custodians and (regardless of the collective bargaining functions of labor unions) are "worthy of their hire." It seems most logical and reasonable, therefore, to consider labor, in its relation to industry and commerce, not as a commodity of trade, but as a *cost of production.*

Although workers are not produced under industrial controls for the potential market, a considerable proportion of workers in all industries is responsive to the lure of higher wages (real wages) in other regions or other industries. If, therefore, the exploitation of an undeveloped region or of a new project of industrial specialization results in low-cost production and profitable trade, self-seeking workers will tend to migrate to these regions or industries upon the assumption that profitable trade and industrial expansion will result in advanced wage scales. This assumption is correct and, in the absence of restraint, immigration will certainly take place if the cause of successful production and profitable marketing resides in some superior quality of natural resource, such as the iron ore "pools" of Minnesota or the irrigated lands and semi-tropical climate of the southwest. Similar results will follow the development of specialized industries the success of which is traceable to superior techno-

logical and managerial skill. For example, the motor industry of Detroit and the cinema industry of Hollywood.

Under such conditions, if the industry is one of increasing returns and resources are sufficiently elastic, the inflow of labor will not only enjoy a higher wage because of its productive power, but industry will expand, profits will increase, and prices of specialized products will probably decrease. This was the actual situation in practically all industries in the United States from the Civil War to 1900, with exception of occasional periods of depression. During this epoch the country experienced its most profitable regional and foreign trade, the greatest influx of immigrants, and the highest degree of mobility among the native population.

If no restrictions are placed upon industrial specialization in production, or upon the interregional exchange of goods, or upon the interregional migration of labor, a time will come when the most advantageous utilization of all natural resources, the most effective application of available labor, the maximum annual industrial output (quantitatively measured), and the maximum pecuniary return will have been achieved. The fact should be noted that *maximum pecuniary return* does not necessarily coincide with *maximum average of general welfare.* This is because labor, being of a personal nature, must be included in the calculation of average general welfare but may not share proportionately in pecuniary returns. However, the utilization of labor in an enterprise is very sensitive to the law of decreasing returns, as expressed in wages. Consequently, the migration of workers to prosperous fields of enterprise may be so great as to force relatively low-wage scales even though the profits of the enterprise continue to advance. This tendency of wages to lag behind prices and the failure of labor to share proportionately in the periodically high levels of profits presents one of the most serious problems of our economic system.

Symptoms of this condition became obvious when the rush of immigrant labor to this country, which followed the Civil War, retarded the advance of wages despite the prosperity of industry. One reason for the excessive immigration, it is probable, was the American tariff policy, which restricted the flow of European industrial products to this country and, thus, stimulated the migration of industrial labor from European to American shops

and also induced unemployed workers from abroad to locate upon the unoccupied lands of the western states.

The restriction of immigration.

During the years from 1880 to 1900, the movement of foreign labor into the United States became so rapid as to create concern for the wage scales, the continuity of employment, and the standard of living of American labor. In order that a reasonable share of the differential industrial advantages of the country should be conserved for native labor, and that the American standard of living should be safeguarded, a policy of restriction was gradually imposed upon immigration. This is now accepted as a permanent American policy.

Economic internationalism.

Sooner or later most industries, if their growth is continued, enter the zone of diminishing returns. Superior natural resources no longer remain undeveloped and some are observed to be on their way toward exhaustion. Markets approach saturation and wages cease to advance. The material rewards of industrial specialization and foreign trade tend to approach a permanent equilibrium between trading nations. Once firmly established, they will have become necessary to the maintenance of existing populations and standards of living. In this situation is revealed the essential economic interdependence of regions and nations. It is obvious that if a nation, for example, undertakes to remain aloof from international commerce it may soon realize the handicap of a skewed and restricted economic and social development. If a nation once established within an interdependent economic community of nations should withdraw therefrom, it risks a substantial decline in its material welfare and also invites the displeasure and, possibly, the collective unfriendliness of its former associates. These facts constitute the most effective incentive toward a rational adjustment of chaotic economic and political conditions in Europe today. They also afford the best available assurance of peace among the nations of tomorrow.

In the situation described above, which is the logical result of several centuries of unbroken social evolution in western Europe and America, one observes the point of departure between *economic internationalism*, and the *cosmopolitan* ideal of economic and social coalescence of nations. Superficially, it may appear

that the actual development of international co-ordination of industry and trade has, until recently, been in the direction of cosmopolitism. When one reviews the record of turmoil and conflict among nations, one might well declare that all political, economic, and social controls which now distinguish nationality should be dissolved. But there is sometimes a vast difference between what should be and what may be. Nations are not built upon economic policies and economic opportunity, although these are quite essential to national existence. Nations are primarily founded upon distinctions of race and racial psychology. They are also segregated by political and social philosophies. Religion, for example, very definitely forbids the coalescence of certain nations. There are also habits, traditions, and social standards which have become institutionalized and are very effective barriers to a successful cosmopolitan organization of society. Not least of these is the varying proclivity for reproduction among different national groups. The Malthusian doctrine is, by no means, the myth that some economists would make it appear to be.

TABLE I. — BIRTH RATE, DEATH RATE, AND EXCESS OF BIRTHS PER 1,000 INHABITANTS FOR FIFTEEN COUNTRIES. AVERAGES FOR 1921–25 AND 1931–35

COUNTRY	BIRTH RATE		DEATH RATE		EXCESS OF BIRTHS		POPULATION PER SQ. MILE, 1935[1]
	1921–25	1931–35	1921–25	1931–35	1921–25	1931–35	
1. Austria	22.2	14.4[a]	15.8	13.5	6.4	0.9	209
2. Belgium	20.4	17.1[a]	13.4	13.0	7.0	4.1	698.8
3. Chile	39.4	34.0	30.3	24.7	9.1	9.3	15.3
4. Czechoslovakia	27.1	19.6	16.1	13.7	11.0	5.9	271.7
5. Denmark	22.3	17.8	11.3	10.9	11.0	6.9	207.4
6. France	19.3	16.5	17.2	15.7	2.1	1.8	196.9
7. Germany	22.1	15.9[a]	13.3	11.0	8.8	4.9	360.7
8. India	32.7	34.3[a]	26.0	23.4	6.7	10.9	194.6
9. Italy	29.7	23.8	17.3	14.0	12.4	9.8	349.1
10. Japan (proper)	34.6	31.6[a]	21.8	18.1	12.8	13.5	433.3
11. Mexico	31.9[b]	42.3[a]	25.5	24.6	6.4	17.7	21.3
12. Norway	22.2	15.3	11.5	10.3	10.7	5.0	24.1
13. Sweden	19.1	14.1	12.1	11.6	7.0	2.5	35.6
14. Palestine	43.9[c]	44.6	23.4	20.9	20.5	23.7	100.0
15. United States[d]	22.5	17.3[c]	11.8	10.9	10.7	6.4	41.3[e]

[a] 1931–34. [b] 1922–25. [c] 1923–25. [d] For registered area only. [e] 1930.

The above table of comparative birth rates and density of population is clearly indicative of population pressure in certain

[1] *Statistical Yearbook of the League of Nations*, 1935–36. *The World Almanac*, 1936.

countries. It also reveals the "natural course" of the currents of migration and suggests definite reasons why, within the last generation, the ports of the United States have been practically closed to the surplus population of more prolific nations. It reveals also why, in our foreign trade arrangements, it is necessary to consider carefully the conditions under which the industrial products of the cheap labor of overpopulated countries are admitted to our markets in competition with home produced goods.

Interregional Trade of the United States

Domestic trade.

The exchange of goods in domestic commerce is a simple form of economic activity, but it is very difficult to measure and express in concrete terms of *annual volume of trade.* Statisticians supply us with fragmentary estimates which are useful for certain comparative purposes, but they have little value except when interpreted by one who is familiar with the technique of preparing such estimates and is aware of the limitations of their reliability.

In measuring the volume of trade, including countless transactions and thousands of commodities expressed in different units, how is the composite total to be expressed?

A frequently used measure of volume of trade, in particular, commodities or groups of commodities, is the total "dollar value" of all transactions of purchase and sale during a given period of time. This is useful as a basis of comparing the market value of trade year by year; but prices are constantly changing, and comparative market values, at best, will only approximate comparative quantities. Frequently, total market values of given products in successive years have no significant relation to total volumes. They may even be in inverse ratio. For example, the 857 million bushels wheat crop of 1930, sold at the farm for 515 million dollars, and the 932 million bushels harvest of 1931, brought only 413 million dollars. The price decreased more within the year than the actual volume increased. Which should be accepted as the "volume of the wheat trade" — the physical volume, or the market value, of the wheat?

Aside from the inherent difficulties of direct measurement of total trade or of domestic trade, it is practically quite impossible to secure detailed records of domestic trade.

For the foreign trade, fairly satisfactory records are available. The volume and appraised values of all exports and imports are carefully recorded at the customs houses. In recent years, because of concern for the security of our foreign markets, there has been need to determine the relative changes of the foreign and domestic trade. Several ingenious methods have been used, and a number of curious estimates have placed the average "volume" of foreign trade at from one-fiftieth to one-fifth of the volume of domestic trade.

The Bureau of Domestic and Foreign Commerce has calculated, as an indication of the relative importance of foreign and domestic trade, the ratio of total export trade values to the combined output values of agriculture, mining, and manufacturing, plus transport costs. The changing value of this ratio, year by year, does indicate the comparative trend of production for domestic markets and production for the foreign trade. From these estimates, it appears that during a period of over thirty years, the average annual value of exports amounted to about 10 per cent of the average total annual production value. In 1915, the ratio of exports to total production reached a maximum of 15.7 per cent, and, in 1923, it reached a low of 8.9 per cent. The figure for 1931 was 7.4 per cent, and the estimate for 1935 was 6.4 per cent.

Recent trends of foreign trade.

The tables presented below reveal the more important facts concerning the character and volume of the foreign trade of the United States during recent years. The reader should remember that bare statistical data are not always to be accepted as absolute or satisfactory comparative measures of the conditions and changes which they indicate. Furthermore, although the use of statistics generally reveals the measurable aspects of cause and effect, it does not afford an explanation of the intangible factors which are sometimes involved.

Table II shows the annual total gross values, by customs appraisal, of exports and imports for selected years, from 1900 to 1936, and the concurrent annual excess of exports which prevailed during the period.

The excess of the annual value of exports over the value of imports is known as a "favorable balance of trade." This annual excess of United States exports has prevailed, with very

TABLE II. — FOREIGN COMMERCE OF THE UNITED STATES

(In Millions of Dollars)

To facilitate comparison, values for 1934, 1935, and 1936 are reduced to equivalent in dollars of 1932.

YEARS	EXPORTS	IMPORTS	EXCESS OF EXPORTS
1900	1,394.5	849.9	+ 544.6
1910	1,744.9	1,556.9	+ 188.0
1920	8,228.0	5,278.5	+ 2,949.5
1925	4,910.0	4,227.0	+ 683.0
1928	5,129.0	4,091.0	+ 1,037.0
1930	3,843.0	3,061.0	+ 782.0
1932	1,611.0	1,323.0	+ 288.0
1934 [a]	1,275.7	984.5	+ 291.2
1935 [a]	1,352.5	1,197.7	+ 154.8
1936	1,448.7	1,429.0	+ 19.7

[a] In terms of Roosevelt dollars, the corresponding figures are:

1934	2,160.0	1,667.0	+ 493.0
1935	2,290.0	2,028.0	+ 262.0
1936	2,453.0	2,419.0	+ 34.3

few exceptions, since the Civil War. In the popular mind, this was long accepted as proof of fortunate conditions in the foreign trade. It actually indicated, however, that the United States was sending more merchandise abroad than was received in return. For the most part the "favorable balance" was required to liquidate dividends and interest annually payable to foreign investors in American resources and industries and as compensation for services rendered by foreign carrier and insurance agencies in the transport of American goods. In recent years, the favorable balance of trade, stimulated by loans to foreign purchasers of American goods, has resulted in an immense accumulation of uncollectible foreign debts. Another sad commentary upon the accumulation of foreign obligations to the United States, including favorable trade balances, is the recoil of the devaluation of the dollar which automatically resulted in writing down the value of foreign "dollar obligations" held in the United States to the extent of 40.94 per cent.[1] Although a relatively large volume of exports usually indicates a satisfactory position in the country's international trade, it must be assumed that the balance of exports is paid for, or properly credited on account, and that

[1] Public and private foreign capital issues offered in the United States in 1932, payable in dollars, was estimated to be $29,355,000, equivalent to 1,420,174 ounces of gold. This sum, payable in devalued dollars, is equivalent to only 838,428 ounces of gold.

ultimate settlement shall be made in terms of an unchanged unit of account.

In contrast with the abbreviated picture of the international business situation afforded by the bald record of exports and imports of goods, an examination of the *balance of international payments* which is discussed in a later chapter (page 851) is instructive.

The *specific commodities* which were exchanged in leading values in 1934 and 1935 are listed in Table II. It is observed that 75 per cent of total exports includes only ten products, while ten principal commodities comprise less than 48 per cent of our total imports. Among exports, cotton remains "king," by a margin of 50 per cent, although its position tends to decline.

Wheat and flour, which in former years occupied an advanced position among exports, had declined to twentieth place in 1935. The appearance of chemicals and related products among both exports and imports, in sixth and seventh places, respectively, is a curious fact. This is due, of course, to the wide diversification of this class of goods — from the nitrates of Chile to radium derivatives, for example.

The composition of foreign trade.

An examination of Table III reveals some rather significant changes in the character of both exports and imports in recent years. Most noteworthy is the relative decline in exports of foodstuffs and processed foods, and the compensating increase in the value of crude industrial materials and finished manufactures.

TABLE III.—LEADING EXPORTS AND IMPORTS OF THE UNITED STATES IN 1934 AND 1935

(In Millions of Dollars)

EXPORTS	1934	1935	IMPORTS	1934	1935
Cotton, raw	372.8	390.9	Coffee	133.2	136.9
Petroleum and its products	227.5	249.0	Cane sugar	117.6	133.5
Machinery	218.4	265.0	Crude rubber	101.6	119.1
Automobiles	190.2	227.9	Paper and paper manufactures	86.5	93.4
Tobacco, unmanufactured	125.1	134.0	Raw silk	71.8	95.8
Chemicals and related products	92.6	103.0	Paper base stocks	71.2	82.0
Iron and steel-mill products	88.7	88.4	Chemicals and related products	65.1	68.7
Fruit and nuts	74.2	94.0	Wines and spirits	49.1	41.2
Packing-house products	66.5	43.0	Tin	44.8	69.8
Coal and coke	56.9	52.0	Furs and fur manufactures	40.7	53.2
Total	1,512.9	1,646.3	Total	781.6	893.6
Total exports	2,160.0	2,290.0	Total imports	1,667.0	2,028.0

TABLE IV. — EXPORTS AND IMPORTS OF THE UNITED STATES BY GREAT COMMODITY CLASSES, SHOWN AS PERCENTAGES OF ANNUAL TOTALS FOR 1920, 1925, 1930, AND 1935

COMMODITY CLASS	DOMESTIC EXPORTS				IMPORTS FOR CONSUMPTION			
	1920	1925	1930	1935[a]	1920	1925	1930	1935[a]
Crude materials	22.9%	28.9%	22.6%	29.8%	33.8%	41.5%	32.5%	28.4%
Crude foodstuffs	11.4	6.5	5.5	2.6	10.9	11.7	13.1	15.7
Manufactured foodstuffs	13.7	12.7	9.4	6.7	23.5	10.3	9.7	15.5
Manufactures for further use in manufacture	11.7	13.5	13.3	17.2	15.2	17.7	19.9	20.6
Finished manufactures	39.3	37.6	49.2	43.5	16.6	18.8	24.8	19.8
Total in dollars (Millions)	$8,228	$4,910	$3,843	$1,355	$5,278	$4,227	$3,061	$1,216

[a] Values for 1935 are reduced to their equivalent in terms of the standard dollar in which records prior to 1933 are shown.

In respect of imports, the decline of crude industrial materials is noticeable, while the importing of crude foodstuffs has increased. Equally significant is the steady increase in requirements for partially manufactured goods from abroad, for further processing in the United States and, also, an increase in the importation of finished manufactured goods.

In interpreting a table of comparative values, such as that above, one should keep in mind the fact that irregular *prices* may be a more potent cause in determining the relative statistical position of some items than is the consideration of *quantity*.

The extent to which several industries are dependent upon the foreign markets for the disposal of their product is indicated by Table IV. The prominence of cotton as the leading product in this respect, with an average export of approximately 60 per cent of the annual product, has been the outstanding characteristic of southern agriculture for over a century. For this reason, the economic situation of the cotton districts and of almost the entire South has always been a precarious one. The possibility of a lost crop or a failing market is a perennial threat of disaster which frequently has been realized. The fact that the domestic demand for most of the commodities included in this list is relatively small emphasizes the dangerous position which they occupy in the market in case of either a decline in foreign demand or a sudden acceleration of output.

The origin and destination of foreign trade are indicated by Tables V and VI. It is extremely interesting, and perhaps portentous, to observe over the period of a generation, the gradual

TABLE V. — EXPORTS OF LEADING COMMODITIES IN RELATION TO PRODUCTION

COMMODITIES	PERCENTAGE EXPORTED			
	1914	1929	1934	1935
Copper, refined	54.8%	36.2%	66.0%	
Cotton [a]	62.6	54.8	58.3	49.8
Tobacco, leaf [b]	47.2	41.2	34.2	35.8
Agricultural implements and machinery	—	25.1	29.7	
Office appliances	23.6	30.2	27.0 [c]	
Refined mineral oil	37.9	19.6	11.0 [c]	
Automobiles	4.5	12.0	11.0	8.8
Industrial machinery	—	13.3	9.9 [c]	
Wheat [d]	19.7	17.9	5.1	4.3
Average exported	35.7%	27.8%	28.0%	

[a] Based on production figures and exports for the year ended July 31.
[b] Based on production figures for the preceding calendar year and exports for the year ended June 30.
[c] Data are for 1933.
[d] Exports include flour.

TABLE VI. — FOREIGN TRADE OF THE UNITED STATES BY GREAT TRADE REGIONS

(Per Cent of Total Annual Average)

REGIONS	EXPORTS						IMPORTS					
	1910 to 1914	1921 to 1925	1926 to 1930	1932	1934	1935	1910 to 1914	1921 to 1925	1926 to 1930	1932	1934	1935
North America	23.2%	24.4%	25.8%	22.7%	22.7%	21.5%	20.5%	26.4%	23.3%	25.6%	24.1%	27.0%
South America	5.6	6.8	9.4	6.0	7.6	9.9	12.2	12.2	13.5	15.2	13.8	15.4
Europe	62.3	52.7	46.8	48.7	44.5	45.3	49.5	30.4	30.0	29.4	29.6	27.4
Asia	5.6	11.3	12.0	18.2	18.8	16.9	15.3	27.3	29.6	27.4	29.6	28.4
Oceania	2.2	3.2	3.7	2.3	2.7	3.5	1.0	1.6	1.3	0.6	0.9	1.2
Africa	1.1	1.6	2.3	2.2	3.6	2.9	1.3	2.1	2.3	1.8	2.0	.6
Amount annual average (Million Dollars)	2,166	4,397	4,778	1,611	2,133	2,132	1,690	3,449	4,034	1,322	1,655	2,031

relative recession of the trade of the United States with European countries and a steady advance in contemporary trade with the Orient. Table V also presents evidence of a fairly stabilized trade between this country and its continental neighbors lying to the north and south.

The eleven countries to which over 60 per cent of the total value of our exports were shipped in 1935, and which in their turn supplied to us 53.5 per cent of our products from abroad, are listed in Table VI. The same eleven countries received 56.5 per cent, by value, of our exports, in 1920, and supplied to us 60 per cent of our total imports. However, their relative

TABLE VII. — UNITED STATES FOREIGN TRADE WITH ELEVEN LEADING COUNTRIES — 1920, 1929, 1935

(In Millions of Dollars)

COUNTRY	EXPORTS			IMPORTS		
	1920	1929	1935	1920	1929	1935
United Kingdom	1,825	848	433	514	330	155
Canada	972	948	323	612	503	286
Cuba	515	129	60	721	207	105
Japan	378	259	203	415	432	151
Italy	372	154	72	75	117	39
Germany	311	410	92	89	255	75
Belgium	283	115	58	47	74	40
Netherlands	246	128	48	95	84	41
Argentina	214	210	49	208	117	65
Mexico	208	134	66	179	118	42
Brazil	157	109	44	228	208	100
Total	5,481	3,444	1,448	3,183	2,445	1,099
Per cent	56.5	65.7	63.5	60.0	55.6	53.5

position, as respects their respective trade with the United States, was somewhat changed during the 15-year period. The United Kingdom yielded first place in combined exports and imports to Canada, Japan and Germany stepped over Cuba into the third and fourth positions, respectively, and Brazil advanced from the bottom of the list to sixth place.

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PART III

DISTRIBUTION

CHAPTER XX

THE GENERAL THEORY OF DISTRIBUTION

During the past century and a half the production of wealth has increased beyond all precedent, the chief factors contributing to this result being the factory system, the exploitation of vast natural resources and stores of mechanical energy (made possible only by modern methods of transport), and the notable progress achieved in science, research, and techniques. Yet poverty still exists, and its harsh features are thrown into sharper relief by contrast with the fact that the present production of wealth *per capita* is indisputably the highest that the world has ever known. Moreover, while the social discontent arising from inequalities in the distribution of wealth is far from being only a recent phenomenon, it is only in modern times that democracy has given it an adequate opportunity for formulated and articulate expression. A large share of the economic problems which are felt to press upon society today for solution relate directly or indirectly to the distribution of wealth.

Distribution among persons and among productive factors.

We have to discuss under the term "distribution" two different though related processes. The first and inclusive meaning of the term is the distribution of the wealth or income of society *among individuals and families;* in other words, the matter of individual fortunes, poverty, and wealth. The second kind of distribution is the apportionment of the product *to the different factors of production.* This is not a question of wealth versus poverty, but of wages versus interest, profits, and rent. In the latter problem the resultant facts are not so important as the reasons for the facts. We wish to know why interest, rent, and profits are paid; and to find out as much as possible about the economic forces which make them what they are, partly in order to reach some verdict about their fairness or necessity, and

partly in order to direct or control them with understanding and intelligence. For we must direct and control them, preferably not by political action, mainly indeed by individual action, but inevitably by that mixture of individual and group pressure which is inescapable in modern democratic society. Distribution as an analysis of the productive process links up in this way with distribution as a problem of poverty and of social equity.

We do not use the word "distribution" to mean the moving of goods from the place where they are produced to the place where they are consumed. When we speak of railways or merchants as "distributive agencies," we are using the term "distribution" in a sense very different from that of the technical economic term "distribution." Distribution as an economic term concerns the ownership, not the location, of goods.

Money incomes.

Since most men today are working for money incomes in specialized employments, distribution takes place through the process of price-making. Some (manufacturers, merchants, farmers) make money incomes by selling goods for more than it costs to produce them or to buy them from others, while others (laborers, salaried employees, professional men, capitalists, landowners) get money incomes by selling their services or by selling the use of their capital or land. In the first case, the money income takes the form of profits; in the second case, it is wages, interest, or rent.

A man's *real income* consists of the commodities and services that satisfy his wants; and the extent to which his money income can be transmuted into real income depends on the prices he pays for these things. He always has the option, of course, of investing part of his money income in production goods rather than in consumption goods, thus giving up part of his present real income for an anticipated larger future income. Since different men have to pay about the same prices for the same kinds of goods, a discussion of the factors determining money incomes becomes also a discussion of the principal factors determining real incomes.

It is important not to allow sympathies and feelings properly aroused by the prevalence of poverty to confuse our thinking about theories of wages, rent, interest, and profits. A reprehensible wage practice remains reprehensible even if wage earners

are very numerous and many of them poor. If profits are necessary, they are as necessary in coal mining as in manufacturing. The question of economic rent has often been a subject of passionate discussion instead of being the object of scientific investigation. One of the most curious traits encountered in economic thinking is the tendency to confuse abstract shares with personal types — profits with the profiteer, rent with the absentee landlord, wages with the poorer class of laborers.

One person may often receive more than one kind of share. The American farmer who owns his land, buildings, farm machinery, and livestock, and who does part of his own work, is at once entrepreneur, landlord, capitalist, and laborer; and his income is made up of different proportions of profits, rent, interest, and wages. The net income of a tenant farmer, utilizing only borrowed capital, and employing only hired labor, on the other hand, consists entirely of profits. The income received by any person depends primarily upon his efficiency and success as a wage earner or as an entrepreneur, or upon the amount and the income-yielding capacity of the capital and land which he owns. His ownership of capital and land may have come about through the thrifty husbanding of portions of his income in previous years, or possibly through gifts or inheritance.

Diminishing productivity.

To explain the payment for personal services is to explain wages; to explain the payment for the use of land and of capital goods is to explain rent and interest. Certain special and distinguishing characteristics enter into the determination of each of these three classes of payments. The conditions governing the supply of labor, for example, are very different from the conditions governing the supply of land. Yet there are some fundamental characteristics which are common to all three factors. The most important of these common characteristics is *diminishing productivity.*

This is essentially the same phenomenon described as "diminishing returns" in Chapter VII, seen from the standpoint of each factor of production. Some writers use the terms interchangeably, but in this book "diminishing productivity" is used in discussions of distribution while "diminishing returns" is used with particular reference to the increasing difficulties encountered in enlarging the total agricultural product if there is a pressure of

growing population. Diminishing productivity plays so large a part in determining the distributive shares and is so peculiarly subject to misinterpretation that the analysis of its operation is here given in some detail.

Assume that a certain farm is cultivated by a farmer who uses only his own labor, together with a small amount of capital goods in the form of draft animals and agricultural implements. Assume further that his land is devoted exclusively to the growing of one crop — corn, for instance. His money income will depend on the amount of corn he produces and the prices he gets for it. At given prices he can increase his income only by increasing his product.

But his product may be increased by any of a number of different methods. In the first place, he may hire a farm laborer to assist him. The two men, working together, will be able to get a larger product than one could alone. In some cases they may be able to get double, or even more than double, what the farmer could produce working alone. More often, perhaps, employing the second man will not double the total product. However, if the farmer employs a third, a fourth, or more men, he will sooner or later reach a point where he will find that employing the last man has not increased the product as much as it was increased by the second last laborer.

This point is called the point of *diminishing productivity*, for after it is reached it will be found that each additional laborer will increase the aggregate product by an amount less than the last previous laborer added to it. This is not because of any differences in the laborers, whom we assume to be of equal efficiency. It means simply that as the productive possibilities of the farm and its equipment of capital goods become more fully exploited through more careful tillage, it requires increasingly greater efforts to increase the aggregate product by a given amount. This is a fact of common observation, requiring no statistical proof, although agricultural experiment stations have compiled such records to the effect of different degrees of thoroughness of cultivation upon the yield of different crops.

The marginal product of labor.

One might imagine, at first thought, that after the point of diminishing productivity had been reached, it would not pay

the farmer to hire additional laborers. But the only important question is whether an additional laborer will "earn his wages," — that is, *whether the product he adds will sell for enough to cover his wages.* It will pay the farmer to extend his employment of labor up to the point where the adding of another laborer to the working force would increase the product by an amount too small to sell for enough to pay his wages, and where dropping a laborer from the working force would decrease the product by an amount at least sufficient to pay the wages of the laborer. If the farmer stops short of this point, he is not making all possible profits; if he goes beyond it, he is cutting down his profits by employing labor which does not "earn its wage."

The last laborer employed (not necessarily any particular laborer, nor the last in point of time, but merely any *one* laborer of the *total number employed*) is the *marginal laborer*, and the increase in the total product attributable to the marginal laborer (the part which would be lost if one less laborer were employed) is the *marginal product of labor.* If the farmer has estimated product and prices accurately, the money value of the marginal product of labor will be approximately equal to the wages of the marginal laborer. Or, since the laborers are supposed to be of equal efficiency, and hence to receive uniform wages, *wages and the marginal product of labor will tend to be equal.*

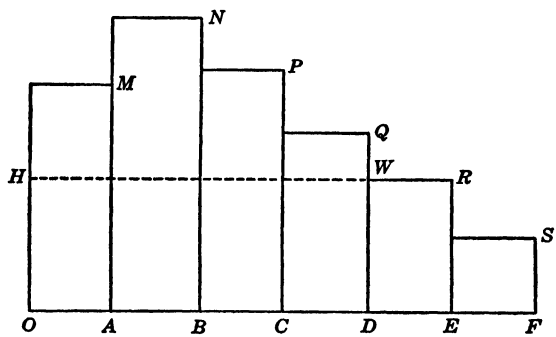


FIG. 1

The diagrams illustrate the principle of the diminishing productivity of labor as developed above. In Fig. 1 the first rectangle *OM* represents the amount of corn that the farmer could raise on his land if working alone, with his given equipment of capital goods. The second rectangle *AN* represents the product

added by employing another worker. Similarly, *BP*, *CQ*, *DR*, and *ES* represent respectively the additions to the product obtained by employing a third, fourth, fifth, and sixth laborer. If *DR* bushels of corn — the increment of product attributable to the fifth laborer — sell for about enough to pay the wages of one laborer, the farmer will refuse to employ the sixth laborer, while the employment of the fifth would be a matter of indifference. If the fifth laborer were employed, the proceeds of that part of the total product represented by the rectangle *OERH* would be used up in the payment of wages (including payment for the farmer's own work as a laborer), while the remainder represented by the small rectangles above the line *HW* would be the farmer's payment for the use of his land and capital, and for his management. Any surplus left after these demands are satisfied would go to the farmer as profits. If the conditions were as assumed, the *fifth laborer* or, rather, any one of the *five* laborers *would be the marginal laborer*, and the product represented by the rectangle *DR* would be the *marginal product of labor*.

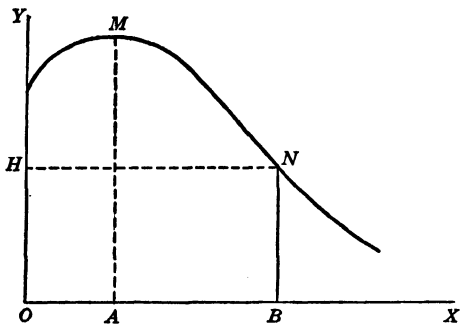


FIG. 2

If we were dealing with a very large undertaking, in which many laborers were employed, the successive rectangles representing the increments in the product attributed to the hypothetical addition of successive laborers could be conceived as indefinitely narrow, so that the diagram would take the form represented in Fig. 2, where the line *AM* is located at the point of diminishing productivity, and *BN* represents the marginal product of labor. In this case the rectangle *OBNH* represents the part of the total product which would just suffice to pay the wages of all the laborers employed.

The marginal products of capital and land.

Thus far we have assumed that the farmer is content to get along with his original amount of land and his original supply of capital goods, and to increase his product by means of added

units of labor. Other possibilities are also open to him. He might do without additional laborers, using instead an increased equipment of capital goods. By purchasing more draft animals, more labor-saving machinery, improved fertilizers, or possibly by installing drains or irrigation ditches, he may be able to raise considerably more corn than he could without such investments. But again he will find the possibility of increasing his product subject to the same limitations that would have prevailed had he simply increased his labor force. With a team of horses he will be able to accomplish more than he could with one horse; two teams of horses may still further increase the total product of the farm; a third would probably be of very little advantage, and a fourth team still less useful. So with investments of capital in other forms; diminishing productivity is a remorseless physical fact with which the farmer has to reckon.

The concrete form in which the problem presents itself to him is this: Will a further investment of money in any sort of production outlay repay me? Here the farmer has to make on the one hand the best possible estimate of the amount which the proposed outlay will add to his annual product, and of the probable selling value of the increased product. On the other hand, he has to estimate his increased annual expenses. These will include (1) the original cost of the additional equipment, divided into annual costs according to its probable durability (each year's cost being the depreciation and obsolescence attributable to that year's use); (2) the maintenance or upkeep (including such costs as operation and maintenance of machinery and work animals); and (3) the interest on the investment (what the farmer has to pay if he borrows the necessary funds from someone else, or the return for which he might have lent his money to someone else, if he uses his own funds). Guided by these estimates, the farmer will increase his outlay as long as the returns from the added product will more than cover his increased expenses. Beyond this point he could not wisely go. The last increment of capital goods — which approximately suffices to pay for itself — is the *marginal increment*, and the added product attributable to it is the *marginal product of capital goods*. The law of diminishing productivity holds for each kind of capital goods used by the farmer, and also the same is true for each kind of labor or each specific use of labor.

The diagrams portraying the operation of the law of the diminishing productivity of labor will serve as well to illustrate the diminishing productivity of capital goods. Assuming that the amount of land and the amount of labor to be utilized are definite in quantity, the successive rectangles in Fig. 1 represent the increase in the gross product attributable to each of successive increments of capital goods. Figure 2 represents the same conditions, if each increment of capital goods is assumed to be indefinitely small. If (in Fig. 2) *BN* represents the marginal product of capital goods, the whole return imputed to the investment in capital goods is represented by the rectangle *OBNH*. The area above the line *HN* represents the part of the product which is available for rent and wages, the farmer's profits being any surplus left after these demands are satisfied.

A third way of increasing his product is also open to the farmer. He may get along with his original equipment of capital goods and his own labor, and increase his product by utilizing more land. This procedure would mean a less intensive cultivation per acre of land: the use of labor and capital would have to be distributed more thinly over the larger acreage. This would result in a smaller product *per acre*, but would be warranted if the increase in the total annual product should sell for more than the annual cost of the additional acreage. (By the annual cost of additional land we mean the rent which the farmer has to pay for the land if he leases it, or the interest on the amount of the purchase price if he buys it.) In this case, the combination of more and more land with a fixed amount of labor and of capital goods will result in a smaller and smaller return per acre of land, and a point will be reached beyond which it will not pay the farmer to further expand his acreage. In other words, *the law of diminishing productivity* applies when land is considered as the variable factor.

The diagrams already used may be adapted to the illustration of the present hypothesis by assuming that equal areas, if successively combined with a given amount of labor and capital goods, would yield increments of product as represented by the successive rectangles in Fig. 1, or by the curve in Fig. 2. It is assumed for the sake of simplicity in the illustration that the different acres of land available for the farmer's use are of equal fertility.

The actual operation of diminishing productivity.

It has been assumed thus far that the farmer has to deal with a fixed quantity of two of the three factors in production, but that he can increase his use of the third factor up to the point of maximum profits. Assuming in turn that each of the three factors in production was the variable one, in each case the principle was the same — the most advantageous adjustment was reached when the product added by the last increment of the variable factor would sell for just enough[1] to cover the increased expense.

The farmer is free to increase his product by increasing his utilization, not only of any one, but of any two, or of all three factors of production. He may, for example, purchase more draft animals and more machinery, employ more labor, and at the same time acquire more land. To a certain extent the use of one factor may lessen the need for another (as in the case of labor-saving machinery and labor). More often, however, the reverse is true. The acquisition of machinery may make it necessary to use more horses, while the acquisition of more land will often make profitable the use of more labor as well as of more capital — a fact which is itself implied in the law of diminishing productivity. Although the profitable employment of labor, capital goods, and land may thus be increased simultaneously, the significance of the law of diminishing productivity is not thereby diminished. The farmer, in deciding upon the purchase of a particular kind of capital good, has to take into account his present and, to some extent, even his probable future supply of other kinds of capital goods, as well as of land and labor, before he can form a judgment as to the amount which the use of the particular capital good will add to his annual product. Moreover, he has to choose between additional investments in labor as against additional investments in land, or additional investments in different kinds of capital goods. But his effort to get maximum profits will lead him to make those investments in that proportion which promises to result in the greatest additions to his product. The result of this will be normally that each factor will be utilized in production up to a marginal point — the point where further utilization would add a product whose sale price would be less than the increased expenses for the last unit of outlay.

[1] Whether this last unit, which just pays for itself, will be added, is a matter of indifference. The margin is sometimes called the "margin of indifference."

Not only in agriculture is the law of diminishing productivity fundamental in determining the proportions in which the factors of production are combined. Every manufacturer has the option of using either relatively more or less machinery and relatively less or more labor in order to produce a certain quantity of goods. He may also have to decide between building a six-story factory covering an acre of ground, and a one-story factory covering six acres of ground — a problem which is paralleled by the farmer's problem of deciding between the cultivation of a relatively large acreage and the more intensive cultivation of a smaller acreage. It does not pay to erect twenty-story business buildings in small towns or one-story structures in the heart of a great city. The entrepreneur in every kind of undertaking has to decide as to the advisability of a particular investment in land, capital goods, or labor, with reference to the fundamental question, "Will it pay?" Any such investment is determined by balancing the cost of the unit of land, labor, or capital good against the selling value of the quantity it will add to the entrepreneur's total product of commodities or services.

In order to achieve maximum profits, each entrepreneur will endeavor, so far as is practicable, to apportion his use of different classes of productive agents so that the value of the increment of product attributable to the marginal unit of each class will about equal its expense.

In any business undertaking, the one thing always given or fixed (at any one time) is the general object of the undertaking, the productive or acquisitive plan of the entrepreneur. In carrying out his plans, in securing a product and a market for it, the entrepreneur has to utilize productive agents. In combining and applying them to his general profit-seeking plan, he encounters diminishing productivity, and attempts to push each kind of expenditure up to the marginal point. If successful, he will secure a surplus over and above his aggregate expenses. That is, his total product will more than cover the specific products that may be imputed to the various productive agents he uses.

The relation of marginal products to distributive shares.

The significance of the principle of diminishing productivity in relation to the distribution of wealth now becomes apparent. If the laborers in a given employment receive equal wages, their

wages will tend to equal the marginal product of labor in that employment. The expense incurred by the entrepreneur for any unit of a certain kind of capital goods will tend to equal the value of the marginal product of that kind of capital goods. The rent which the farmer will pay for an acre of land will tend to equal the value of the marginal product of land of that quality. To the extent that competition works freely, different entrepreneurs in the same market will have to pay the same wages for the same kind of labor, the same price for the same kind of capital goods, and the same rent for the same kind of land; and they will get the same prices for the same kinds of products. Moreover, *any one unit* of the aggregate amount of a productive agent of any kind employed at a given time may be deemed to be the marginal unit. Therefore, the money remuneration of each unit of the agents of production tends to equal the selling value of the amount of product *dependent upon* the use of that unit.

It is not necessary to the validity of the marginal productivity theory of distribution that in any particular undertaking at a given time the proportions in which the factors of production are actually combined be adjusted with the nicety which the theory seems to imply. The amount of land which the farmer holds at any time is apt to be fixed by his estimate of his future rather than of his present production, while custom, pride of ownership, and the hope of gain through an increase in land values also have their influence. So also the manufacturer builds his factory for the future, and may even equip it with a larger complement of some kinds of machines (such as boilers and engines) than present requirements justify. On the other hand, a sudden and probably temporary increase in demand for a product will be met by the employment of more labor (even at the high rate paid for overtime or night work) rather than by the installation of more labor-saving machinery, even though the latter might be more economical in the long run. And many other market factors obscure or temporarily offset the influence of marginal productivity, especially those which hamper freedom of competition and mobility of the factors of production, or which arise from errors and practical difficulties in estimation on the part of entrepreneurs. However, in the long run, the remuneration and utilization of productive factors appears to conform to the theory as outlined above.

Marginal productivity and the prices of production goods.

The reader who has grasped the concept of marginal utility will find that a recognition of some similarities in the roles which marginal utility and marginal productivity play in the price process will help him to comprehend the significance of the latter concept. Just as we cannot speak of the utility of a commodity in the abstract, but only of the utility of particular concrete units of a commodity, so we cannot speak of the productivity of land, labor, or capital goods in general, but only of the productivity of particular concrete units of land, labor, and capital goods. The consumer is getting the maximum of satisfaction of his wants when the final dollar spent for one commodity satisfies just as intense wants as the final dollar spent for any other commodity, and he tends to apportion his expenditures accordingly. The entrepreneur is not making maximum gains if his final expenditure for any kind of productive agent adds more or less to his product than his final expenditure (of equal amount) for any other productive agent, and he tends to apportion his employment of land and of different classes of labor and capital goods accordingly.

The statement that the prices paid for the use of land, labor, and capital goods tend to equal the value of their marginal products is no more a complete explanation of the values put upon their services than the principle of marginal utility is a complete explanation of the prices paid for consumption goods. In fact, marginal productivity itself depends partially upon the prices which the individual entrepreneur has to pay for the services of the factors of production. The prices of productive services are like the prices of vendible commodities in that each buyer (entrepreneur) and each seller has to buy and sell at prices which, being established by the aggregate demand and supply of the market, are beyond his own control. Yet this aggregate demand and supply is the net result of all the decisions made by individual buyers and sellers with respect to the amounts which they will buy or sell at one price or another.

The demand for the use of land, labor, and capital goods is ultimately a demand for their final products — the goods that satisfy human wants. The entrepreneur's task is to anticipate and meet this demand — a problem which assumes the concrete form of producing goods that will sell for more than the expense of production. On the one hand, he has to estimate the quantities

he can sell at certain prices; on the other hand, he has to calculate the quantities which various units of land, labor, and capital goods will contribute to his product, together with the prices (rent, wages, cost of capital goods, and interest) that he has to pay for these units. Through his mediation the demand of society for want-satisfying goods becomes a demand for the services of certain quantities of land, labor, and capital, to be combined by him in certain proportions. The skill with which this function is performed by entrepreneurs in the aggregate has an important bearing upon the relative degree of attainment of proper balance between the factors of production. The entrepreneur's guiding principle in his transformation of the community's demand for the products of land, labor, and capital into his own demand for the services of these factors of production is the principle of marginal productivity. The wages, rent, and interest that are actually paid for the services of the factors are the resultants of the demand of entrepreneurs on the one hand, and of the supply of these factors on the other hand. The forces determining these prices are focused at the margin. The principle of marginal productivity is thus an illuminating way of *stating the problem* of the distribution of wealth, rather than a *solution* of it. Just how supply and demand operate in the case of each factor in production will be considered in later chapters.

The meaning of "productivity."

It is necessary to define clearly the technical meaning of productivity both to proper appreciation of the importance of marginal productivity and to avoid exaggerating its importance. Productivity is not a physical phenomenon or force such as electricity or steam. It is an intangible quality which is imputed to the factors of production much as marginal utility is imputed to economic goods. Productivity as an economic determinant exists chiefly in the mind of the entrepreneur, but it is none the less real and it controls the remuneration or price which the factor of production will receive in actual use.

The distinction between physical and imputed or marginal productivity may be illustrated by reference to *free production* goods furnished by Nature. The oceans and lakes provide free pathways for commerce; natural forces of all kinds are freely utilized by men in the work of production. But we do not call

these things productive, *because no part of the annual product depends on the utilizing of any particular unit of them.* In a purely technical sense the wind is not productive, but windmills are. In order to utilize the ocean we have to invest money in vessels and docks. We impute productivity to these things because they will not be furnished unless it is estimated that they will yield a remunerative income, and because the annual product will be reduced if they are not furnished.

Somewhat analogous to these "free productive goods" is society's fund of accumulated knowledge of productive methods, — the heritage of centuries of economic evolution. This accumulated industrial experience is an infinitely more precious possession than the existing store of productive goods. Compare the productive possibilities of a community of men possessing this knowledge, but forced to begin work absolutely without a ready-made stock of capital goods, with those of a tribe of savages suddenly and miraculously equipped with all of the productive appliances of modern civilization. Yet this vast fund of productive knowledge, so far as it is common property, is not thought of as "productive." The social dividend or the total annual income of society is continually being increased as a result of the discovery of new natural forces, or new ways of harnassing and utilizing natural forces. Secrecy or government patents make it possible for those who first introduce these new methods of production to reap an income from the temporary advantage it gives them as producers. For the time being these new methods themselves have to be regarded as "productive," although they contribute much more to the increase of the social dividend after they have become matters of common knowledge and use, and hence have ceased to be called "productive." Disinterested scientists, especially those in the employment of the government or of universities, have often freely given the results of their research to the world, thereby swelling the social dividend, but not reaping for themselves the pecuniary reward which goes to those who patent their improvements and thereby render them "productive." Many of the world's greatest advances in the technique of production have been made possible only by the patient researches of investigators in the "unproductive" field of pure science, working solely for love of the work, and without hope of pecuniary reward.

We impute productivity only to goods or services which are the

objects of property rights or of analogous rights of control, — such as a man's power to dispose of his own labor. We harness natural forces for the work of production, but we impute productivity only to the harness. We continually learn better and better methods of doing our productive work, but we impute productivity only to the expenses involved in utilizing these methods, — not to the methods themselves. *Productivity implies merely a relation of dependency between the amount of the product and the use of a particular unit of one of the agents in production.*

It is important that the reader should see the truth in the statement that the laborer, the landlord, and the capitalist get paid in proportion to their respective products. It is equally important that he should see clearly that there are definite limitations to the meaning and significance of the statement. In particular, the statement that rewards tend to equal products has no ethical significance and should not be interpreted as a justification of the present economic order. There are many reasons for this conclusion. (1) The marginal product of the laborer, for instance, depends as much or more upon the technical efficiency of the other factors as it does upon the skill and industry of the laborer himself. Working with first-class machinery the marginal laborer might be able to add $2X$ units to the previous product, but working with obsolete machinery he might be only able to add X units. The powerful textile unions of Great Britain have for years insisted that the best and latest machinery be employed for the very reason that the marginal productivity of labor depends upon the technical efficiency of the entrepreneur and the capital goods employed as well as upon the efficiency of the laborer himself.

(2) The doctrine that rewards tend to equal products does not mean that each factor earns the share which it receives or that the owners of the factors receive the shares earned by them. To state that the rent of an acre of land tends to equal the value of its product is not to say that a particular landowner has "earned his income." He may have inherited the land or acquired it by fraud. Similarly, a laborer may or may not receive a money wage equal to his imputed contribution to the product. (3) The efficiency of the individual laborer is one of the things determining his productivity. His efficiency may depend largely upon the opportunity to "make the most of himself." But opportunity

depends largely upon environment and this in turn is to a large extent amenable to social control. (4) The doctrine is only a statement of a normal tendency. It does not, properly understood, conflict with the fact that such things as custom and other forms of economic friction and inertia, the higgling of the market, the conscious efforts of social classes to better their condition, imperfections in the monetary system, short-sighted selfishness on the one hand, altruism on the other, as well as the conscious social control expressed in labor legislation, usury laws, and the like, all have important effects upon the incomes actually received by those who furnish labor, capital, and land for the work of production.

Marginal productivity and the entrepreneur.

The doctrine of marginal productivity applies to the entrepreneur in so far as he provides land, capital, or labor. Indeed the doctrine depends, perhaps to a larger extent than is usually thought, upon the idea of the "exhaustibility" of the entrepreneur, that is to say, his limited power to manage larger and larger business units. After a certain point is reached, the marginal productivity of the entrepreneur as a captain of industry begins to decline, just as the marginal productivity of the land and capital goods which he supplies begins to decline if worked too intensively.

Social aspects of diminishing productivity.

Perhaps the most important aspect of the productivity principle is its emphasis upon the interdependence of the various distributive shares. The marginal productivity of each factor is intimately dependent upon the technical efficiency and upon the abundance or scarcity of the other factors. This applies particularly to the real, as distinguished from the money, income of each factor.

If the number of laborers within the boundaries of a nation is increased by immigration, without a corresponding increase in capital or in the amount of land available for use, the result will be an increase in the total amount of goods produced, which means an increase in the amount of wealth produced per unit of land and capital, but (on account of the operation of the law of diminishing productivity) a decreased amount per laborer; a higher marginal product for land and capital, and a lower marginal product for labor; consequently, higher rent and higher interest,

but lower wages. If the supply of capital within a country is increased, while labor and land remain constant, the result will be higher wages and higher rents, but a smaller remuneration for capital.

In a real sense the same laborer is more productive in a country where land is relatively plentiful than in a country where land is relatively scarce. A laborer may gain no technical efficiency by migrating from Europe to America, but the increment of product attributable to his work is likely to be considerably larger in the United States than it was in Europe. Here he really achieves a larger product and earns a larger wage. The migration of labor and capital from one region to another, or from one country to another, is guided by the endeavors of capitalists and laborers to get the maximum remuneration.

In a prosperous country the supply of labor and the supply of capital are likely to increase simultaneously, though not necessarily with equal rapidity, while more land is at the same time being made available through improvements in transport. In general, the law of diminishing productivity will necessitate a continual increase in the proportion of the product set aside for the remuneration of each unit of the most slowly increasing factor in production; while, of the other two factors, the one that increases more rapidly will receive, per unit, a relatively smaller and smaller proportion of the value of the total product.

Just as labor secures a larger product where land is relatively plentiful (and where the supply of capital is adequate), so land of a given grade produces more *per acre* in a densely populated country, for the reason that it pays to cultivate it more intensively, — to use relatively more labor and capital and relatively less land. On the farms of many European countries much more wheat is produced per acre than on American farms. This does not mean that American agriculture is comparatively inefficient, for on American farms the product *per man* is much larger than in Europe.

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CHAPTER XXI

THE WAGES OF LABOR

Wages are the remuneration received for the services of labor. Under "labor" we include all kinds of personal services for which payment is made. Thus professional men and salaried employees are wage earners, though in common usage the term is restricted to manual laborers working for daily or weekly payments. There is a "laboring class," marked off by lines that are fairly distinct, and including the great body of day laborers, factory hands, agricultural laborers, men in various trades requiring various degrees of intelligence and skill, employees in minor positions in business and mercantile establishments, and the like. Some of the most important and pressing of present-day economic problems — the variety of things that, taken together, make up the "labor problem" — relate to the economic position of this class. It is important, therefore, to ascertain the rules that determine its share in the national dividend. In the discussion of wages we have in mind primarily the income of the "laboring class," although most of the principles that will be developed apply just as accurately to other incomes that may be classed as wages.

Wages as the price of labor.

The definition of wages already given suggests at once the most important fact about them: they are the prices paid for particular kinds of services, and therefore fall under the general laws of supply and demand. So far as the wages of any kind of labor are concerned, we may say, as we did of the prices of commodities, that they will tend to be fixed at the point where the supply of that kind of labor and the demand for it are in equilibrium. But, as was found in the discussion of the prices of commodities, this simple statement does not take us very far into the analysis of the problem. We want to know why the supply of labor and the demand for it are what they are. We shall find also that the

factors governing the supply and demand of labor are in some respects very different from those governing the supply of and demand for commodities.

We must also consider the contribution which labor makes to production. How can it be measured? How can we distinguish it from the part of the total product attributable to land and capital? We cannot say that the product of labor is to be measured by the difference between the total product produced by the co-operation of labor, land, and capital and the product which would be produced by land and capital working alone; for this last of course would be zero.

Marginal productivity may be considered a determinant of labor's share in the total product, especially in the sense of fixing a maximum limit to its share. Although it is extremely difficult in any given case to allocate a specific physical or pecuniary evaluation upon labor's marginal productivity, for theoretical purposes we may consider it to be that share of the final aggregate product which is added by the employment of the marginal worker, or which would be lost by the discharge of one of the existing force employed. A careful entrepreneur will seldom pay wages equivalent to a larger share than that so fixed, because to do so would mean diminished profits, possible losses, or even ruin for himself.

The minimum limit of wages appears to be fixed by the subsistence income necessary to maintain the labor force at the level of numbers, efficiency, and morale required by the productive system. The wages actually paid in money, and hence the real wages and the share in the total product, will ordinarily fluctuate between these limits in accordance with the relative strength in bargaining power of the laborer and the entrepreneur, a factor which varies with the business cycle, with location and environment, and with many other circumstances.

It cannot be concluded that the marginal productivity theory of wages or production has been confirmed statistically. Its statistical basis is highly defective in parts; and it may never be possible to test the theory adequately by statistics. In the final analysis its chief basis is found in business competition. If entrepreneurs wish to make money, as they do, and if they compete for the services of efficient laborers, as they do, then how is it possible that wages shall do other than approximate the present worth of the imputed marginal product of labor? If wages are

more than that, over a period of years, then entrepreneurs must lose money in the long run. If wages are less, then entrepreneurs must normally overlook a recurrent opportunity to make more profits by employing additional labor and expanding their business.

The demand for labor.

The demand for labor is essentially a demand for the *products* of labor; a man's purchased effort commands a price, not on its own account, but rather because it aids in or is necessary for the production of articles or services for the satisfaction of wants. Effort which is expended upon useless projects for which there is no effective demand contributes nothing to the social product and deserves no reward — it must be guided and confined to the production of new utilities.

Accordingly, the demand for labor mainly appears in the form of wages offered by entrepreneurs for services of workers, to be rendered under their direction. More specifically, since there is no demand for the "product of labor in general," the demand of entrepreneurs is a demand for concrete products which labor can yield for their disposal.

Furthermore, in the case of labor as in the case of commodities, the term "demand" must not be given a vague and loose construction. The "demand for commodities" refers to specific quantities which will be taken at given prices on a given market; similarly, "demand for labor" refers to specific numbers and types of workers who will be employed by certain entrepreneurs at given times and at stated wages.

In a given occupation of a particular time, wages might be fixed at any one of a large number of different possible points. The higher the wage, the smaller will be the number of laborers that an entrepreneur can afford to employ. (1) Higher wages mean higher expenses of production, and consequently higher prices will have to be charged for the product — a fact which will reduce the quantity of the product that can be sold on the market, and consequently reduce the demand for labor. (2) Higher wages will compel entrepreneurs to economize in the use of labor, and to use relatively more land and capital, according to the principles which have been explained in the discussion of diminishing productivity. The demand for any particular kind of labor is

thus influenced by variations (1) in the demand for the products of that particular kind of labor, and (2) in the proportion of the product attributable to labor rather than to land and capital.

Machinery and the demand for labor.

The *elasticity* of demand for any kind of labor — the *extent* to which variations in wages will affect the quantity of labor utilized — is a complex function, being affected not only by the elasticity of demand for the particular products produced by this kind of labor, but also by the readiness with which more capital or more land, or both, can be substituted for labor, as labor becomes higher-priced. In the printing industry, for example, a rise in wages would make it profitable for employing printers to use more labor-saving machinery, such as typesetting machines, automatic press feeders, and the like. The higher the wages of agricultural laborers, the more profitable will be the more extensive, as contrasted with the more intensive, uses of land. On the other hand, there are many trades, such as plumbing, where machinery cannot easily be substituted for hand labor, in which the only elastic element in the demand for labor lies in the elasticity of the demand for its products.

Another problem of great social importance is the way in which the demand for labor is affected by new inventions and by the introduction of new machine processes. Laborers themselves have usually viewed such innovations with hostility. When machinery first began to be used extensively in the woolen industry in England, their opposition was expressed in riots in which the new machines were destroyed, as well as in "proposals to impose legislative restrictions on the use of machines, so as to bring them to a level with hand work, and prevent them from doing the work more quickly or more cheaply than it could be done by hand." [1] Laborers generally still view the introduction of labor-saving machinery as economically injurious to themselves. It is sometimes held that this attitude on the part of laborers is short-sighted, since the inevitable result of machine production is to cheapen the prices of products and thus to lower the cost of *real* living, the net result being an increase in wages of labor in the aggregate.

[1] Cunningham and McArthur, *English Industrial History*, The Macmillan Co., New York, 1895, p. 226.

This view emphasizes an important truth, yet it misses the real point of the laborers' grievance. Although the first result of improved methods of production is often larger profits to those who introduce them (especially if the new methods are protected by patents), their benefits are ultimately diffused throughout society at large in the form of fuller and better satisfaction of wants; and wage earners, as members of society, share in these general advantages. But hardship to individual laborers is often an *immediate result* of the introduction of labor-saving machinery. Especially is this true in the case of skilled workmen in highly specialized employments, who find themselves suddenly deprived of the advantages of their skill, painfully acquired after long years of apprenticeship. To expect that such men will feel that they are compensated by the advantages ultimately accruing to laborers as a class, is to ask too much of the altruistic elements in human nature. Workmen have learned, however, from the experience of the past century and a half, that the introduction of machinery is inevitable, and in the better-organized trades they are in many cases pursuing the wiser course of trying to regulate the introduction of new kinds of labor-saving machinery in such a way as to diminish the hardships inflicted on individuals. Thus, when the linotype machine began to displace hand compositors in the printing trade, the typographical union was able to secure the retention of many hand compositors as linotype operators, together with a reduction in the length of the working day.

The effect of the introduction of machinery upon the demand for labor varies in different industries, the most important variable factor being the *elasticity* of the demand for the products of the particular trade affected. In the case of the linotype, the smaller cost of composition made it possible for newspapers greatly to increase the amount of their reading matter at the same or at a lower price, so that the reduction in the number of employees after the transition period was small compared with what might have been expected. The introduction of machine methods into the English textile industry during the period of the Industrial Revolution also furnishes an instructive example. The change in the methods of manufacturing cotton cloth came just as the invention of the cotton gin had greatly increased and cheapened the supply of raw material. This, coupled with the reduction

in manufacturing costs due to the introduction of the new machinery, so cheapened cotton cloth that its use was largely increased. In fact, many more persons were employed in spinning and weaving cotton soon after the Industrial Revolution than immediately before it. In the woolen industry, however, there was no such immediate increase in the sale of the product, so that many workers were displaced and had to seek occupations where their specialized skill was of no value. Especially when the occupation affected is a highly specialized but relatively unimportant one in a series of processes comprised in the manufacture of a product, the wage-earning power of the displaced laborers is likely to be seriously diminished.

The supply of labor.

In considering the nature of the supply of labor, differences between the way in which wages are determined and the way in which prices of commodities are determined become most noticeable.

In the first place, in the case of labor there cannot be much difference between the actual supply and the potential supply. Labor is the most perishable of commodities: the number of working days in a man's life is limited, and those that are not sold are irrevocably gone. The laborer has some power in the way of holding out for higher wages, but even this power is limited rather narrowly by the absolute necessity of making a livelihood. In the long run, small wages are better than none. The sale of labor is therefore often a *forced* sale.

In the second place, the fact that labor is inseparable from the person of the laborer has important results. When the laborer enters into an agreement to work for wages, he not only sells his labor, but he gives up a certain amount of control over his own life; he agrees to live and work under conditions — often unpleasant — set for him by others; he accepts, in short, all the environment of his task, as well as the task of itself.

Connected with this fact is a third difference — the relative immobility of labor. Commodities may usually be sent to the market where they will command the best price, but the laborer is restrained by family ties, patriotism, differences in language, customs, religion, ignorance, and the like. The result is that variations in wages between different countries or different local-

ities in the same country are much greater than similar variations in commodity prices.

The relation of the structure of the population to the supply of labor. It is often assumed that the supply of labor in different countries and localities depends primarily upon the numbers of the population. We must also note that the *structure* of the population is variable and affects the supply of labor. For instance, the relative proportions of the sexes in the population have an important bearing on the supply of labor. The increasing proportion of women entering into the labor market has become noteworthy in recent years. In 1870 only one woman in ten was "gainfully employed"; in 1930, one in every five was so engaged, and the increase is expected to continue. In the same period, the proportion of male workers to total male population also increased, but at a slower rate — from 55 to 61 per hundred.

The age distribution of the population also influences the supply of labor. If we assume roughly that the persons from 20 to 60 years of age represent the "productive age group," we find that their number has increased in proportion to other age groups, from 45 per cent in 1870 to 53 per cent in 1930. A larger proportion of the population of the United States is between these ages than in the case in most European countries — again because of the large number of foreign-born adults in our population. (In most European countries a larger proportion of the population is of "productive age" than is true of the native population of the United States.) In considering the effect of these natural groupings of the population upon the supply of labor, we have also to take account of differences in the nature of industries, in national or local customs, and in the presence or absence of legal restrictions, — all of which affect the number of women and children which may be included in the available supply of labor. It has been suggested that the frequent holidays in the Latin countries of Europe are an appreciable obstacle to the industrial development of those countries, for they materially diminish the real supply of labor. In this country since the World War, the whole labor situation and the volume of unemployment in particular have been appreciably affected by an unusual increase in the number of persons attending schools of various kinds. In 1930, about 23 per cent, or nearly 28 millions were in this group.

The supply of labor is not, however, merely a matter of the number of available laborers. The physical strength and vigor, industry, intelligence, ingenuity, and moral qualities of the laboring population determine the amount and kinds of work they can do. These things vary greatly between different races and between different individuals of the same race. They are not wholly determined by heredity, for they can be influenced greatly by the physical and social environment. So far as high wages mean more and better food and improve the other conditions of living, they tend to increase physical and mental efficiency and thus to increase the quantity and better the quality of labor that can be drawn from a given population. Public education and public insistence upon pure foods, upon hygienic conditions in homes and in factories, and upon opportunities for wholesome recreation tend also to increase the efficiency of labor.

The relation of the growth of the population to the supply of labor.

Just as the potential supply of commodities at any given time is determined largely by past conditions, so the potential supply of labor at any given time is to a very large extent predetermined. Subject to the limitations which have been mentioned above, the supply of labor is a matter of the numbers of the population, and the factors affecting the growth of the population are, from the long-time point of view, the most important things determining the supply of labor.

Most of the discussion of these factors has centered around the *Malthusian theory of population* — the doctrine that population tends to increase faster than the food supply — and is only held back by the actual pressure of famine and disease (arising from an insufficient food supply), or by the prudential motives which restrain men from undertaking the responsibility of marrying and raising families upon incomes insufficient to provide the necessities of life. Just what the first part of this doctrine means can be made clear by referring to the conditions in a country like India, where the population presses so closely upon the food supply that any considerable crop failure is sure to result in famine and starvation. Every increase in the food supply of India is followed there by an increase in the birth rate and a decrease in the death rate; every diminution in the food supply is followed by a decrease in the birth rate and an increase in the death rate.

However, in the United States, Canada, England, or any other country possessing Western civilization, we notice many things that do not seem to harmonize with the Malthusian theory. For example, the United States now has an agricultural problem arising from a *surplus of food products*, a surplus which has depressed the price of the farmer's produce and given rise to a great deal of discontent on the part of the agriculturalists. In England the farmer is not much better off, for the importation of wheat and other staple food commodities forces him to sell his home-grown produce at prices hardly sufficient to allow reasonable profits. Therefore, most economists have discredited Malthus' theory.

The theory harmonized better with conditions in Europe at the end of the eighteenth century. As far back as 1630, England was thought to be overpopulated; overcrowding at home being one of the reasons commonly given for the policy of colonization undertaken at that time. Yet the best estimates indicate that England did not then have more than 5,500,000 inhabitants. A hundred years later, despite the growth of industry and of foreign and domestic trade, as well as some important improvements in agricultural methods, the population had increased to only about 6,200,000. In 1761, on the eve of the Industrial Revolution, the population is estimated to have been about 6,700,000.[1] By 1831, when the factory system was thoroughly established (although England was still trying to raise most of her own food supply), the population had more than doubled, amounting to about 15,000,000. Since that time England has developed her manufacturing and commercial interests, but has imported a larger and larger proportion of her food supply and raw materials from newer countries, where land is cheaper. The 1931 census of England and Wales showed a population of 40,000,000. There is no explanation of this remarkable growth in the population of a country which was "overcrowded" in 1630, other than that the opening up of new countries and improvements in transport have enormously increased the world's supply of food products and raw materials — a considerable portion of which England has been able to get for herself through the development of those commercial and manufacturing activities in which her early start, her situation, her coal and iron mines, and her own necessities, have given her pre-eminence.

[1] For these estimates, see *Census of Great Britain*, 1850, Vol. II.

The total population of all Europe in 1760 was probably not over 130,000,000. In 1930, despite the losses inflicted by the World War, it was about 550,000,000, some 300,000,000 of this increase having taken place since 1820, and about 250,000,000 since 1872. Account must also be taken of about 150,000,000 persons of European origin or descent living outside of Europe. Moreover, wherever this European expansion has carried Western civilization and industrial methods, the numbers of the native population have more often increased than decreased.[1] Such, for example, is the case in Mexico, South America, the Philippines, Java, India, and Egypt. For at least a hundred and fifty years before the opening of Japan to Western civilization its population had remained nearly stationary. Since 1871 it has increased from 33,000,000 to approximately 66,000,000 in 1933. The probability that this great increase in that part of the world's population which has adopted modern industrial methods has come about partly by a decrease in the death rate rather than by an increase in the birth rate does not alter the significance of the fact that these improved methods of production and transport have operated like the release of a spring,[2] allowing the natural tendency toward the increase of the population to work itself out more fully.

Account must be taken, however, of the remarkable decline of the birth rate in western nations. In the period 1871–1875 the birth rate in Northern and Western Europe was 32.7 per thousand. By 1933 it had fallen to 18.1 per thousand.

> "With a fertility and mortality as they prevailed in Western and Northern Europe forty or fifty years ago, the population would have doubled in three generations. With a fertility and a mortality as they have prevailed for some years, the population of Western and Northern Europe is bound to die out. This process, of course, will be rather slow. With the present age composition it would take decades until there actually would be an excess of deaths over births, and it would take centuries until the population would be half of what it is now. The process will be accelerated if emigration continues, while it will not, of course, be affected by immigration since we are concerned only with the present population and its descendants. It can

[1] W. F. Wilcox, "The Expansion of Europe in Population," *American Economic Review* (December, 1915), Vol. V, p. 749.

[2] This figure was applied to the effect of an increase in wealth upon the growth of the population by Sir James Steuart, in his treatise on *Political Economy*, A. Miller and T. Caldwell, London, 1767.

be stopped by an essential change in mortality or in fertility. But the future reduction of mortality in those ages which are the only decisive ones, that is those under fifty years, cannot be very great after all that has already been accomplished. The future then depends mainly on the trend of fertility." [1]

The question of the slowing up in the rate of population growth is discussed in greater detail in the following chapter. It will suffice to notice here that population in the recent past has not increased as rapidly as wealth. Average real incomes are very much higher than they were before the Industrial Revolution. Interpreted in the light of the principle of diminishing productivity, this means that population has not increased so rapidly as capital and the available supply of land. If there had been no increase in population during the last hundred and fifty years, the marginal productivity of labor would have been very much higher than it is, and wages would have been correspondingly higher than they are.

The subsistence theory of wages.

The doctrine that wages, in the long run, tend to equal a bare subsistence for the laborers and their families was a theory advanced by English economists in the first quarter of the nineteenth century as a corollary of the Malthusian law of population. Said Ricardo: "The natural price of labor is that price which is necessary to enable the laborers, one with another to subsist and to perpetuate their race, without either increase or diminution." Granting the premises, the logic was incontrovertible: If wages fall below this level of subsistence, the result will be, in the long run, fewer laborers and therefore higher wages. If the increase in wages goes beyond the level fixed by the cost of subsistence, the result will be, according to the Malthusian doctrine, more laborers and therefore lower wages. The cost of subsistence in this view formed the "expenses of production" of labor, and the actual wages determined by supply and demand were supposed to fluctuate above or below normal wages as the market prices of commodities fluctuate about the normal prices fixed by the expenses of production.

Socialists and advocates of the single tax have made much of this theory of wages as proving the impossibility of bettering the condition of the laboring class under existing circumstances. By

[1] R. R. Kuczynski, *The Balance of Births and Deaths*, The Macmillan Co., New York, 1928, Vol. I, pp. 9, 62.

some socialists this doctrine, in its most rigid form, has been called the "iron law of wages." But socialists and followers of Henry George alike have to face the difficulty of accepting this theory and at the same time rejecting the theory of population on which it rests — a theory which they cannot accept, for its truth would obviously place insuperable obstacles in the way of any lasting improvement in wages being achieved through the adoption of their schemes. The subsistence theory of wages, if true, would be just as true under socialism as under existing conditions.

The subsistence theory of wages is in part a reflex of conditions actually existing in England early in the nineteenth century. Wages were very low, and the law required that deficiencies in wages below the amount necessary for the maintenance of the laborer and his family should be made up out of parish funds — a provision which in itself tended to keep down wages, and was made still worse by the fact that the allowance to a family for maintenance was proportioned to the size of the family, thus encouraging the rapid increase of the population.

The relation of the standard of life to the supply of labor.

Whatever may have been its significance in the past, the subsistence theory of wages does not square with the facts today, for the amount paid in wages is considerably more than is "necessary to enable the laborers to subsist and to perpetuate their race, without either increase or diminution." Ricardo himself did not give to the "minimum of subsistence" the fixed and rigid meaning which some socialists have attached to it. It varied, he recognized, with the habits and customs of the people. In this more elastic form the "minimum of subsistence" shades into what has been called the "standard of life." As we have seen in Chapter VIII, the term "standard of living" is used with several distinct meanings, but in this connection *the number and character of the wants which a man considers more important than marriage and family constitute his standard of life.*

While the increase in the quantity of goods produced occasioned by the Industrial Revolution and the utilization of new and vast natural resources has been attended by an unprecedented increase in population, it has also been attended by an improvement in the standard of living. Every advance in the standard of life marks a step definitely gained in the economic progress of the

laboring class; it affords a vantage ground for still more progress. This is not only because the standard of life is a fundamental factor in determining the long run supply of labor, but also because experience has shown that the standard of life affords an element of strength to laborers in their bargaining with employers. Any encroachments on it are met with strong and determined resistance. Moreover, a high standard of life makes for productive efficiency on the part of the laborer, and hence tends to increase his earning capacity. The wisest philanthropy is embodied in the efforts made to raise the level of living. Among such efforts are included public and private movements to secure better conditions of housing, municipal expenditures for places of public recreation, for public libraries, for clean and well-lighted streets, and, above all, for wider and better public education.

The extent to which the possibility of attaining a higher standard of living operates as a restraining force upon the increase of the population is largely determined by the extent to which democratic ideals are realized in the social organization. It is noticeable, for example, that the first generation of immigrants to the United States bring with them the habits and ways of living of their European homes. So long as simple standards of life are retained in connection with the larger incomes which they are able to earn in this country, more of them are able to marry; they are able to marry earlier, and they can raise larger families. But the second generation grows up in an American environment. They attend our public schools, where they mingle with American children and receive an American education. The possibility of taking a social and economic position higher than that of their parents is opened up to them. They become saturated with the American notion that each man has a chance to climb to the top of the ladder. They find here no rigid barriers separating social classes from one another. "Like father, like son" may have been true in Europe; here it has no binding force. Hence the birth rate among our native population of foreign parentage is very much lower than the birth rate among our foreign-born population.

The supply of labor in different occupations.

Just as the demand for labor on the part of entrepreneurs is not a demand for "labor in general," but a demand for specific kinds of labor, so the supply of labor is the supply of laborers who are

able and willing to do certain definite kinds of work. The supply of labor in any given occupation at any given time is almost as rigidly fixed as is the supply of labor in general. Laborers can usually change from one occupation to another only at the loss of the advantage of whatever specialized skill they may have acquired, but this is a matter of *occupations*, not of *industries*. There is a wide range of industries open to a skilled mechanic. But in the skilled trades variability in the supply comes less from the ease of passing from one trade to another than from the opportunities open to the more efficient and ambitious workmen of entering business on their own account or of entering some calling where general ability rather than specialized skill is the prime requisite. The carpenter may become a contractor; the skilled mechanic may become a salesman in some line where his specialized skill will be of advantage. The options thus open to the stronger members of each group should not be overlooked in any consideration of the forces tending to resist a downward movement in the wages paid in any occupation.

When we take a longer period of time into account, we find more elasticity in the supply of labor in particular occupations. The ranks of each trade are being continually depleted by old age, by death, and by the alternatives open to its stronger members. These gaps need not be filled by an incoming body of apprentices if the wages paid are lower than the wages in other occupations demanding a similar degree of preparation and ability; but there is a certain amount of inelasticity even here, for a variety of reasons, among which we may note: (1) imitation, which leads a boy to enter the same occupation his acquaintances have chosen; (2) the tendency of sons to enter their father's occupation; (3) lack of knowledge or appreciation of the relative advantages of different employments; and (4) the fact that only a number of options may be open to the residents of a particular district. These facts in turn have an important bearing upon the localization of industry, for industries are apt to be located in places where there is a present and prospective supply of skilled labor.

Differences in wages, together with other factors just mentioned, are not the only considerations which attract laborers to different occupations. There are differences in the wages paid in different employments which are out of all proportion to any differences in the training or the ability they require. Adam Smith enumerated

five circumstances which "make up for a small pecuniary gain in some employments, and counterbalance a great one in others." These are: "I. The agreeableness or disagreeableness of the employments themselves; II. The easiness and cheapness, or the difficulty and expense, of learning them; III. The constancy or inconstancy of employment in them; IV. The small or great trust which must be reposed in those who exercise them; and V. The probability or improbability of success in them."

These circumstances may be further elaborated: first, the agreeableness or disagreeableness of an employment is very often a matter of the social standing attached to it. Many men are doing clerical work to whom some kind of physical exertion would be both more pleasant and more profitable, but who dislike to be classed among the "manual laborers." So-called "professional pursuits" attract many men to whom more lucrative opportunities, requiring less special preparation, are open in other employments. Second, the most poorly paid (because the least efficient) laborers are found in the least agreeable and the most uncertain employments.

The wage contract.

The wages actually received are determined by an agreement between the worker and his employer. Here we find the "gains of bargaining" which were mentioned in the discussion of the prices of commodities. In the case of the wage agreement, if the bargain is between an employer and an individual workman, the advantage is likely to be very largely with the former. The employer generally knows fairly accurately what he can afford to pay the laborer; he knows about how much the laborer will add to his product, and his knowledge of business conditions helps him to estimate the value of this added product. He knows approximately what it would cost him to get his added product in other ways, by paying some of his present employees for overtime work, or possibly by speeding up his machinery. Moreover, there is the possibility of getting some other laborer, in case he fails to come to an agreement with the one in question. Finally, experience as an employer helps him to gauge the minimum that the laborer will accept.

The position of the laborer is quite different. He can gauge with less accuracy just how much his services are worth to the

employer. The minimum wage that he will accept will be governed by his very limited power of holding out for higher wages, or by his estimate of what he can get in other employments — very few of which may be open to him. The whole situation may be expressed by the statement that it is usually a matter of small importance to the employer whether or not he secures a particular laborer, while the securing of a particular employment is often a matter of the very greatest importance to the laborer. Under these conditions, wages are likely to be fixed much closer to the minimum which the laborer will take than to the maximum which the employer will pay. Where laborers can bargain in groups rather than as individuals, their disadvantages are lessened. The fundamental motive underlying the development of labor organizations has been to secure the advantages of *collective bargaining*.

Wage trends.

The trend of real wages in recent years for all workers in typical manufacturing enterprises has been given in convenient form in Table I. Both nominal and real wages have risen since the

TABLE I. — AVERAGE "REAL" EARNINGS OF WAGE EARNERS IN MANUFACTURING INDUSTRIES, 1919–1936 [1]

YEAR	INDEX OF COST OF LIVING (1929 = 100)	YEAR	INDEX OF COST OF LIVING (1929 = 100)
1919	106.6	1928	100.0
1920	121.9	1929	100.0
1921	106.4	1930	97.4
1922	98.8	1931	88.7
1923	100.0	1932	80.5
1924	100.3	1933	76.8
1925	102.2	1934	80.0
1926	102.9	1935	80.8
1927	101.4	1936	81.8

beginning of the war, and have continued to do so with some interruptions through the year 1935. It has been shown that the increase of wages has coincided with a marked expansion in the output of industry, and particularly with a rise in the average output per worker. The expansion of output and the rise in

[1] *The Recovery Problem in the United States*, The Brookings Institution, Washington, D. C., 1936. These data are taken from table on p. 633.

wages have both been accomplished in the face of a diminution of the hours of labor. The National Industrial Conference Board estimates that the number of working hours in the manufacturing industry declined from 56.8 per week in 1899 to 48.4 in 1929. During the period in question, it may be noted, the profits of industrial corporations, the price of industrial stocks, and the dividend payments of corporations rose even more rapidly than industrial output or the earnings of labor. Many causes have combined to produce these results. Immigration has been restricted and the growth of population retarded by other influences; the technical efficiency of both men and management has been raised in agriculture and transport as well as in manufactures. All this is consonant with, though it does not necessarily prove, the marginal productivity theory of wages. Perhaps the most significant fact is the steady rise of both wages and output in the face of an actual decline in the number of laborers at work in agriculture and manufactures. All this has contributed to increase the productivity and the value of the services of the marginal laborer. The result has been a gain in money earnings; and this, on account of the price level, having risen comparatively less rapidly, has represented an equivalent advance in real wages.

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CHAPTER XXII

RENT OF LAND

The Classical Theory of Rent

The Ricardian theory of rent.

The early English economists, and especially Ricardo and his followers in the Classical School, differentiated land from capital and other forms of wealth, and ascribed to rent and other attributes of land distinct peculiarities. These differences were erected or broadened into a theory. "The noteworthy social consequences drawn from the Ricardian theory of rent used to be considered "one of the cardinal doctrines of political economy." [1] According to that concept, rent consists of compensation for the use of the "original and indestructible powers of the land." It is not to be confused with the popular meaning of the term "rent": that is, the price paid for the use of durable goods of any kind owned by another, for example, a house or a building. The older classical economists claimed rent, in the popular sense of the term, consisted of two elements: (1) ground rent, or what Ricardo called the compensation which is paid to the owner of land for the use of the "original and indestructible powers of the soil"; and (2) capital rent, the price paid as interest on the capital invested in improving the quality of the land and in constructing the buildings on it. *Economic rent comprised only the first of these two elements.* The distinction is not altogether fanciful, though we are generally accustomed to see the two component parts of the income derived from land going to one and the same proprietor. In many large cities, however, they are paid to separate owners. Sometimes one man owns the land and lets the use of it for a long term of years to another who erects buildings upon it, which, either with or without payment, become the property of the landowner at the ex-

[1] John Stuart Mill, *Principles of Political Economy*, Ashley edition, Longmans, Green and Co., New York, 1909, p. 425.

piration of the lease. A recent example, so widely known as to serve for illustration here, is the Radio City development in New York City, where nearly three blocks of land are owned by Columbia University but let or leased to the Rockefellers who have built the great concentration of office buildings known as Radio City or Rockefeller Center. Often, however, the separation in ownership is permanent, the building owner paying perpetually an annual sum for the use of the ground. This was formerly the case in Baltimore, for example, where "ground rents" are an important feature in the economic life of the city. In such cases the two elements in the income derived from land are clearly distinguishable. Nevertheless, as will be seen later, the distinction has not the significance originally ascribed to it.

The quality of land.

The Ricardian theory of rent laid great stress on the differences in the quality of land. Certain types of land, it was stated, will yield nothing to any amount of labor. Other types can be made to produce something, but not enough to defray the expenses of production. The conformation of the land constitutes an essential element in the quality of land. A steep and gravelly hillside can by no possible effort equal a plain in fertility. The north side of a mountain cannot be made to produce the same crops as the south side. Climate is not, to be sure, a "property of the soil," but it is an inseparable appurtenance of the land, and upon it the productiveness of the land largely depends. The ownership of a piece of land carries with it the advantage of all the conditions which attach to that land. Ricardo and many of his immediate followers looked upon rent as springing out of inherent natural conditions. Thus they spoke of rent as the effect of a "natural" monopoly.[1] If, however, land of all qualities existed in abundant or unlimited quantities, rent would not exist. Thus, according to Ricardo,[2] the first settlers in a new country would have no need to pay rent. So long as any man could get land of the best quality free, there was no reason why he should pay rent to anyone else. But this state of affairs would last only as long as some of the best lands remained unoccupied. When population made it necessary to utilize inferior lands, the owners of the better

[1] John Stuart Mill, *op. cit.*, p. 422.

[2] David Ricardo, *Works*, "Principles of Political Economy," John Murray, London, 1846, p. 35.

lands would be able to demand and receive a rent for the use of their lands. This reasoning will be made clear by reference to Fig. 1, which is constructed on the assumption that there are six grades of land, *A*, *B*, *C*, *D*, *E*, and *F*, and that all these lands require the same amount of cultivation per acre. The successive rectangles represent the selling price of the product that can be

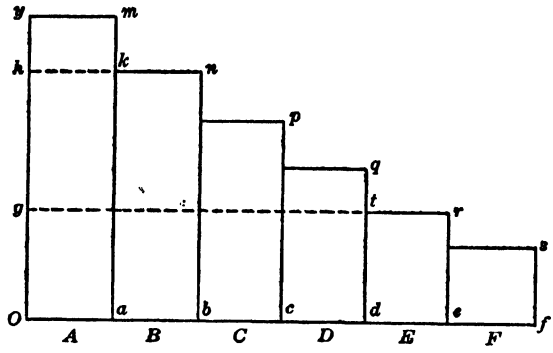


FIG. 1

raised on one acre of each of these different grades of land, by the use of the fixed amount of labor and capital. The product of an acre of the best land, *A*, will sell for 30 units. Until all of this best land is occupied, no rent will be paid, because, if rent is asked, the user of the land can, presumably, avoid paying it by taking up equally good land free of charge, and the entire value of the product will be available for the expense of the capital and the wages of labor employed in its cultivation.[1]

As soon, however, as it becomes necessary to cultivate some of the *B* lands, the situation will be altered. The owners of the *A* lands can now exact a rent for their use, and the tenant farmer has no alternative, except to utilize land of the second grade, on which the fixed amount of labor and capital will only produce a product per acre selling for 25 units. The rent which will be paid per acre for *A* lands will amount to the 5-unit difference between the price of the products of the two grades of land. For if the landowners attempt to charge more than this difference, tenant farmers will find it more advantageous to use the *B* lands; if they charge less, the *A* lands will be the more remunerative to the farmer, and competition among the farmers for the leases of

[1] The profits which the farmer may receive as entrepreneur do not affect the analysis, and may accordingly be neglected.

A lands will force the rent up. In short, rent will normally be fixed at the point which will *just equalize the advantages of cultivating the two kinds of land.*

As soon as increased population and the consequent need of a larger food supply and more raw materials have forced men to begin to cultivate lands of the *C* grade, the *B* lands will command a rent, while the rent of the *A* lands will be increased. And as cultivation is pushed down to still poorer and poorer lands, the rents which these better lands command will be still further increased. Thus, when some lands of grade *E* are in use, the price of the product which can be got from this free land, by the use of the fixed amount of labor and capital, will be 10 units per acre. This sum will just about pay the cost of labor and capital, for if it amounts to less than these expenses of production, the *E* lands will not be worth cultivating; if it amounts to very much, it will pay to cultivate still poorer land. But if 10 units will just pay wages and interest on the *E* lands, the same sum will pay wages and interest on the better lands, for we have assumed that the same amount of labor and capital is used on each grade of land, and the difference between this base cost and the return per acre for the respective grades of land will represent rent per acre. While the *E* grade land just supports the labor and capital costs of production, cultivation of the *F* grade land will not only fail to return a rent but produce less than it would cost to employ labor and capital on it. With *E* grade land as the margin, the lower grade represents a sub-margin, which when used disturbs a balanced utilization of land, capital, and human effort.

Rent, then, according to the Ricardian theory, is a *differential which measures the superiority of the rent-bearing land over the marginal land — the land which just repays the expenses of cultivation.* It is not necessary to the significance of the doctrine that all, or even any, of the farmers should be tenant farmers. If the farmer owns the land he operates, the part of his income which may be imputed to the superiority of his land over an equal area of marginal land must, in any accurate accounting, be counted as rent.

Rent under conditions of intensive cultivation.

It has been assumed, up to this point, that equal amounts of labor and capital would be used on lands of different grades. As a

matter of fact, even after the A lands are all occupied, the supply of agricultural products can be increased without resort to poorer lands. All that is really necessary is to cultivate the A lands more intensively. When this is done, however, the law of diminishing returns is encountered. Successive equal amounts of labor and capital used on the same lands cannot be expected to yield uniformly large increments of product. It will pay, however, to go up to the point where the last unit of labor and capital adds barely enough to the product to pay for the increased expense, — a point which was called by post-Ricardian writers the *intensive margin*. The result of this more intensive cultivation is represented in Fig. 2. Now the first rectangle in this diagram (A) represents precisely the same thing as is represented by the first rectangle in Fig. 1, the 30-unit return from the cultivation of an acre of land of A grade by the use of a fixed amount of labor and capital. The second rectangle in Fig. 2, however, represents the additional product resulting from the use of an equal amount of labor and capital on the *same acre*, while the third represents the increment of product due to employing yet a third unit of labor and capital in the same way. Assume that this third unit, A_2, adds just enough to the selling price of the product to pay for itself. Then, as already explained in the discussion of diminishing returns, 30 units (for $A + A_1 + A_2$) will represent that part of the farmer's income which will be used up by the expense incurred for the three-fold application of labor and capital used on this one acre of land, and the return thereover will represent the real rent of that acre. If land E (Fig. 1) just repays the expenses of cultivation when one unit of labor and capital is used per acre, the price of the product per acre of this land will equal the price of the increment of product attributable to the third unit of labor and capital used on land A. So far, then, as the margin of cultivation is concerned, Fig. 1 represents the conditions accurately. The productivity of capital and labor at the intensive and extensive margins is the same.

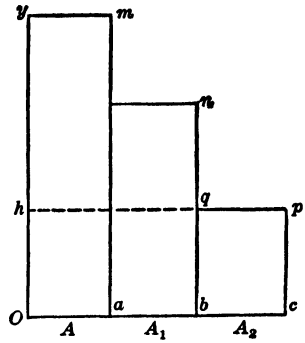


FIG. 2

But Fig. 1 does not completely represent the older theory of

rent in that (1) it does not indicate the fact that larger quantities of capital and labor are used on the better lands than on the poorer lands, and (2) it does not represent the larger products due to this more intensive cultivation of the better lands. These considerations are taken account of in Fig. 3, which also, by the substitution of curves for successive rectangles, represents the infinite variety of degrees of goodness of the different acres making up the land supply of a country. In Fig. 3, the line *hm* represents the money value (or price) level of the product of an acre of the poorest land in use, and the spread between line *hm* and curve *im* represents what rent of other lands would be per acre under conditions of uniform intensity of cultivation. The curve *gm* represents the diminishing amounts of labor and capital actually used per acre as we pass from the better to the poorer lands (in contrast to line *hm*), while the spread between curves *gm* and *ym* represents the rent per acre of the different grades of lands (in contrast to the spread between *hm* and *im*). The foregoing analysis leads to the following revised statement of the Ricardian theory of rent:

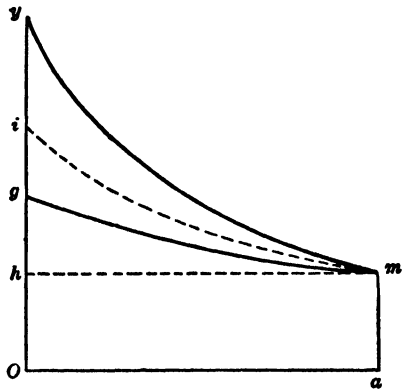


FIG. 3

The rent of any piece of land is measured by the difference between the money value of the products obtained from it by the use of the most advantageous amounts of labor and capital and the money value of the products which could be obtained by the use of equal amounts of labor and capital on marginal land, or at the intensive margin of cultivation.

This statement should not be understood as comparing the total product raised on a given piece of land with the total product which could be got from the *same amount* of marginal land. This would be to reintroduce the assumption of uniform intensity of cultivation — an assumption which impaired the adequacy of the theory of rent illustrated in Fig. 1 above. On the contrary, it is assumed in the present statement that the farmer would use whatever amount of the marginal land he found most profit-

able. If it were profitable to use twenty times as much labor and capital on a certain piece of land as on a similar amount of marginal land, to employ the same amount of labor and capital profitably on marginal land would take twenty times as much land.

The different uses of land.

We have seen that the better lands will repay more intensive cultivation than the poorer lands, and have found this fact to be of great significance in the older theory of rent. More intensive cultivation does not only mean the more thorough cultivation of the land in the raising of any one crop. Land produces a great variety of products, and some products demand more intensive cultivation than others. In the business of raising cattle, as it is conducted on a large western ranch, the total investment of capital and labor may be very considerable, but the investment *per acre* of land is very small indeed; while a small market garden, located near a great city, will repay a very high degree of intensity of cultivation. It is only on the best lands that crops requiring a large amount of labor per acre can be raised profitably. By the "best lands" is meant not only the lands which are best fitted by soil and climate for the production of particular crops, but the best lands in the sense that they are nearest the market. For example, cities in the eastern part of the United States get some fresh vegetables from market gardens in their own environs, while another part of the supply may come from the southern states or even across the continent from California. The local market gardens are good lands by reason of their situation; the more distant lands are good lands because of special qualities of soil or climate which enable them to furnish out-of-season vegetables.

The poorest land that can profitably be used in the growing of *any one kind of product* is not necessarily marginal land. Land too poor for market gardening may be good wheat land; land too poor for wheat may be good grazing land. The poorest land devoted to any one purpose may yield a rent, because of its relative superiority in some alternative use. The marginal lands used as a basis of comparison in our statement of the Ricardian law of rent are the poorest lands used for any purpose — grazing lands, possibly. But, as we have seen, rent may also be measured from the intensive margin of cultivation, and the intensive margin is found on all lands, even the best.

Mineral lands.

According to Ricardo, the principle governing the rent of mines is "precisely the same as that . . . already laid down respecting land." If, he stated, there were an abundance of equally fertile mines, available to all, they would yield no rent. It is obvious, however, that mineral land differs fundamentally from agricultural land, because there is no possibility of replacing the materials taken from the earth.

> "Mining is a continual harvest; it is purely extractive. Even forests reproduce and replace themselves if given long enough time, but this is not true of minerals. Consequently the income yielded by mineral lands differs from that from other kinds of land, and this fact should be recognized when a policy for utilizing mineral lands is formulated." [1]

Agricultural land, on the other hand, may be enriched by use, under the conditions of cultivation prevailing today. This difference between mining and agriculture illustrates the fundamental contrast between the Ricardian theory of rent and the modern view of the income derived from land.

Criticism of Ricardo's Theory of Rent

Ricardo's assumptions.

One of the main premises upon which the Ricardian theory of rent rested was the assumption that *nature has supplied land, one of the chief factors of production, in strictly limited quantities.* A second premise was that *population normally and regularly exercises a pressure upon the means of subsistence.* If the quantity of land is very limited and far less than man needs, and if the fertility of mankind is such that it leads to an increasing demand for what land can produce, then the rent of land must continually increase, and the landowner must necessarily enjoy an especially privileged position.

When Ricardo wrote, conditions in England harmonized with these premises, and it was natural that he should adopt them as the foundation of his theory of rent. The Napoleonic Wars on the continent, together with a high protective tariff in England,

[1] Ely and Morehouse, *Elements of Land Economics*, The Macmillan Co., 1924, p. 139. See also *The Foundations of National Prosperity*, by Ely, Hess, Leith, and Carver, The Macmillan Co., 1917, Part III, by Professor Chas. K. Keith, "The Conservation of Certain Mineral Resources."

kept England from importing grain from Europe. At the same time, population was growing rapidly. These circumstances led to very high wheat prices, a considerable extension of the land under cultivation, and a remarkable rise in rents. The Ricardian theory of rent was the outcome of this state of affairs. Economic conditions are, however, very different in our own country today. We now have a surplus of food products as measured by effective demand, and an overabundance of land, utilizable and potentially utilizable. It is to be noted also that Ricardo assumed equal quantities or "doses" of managerial labor to be applied to the areas of land compared, as well as equal doses of ordinary labor. This implied assumption can hardly be accepted in explaining actual rent because, in reality, there are more varieties of entrepreneurial ability than of ordinary labor ability. That these premises are no longer considered valid in the United States must be borne in mind in reading the following criticism of the details of the Ricardian concept of rent and the exposition of modern ideas concerning land income.

The fundamental resemblance between land and capital.

The income derived from land depends, to a great extent, on what has been put into the land, so that the tendency is now to regard land, in the economic sense, as largely produced and, to that extent, as one kind of capital. In determining the price asked for land, account is taken of the outlay of capital, draining, terracing, wells, and irrigation. As Dr. Virgil P. Lee has pointed out:

> "Clearing away the brush or timber is done once for all and serves for all future operations of farms. In many sections of the country, clearing is a very large item in the purchase price, sometimes even more than the price of the uncleared land. It often takes numerous crops to yield a net return sufficient to pay for the clearing of the land. Since clearing endures as long as the land, the cost of clearing should be considered as a part of the purchase price of the land." [1]

The same considerations, says Dr. Lee, should be applied to drainage, irrigation, and terrace systems. Thus the old distinction drawn between rent as the price paid for "the original and indestructible powers of the land" and as the price paid as interest on the capital invested in improving the quality of the land

[1] Virgil P. Lee, *Principles of Agricultural Credit*, McGraw-Hill Book Co., New York, 1930.

ceases to have any great significance. It is true that we find land in all forms provided by nature, but in economics we are not concerned with the physical supply of land as such, but with *the economic supply of land.* In all the older countries, the toil of ages has become embodied in the present usefuiness and value of land. No land is economically utilizable which does not represent human toil of some kind. For example, land cannot be put to economic use unless we have access to it; and the efforts involved in creating means of access often constitute a very considerable part of the cost of making land economically utilizable; land may thus be said to be "produced," and to be the result of "stored-up effort." In the case of agricultural land the cost of bringing it under the control of man is very high. When we examine the question of housing, we find that a large proportion of the expense consists of the cost of access. This brings us to the question of urban land, which has been almost completely neglected by the Ricardians.

Few people realize what it generally costs to render land in large cities utilizable, or, in other words, to "produce" urban land. An illustration is afforded by the city of Radburn, New Jersey, which was developed by the City Housing Corporation of New York City. The land that goes with each house cost originally about $240. By the time a lot was ready for a house to be put up on it, the estimated cost of the land increased to some $2,000. This sum covers accessibility, that is to say, the streets, and also the expense of providing a proper proportion of parks, playgrounds, and so on. Some idea of the cost of producing a building site is given by the Radburn figures, as worked out by the technical staff expert. They will be found in the table on page 451 which will repay careful study.

If we add to the cost of the lot interest and taxes for the period from the time the land is purchased until construction begins and also any other overhead costs, together with supervision for an average of five years (say $200), it will give a total cost per lot of $2,200 and cost per square foot of 55¢. In an earlier statement of the cost of land this estimate was included; but it was omitted from the table given, on account of its uncertainty. It should be noted that the land, when purchased by the City Housing Corporation, was not in its original state, for labor and capital had already been expended on it, though primarily for

ESTIMATED COST OF IMPROVED RESIDENTIAL LAND IN SUPER BLOCK SUBDIVISION, RADBURN, BERGEN COUNTY, N. J.

ITEM	EXPLANATION	COST PER SQ. FT. OF SALABLE LOT	COST PER SALABLE LOT 4,000 SQ. FT.
Land cost of lot	Purchase price of unsubdivided gross land area including title and title survey expenses averaging $2,500 an acre	$.06	$240.00
Land cost of beds of streets and park areas	Land area devoted to streets and parks is 40% of gross land area, leaving 60% as net usable or salable area — consequently add $\frac{40}{60}$% or $\frac{2}{3}$ to above amount, making $4,000 an acre . . .	.04	160.00
Improvement cost	Cost of grading streets, installing storm sewers, sanitary sewers, concrete paving, curbs, sidewalks, street trees, street lights (electric, gas, water being installed gratis)	.20	800.00
Landscaping cost	Includes the extra costs of a garden community —		
	A. Park development, park walks, lights, top soil, shrubs, play equipment, etc.	.06	240.00
	B. Private lot development or yard planting work. (This item is usually not included as part of the cost of real estate and is either omitted or considered an extra item in construction cost.) . . .	.09	360.00
Overhead cost	Engineering and architectural fees and expenses for planning of the above and supervising, plus interest and taxes on the land during construction period only . . . . . (No carrying charges, *i.e.* interest and taxes, have been added to the cost of the land from the time of purchase until construction commences. When this is added the cost of the land will be even greater.)	.05	200.00
Total improved cost		$.50	$2,000.00

other purposes than for building. The question arises, "Who bears the cost of making land utilizable for urban purposes and who reaps the benefits?" In the case cited above, the immediate cost was borne by the developers, so far as the provision of streets, parks, and similar developments are concerned. In other cases these are provided out of a general tax fund into which the landowners and others contribute.

Ripening costs in producing land.

One of the chief defects of the older classical theory of rent was the failure to consider costs as well as income. This was partly due to the fact that agricultural land and not urban land was observed by Ricardo and his followers, and their illustrations were nearly always drawn from agriculture. In the early nineteenth century, agricultural land in England had already undergone many improvements. The conditions in pioneer communities in the United States and elsewhere are strikingly different. The typical settler of new land toils unremittingly. He and the members of his family labor early and late, receiving small income and hoping — and in recent years hoping usually in vain — for an increment in land values as recompense for their work, sacrifices, and waiting. In urban land, costs are high and constantly increasing with the rising demands made upon the utilizers of land in cities; and these costs are of growing significance as our civilization becomes more and more urban. We have to consider especially what we now call ripening costs in land utilization.

Unutilized land cannot be brought into use immediately. Generally speaking, it takes time for land to "ripen." This is illustrated in agricultural land in northern Wisconsin. An authority has stated that a land settlement project in northern Wisconsin should comprise not less than 40,000 acres; but it takes a long time to get the settlers on this land and a still longer time for the settlers to bring the land into use. In the case of urban land, as, for example, at Radburn, a long period is considered necessary, on the average, to bring the land into use. This is a good example of ripening costs because every effort is made to reduce them to a minimum. It would be quite impossible to bring these 1,250 acres of land into immediate use.[1]

Recent practical researches into the nature of land value bear directly upon the present problem. Here it is appropriate to review one important principle that arose in an examination of the practice of appraising vacant land in and about urban areas.[2]

[1] A more normal illustration of ripening costs would perhaps be afforded by the development in Madison, Wisconsin, called University Heights. This addition to the city was needed and the development was unusually rapid, as things go. It has taken approximately thirty-five years to complete this development and in the meantime the land was gradually ripening into use. It is not easy to see how, without loss, the ripening period in this case could have been greatly shortened.

[2] Herbert D. Simpson and John E. Burton, *Valuation of Vacant Land in Suburban Areas*, Institute for Economic Research, Chicago, 1931.

In the study under consideration the investigators were confronted by a large supply of vacant urban and suburban land, for which they sought an index of its worth for the year 1928. Their computations indicated that the average period for absorption of any unit of the available area extended to 1944; the only reliable index of its worth at such a date was the level of value attributed to the area developed in 1928 to the use to which the vacant area was being pointed; that was found to be $15,700 per acre, which, when discounted through the years from 1944 back to 1928, represented an amount of $2,200 per acre. The discounting process encompassed a deduction from the 1944 value of the costs of carrying vacant land until it would be utilized. Starting in 1928 with a value of $2,200 per acre, a return course to the 1944 value of $15,700 was plotted and segregated according to the cost elements entering into the value increase. Should the vacant land carried at $2,200 in 1928 reach $15,700 within 16 years, it would represent an *appreciation* of more than 600 per cent, all of which would be but the tax, capital, and development cost.

Broadly conceived, *ripening costs occur when land is changing from one use to another;* from what may be called a lower use to a higher use. This period of transition, which is sometimes prolonged, frequently involves heavy expenditures. If the holder of the land is a private individual, the "ripening" costs falling on him take the form of taxes, special assessments, and the sacrifice of interest on his capital, unless these costs are anticipated and discounted in the purchase price of the land in question. If the ripening costs are discounted in the purchase price, the discounting process is merely a method of transferring the burden of these costs from the purchaser to the seller of the land. These expenses must be borne even when the land is yielding no income. Normally, all costs are expected to be paid out of the income from the use of land, or recouped from its sale price. It is to be observed, however, that many people are induced to meet the ripening costs of land by the expectation of recoupment arising out of an increment in land value. From this observation is formulated what may be called the "law of ripening costs in land utilization." *The costs falling upon the holder of land during a reasonable period of ripening use are socially necessary, and are properly chargeable to the increment in land value resulting from the change in use.*

Obviously the time interval described above as a ripening period is not peculiar to capital investments in land. Such expenses are incurred in other forms of capital; but, in the case of land, they are particularly significant because of the heavy investments and long period of time required to change land from one use to another. Thus this ripening process exists in connection with land to a degree not found in connection with most other forms of fixed capital. Any attempt to explain why this is so involves a careful analysis of the peculiarities of land as a type of fixed capital. It requires a consideration of the unstandardized and specialized nature of the commodity, the immobility and durability of land, the ratio of land value to improvement value, the low rate of capital turnover, the legal rules regarding estates in land and transfers thereof, the practices and customs of those who use land not only as a commodity to be bought and sold, but also as a source of productive services needed to carry on other activities. These and other characteristics need careful examination in the light of their effect upon this factor of the ripening period. Considered in the aggregate these characteristics seem to lead to the conclusion that this ripening process in connection with land is highly significant in explaining the nature of land costs and income.

Such an analysis affords an explanation of gross ripening costs which must be deducted before we ascertain what is the net income yielded by the land. Furthermore, in so far as ripening costs are costs of bringing land into use, they have a potential effect upon the supply of land for a given use and through supply an effect upon land income. *These various cost items indicate that the income from land is not altogether a costless income but is a return which must be earned just as the return from any other factor of production must be earned.*

The authors do not feel it in order to review all of the charges which economic literature places directly by implication upon the "landlord." Countless charges of unearned land rent and land value have been justifiably made, but fundamentally the charges do not establish land rent and value as costless. Land income or value may have accrued as unearned to certain recipients but at a cost to others. The carrying of the railways to the west permitted great land profits because the cost was largely public. The building of great urban areas has followed great

public costs, and in many cases provided great private fortunes from land value increases. These situations are largely past and they were more the warp and woof of social injustice than substance for land rent or value theory. More attention is now given to making public costs cover the public benefit and spreading more specific costs which benefit specific interests upon those so benefited. Ricardo's unearned rent and bounty of nature becomes a relatively thin stratum in a structure of land rent and value, and more attention should be accorded the costs which are involved. The real field for inquiry lies in a distinction between private and public costs.

Historical costs.

If an enterprise is to be successful, past costs must be remunerated in present returns. We have to reckon the past cost of bringing land into utilization. In the case of fixed investments like railways and land it is always possible to take away by taxation or confiscatory measures a part or the whole of the income that is a result of past effort. Land occupies the same position as other investments. If taxation takes away half the income, then it takes away half the value. This is true with regard to Liberty Bonds, with regard to railway property, and with regard to land. We have to consider justice and we have also to consider the effect of taxation upon future utilization.

Margins of utilization.

The older theory looked upon land as peculiar in having an economic margin of utilization. Everything was measured upward from the margin of utilization of land. It is now apparent that this margin of utilization applies to all forms of capital. The utilization of the margin in land does not determine other margins. In a mobile competitive society like ours a perpetual shifting from one kind of utilization to another goes on, a shifting, not in the use of land alone but in the use of all productive goods, giving us one general margin of utilization for all forms of productive endeavor.[1]

[1] It is not to be understood that all marginal enterprises give the same yield as expressed in percentages of income to investment. Some enterprises yield a relatively low percentage of income because the return is partially psychic. Certain inequalities in wages and salaries are explained by the fact that a considerable proportion of the return is psychic income. Some enterprises may yield a large return because of disagreeable features connected with them. Consequently, if we had a system of perfect competition with all the enterprises uniformly reaching their margins, we should have inequalities in percentage returns.

Costs do not directly determine value, *but they limit supply and thus* indirectly affect value. The returns on investments in landed property are usually low; it is a fact of common observation that the rate of capitalization, that is, the ratio of income to selling value, has been lower for land than for most forms of capital goods. This is largely due to the fact that improvements in use have so greatly increased our supply of utilizable land in relation to a relatively declining demand as to cause decline in net income. Income and expenses have come closer together. The influences behind this feature are myriad, including not only technical improvements, but competition with other forms of investment, such as industrial stocks. Of course, with a general margin of utilization, the investor in land, in a competitive society, cannot normally and regularly expect a larger return than other investors receive. Indeed, as it is an investment preferred by many, the pecuniary returns are apt to be relatively low. There is some question whether a man can buy land with money he has borrowed and rely upon repaying it with its income, for the return on investments in land is normally and regularly less than the prevailing rate of interest.[1]

Economic evolution.

All theory must recognize the effects of economic evolution. There was a time when land had a greater relative significance than now. It was the chief kind of wealth and the landowner was the typical rich man. The landowner was often in a position to oppress others because there were few possibilities of exercising options or choices with regard to the utilization of one's powers. A progressive emancipation from the power of the landowner has gone on. The typical rich man is now not the landowner but a banker or merchant or a public utility magnate. We are learning to utilize more and more efficiently the forces of nature and consequently we release their free services to an ever-increasing extent. This is one of the reasons for growing prosperity.

[1] Many reasons for a small rate of pecuniary return on land giving us a relatively low margin can be found. One reason is the psychic income from land investments in the form of amenities. Another is the very common exaggeration of anticipated increments in value. This has been especially the case in the United States because, in the past, in many parts of the country, land values have increased enormously. Account is taken of increments but not of decrements. The fortunate recipients of large gains from increments receive publicity but the newspapers do not publish accounts of decrements nor are they heralded abroad by chambers of commerce and real estate boards. These are some, but not all, of the reasons for a tendency for the prevailing rate of interest on money to be higher than the income that land as such yields.

But as already pointed out, this growing prosperity means suffering on account of maladjustments, as in the case of the farmers and producers of bituminous coal.

The retardation of population growth.

We have two general forces operating upon the utilization of land and upon land values. The first is the growth of population. At present the outstanding fact about population is the remarkable slowing up in the rate of its growth. The result of scientific investigations by various authorities indicates an extremely slow rate of the growth of population within recent years. Statistical data prove the decline of fertility among European races since 1880. In 1929 a conference at the University of Chicago was attended by experts from different countries. The authorities did not speak dogmatically because they appreciated how much is still unknown about the growth of population. Nevertheless the consensus of opinion was that we needed to have no apprehension about an undue growth of population. The researches brought forward in this conference and from time to time since indicate that there is now more danger of a decline of population than of an excessive increase.

Improvements in the utilization of land.

The second force or factor results from increasing economies in the utilization of land. Nothing is more outstanding in the economic history of the present century than improvements in the utilization of land, whether it be agricultural land or urban land. Ricardo and his followers recognized the fact that improvements in the utilization of land reduced costs and forced a given area of economically utilizable land to accomplish larger purposes; but they regarded these improvements as simply a minor factor. The effective demand for land was, they thought, certain to increase indefinitely.

It would take a good-sized volume to describe even briefly the improvements in agriculture which have taken place in the past centuries. These improvements, while rendering the bounties of nature more and more available, have tended in the long run to lower prices paid to producers. We discuss later, in Chapter XXXII, some of the results of this forward movement of agriculture which has consisted not only in improvements in methods of tillage and cultivation, in fertilizers, in the varieties

of plants, in breeds of livestock, but also in organized social methods looking toward a better utilization of the nation's land supply, such as the irrigation of dry lands and scientific forestry.

Of much greater importance, however, than all these things taken together, has been the revolution in ocean and land transport, which has enormously increased the available amount of land. Lands in England have gone out of cultivation because the railway and the steamship have brought the great wheat fields of America to her very doors. Even in the United States the new lands brought near to market by the railways have often been of better quality than the lands previously cultivated, so that the margin of cultivation has gone up rather than down. There were 2,250,000 acres of improved farming land in the state of New Hampshire in 1850; by 1900 this acreage had shrunk to 1,075,000. The number of acres of all land in farms was 2,116,000 in 1935 compared to 3,249,000 in 1910. In Massachusetts from 1850 to 1900 the improved farm lands decreased from 2,135,000 acres to 1,300,000 acres. The number of acres of all land in farms was 2,196,000 in 1935 compared to 2,876,000 in 1910. Similar figures could be given for some of the other older states. The diminution in the use of old lands may be partly accounted for by their deterioration in fertility under continual cultivation without proper rotation of crops. But this is only a partial explanation, for anyone who is familiar with agricultural conditions in this country knows that even the most careful tillage could not have kept millions of acres of farm land which were once rent-yielding from going below the margin of cultivation, for the simple reason that the margin of cultivation rose. The railway companies' practice of making very much lower rates per mile on long hauls than on short hauls hastened the process by minimizing the disadvantages of lands of good physical quality situated at a distance from the market.

Falling land values.

It is a fact of vital significance that the slowing down of the rate of population growth and the many technological advances in their utilization of land have contributed to bring about falling land values. So far as agriculture is concerned, these are prime causes of the distress of the farmers. Dr. Oliver E. Baker, senior agriculturist in the United States Bureau of Agricultural

Economics and one of the authorities in this field, estimates that the food supply has been increasing nearly twice as rapidly as the population in recent years. He uses these words:

> "Agricultural production as a whole increased about 13.5 per cent, whereas population increased about 8 per cent; in other words, the increase of agricultural production was fully 50 per cent greater than of population. Incomplete data for the years 1927 and 1928 indicate that agricultural production is still increasing more rapidly than population." [1]

Instead of increments in land values, the farmers have suffered from enormous decrements. John Stuart Mill thought that with increasing toil and sacrifice we should be able to wrest from nature the food and raw materials we need. As a matter of fact, continuously, for over half a century at least, it has taken a smaller and smaller portion of our economic resources to produce the food and raw material that we need; so that a relative and in many cases an absolute reduction of costs has taken place. Some agricultural land is going out of use and land values are falling, relatively, both in this country and in many parts of Western Europe.

When we come to urban land the situation is not so clear at first sight. We notice, however, enormous economies in the utilization of this land. One of the marked features of urban development is the multi-family house in all cities, in smaller cities as well as in larger ones. An area of land that formerly accommodated one family of five will in some cases now accommodate 500 people. An area of land that would formerly have provided offices for perhaps 100 persons will now furnish room space for 1,000 or even 2,000 persons. The concentration of population has been such that some choice centers have reached values that seem almost fabulous. Little attention, however, has been given to land values in smaller cities where building sites can often be purchased for only a small fractional part of what it originally cost to produce them. The increase in urban land values, however, has been great in some cities while the decline of land values has been going on elsewhere. In Chicago, for example, some sections of the city have experienced an enormous increase in land values; but there are other sections in

[1] "Changes in Production and Consumption of Our Farm Products and the Trend in Population," *The Annals of the American Academy of Political and Social Science*, Philadelphia, March, 1929, p. 2.

Chicago where the land values have diminished sharply. On the whole, Chicago has seen a great increase in land values; but no one knows precisely the relation between increments and decrements. Researches tend to show that, on the whole, land-value movements are to a considerable degree wave-like over a period of time, consisting of alternating heights and depressions.[1]

Values of New England farms were depressed when Mississippi farm lands were rapidly rising in value; and landowners in England, at the same time, were suffering from falling prices of agricultural products and falling rents. The crest of the wave, to continue the figure, has risen very high on North Michigan Avenue, Chicago, following the construction of the bridge over the Chicago River. Less attention has been paid to the relative loss in land values south of the bridge.

The study of land values brings us continually to the unknown. We may really call the economics of our time the "new economics," because the economist of the present day appreciates how inadequate his knowledge is and how necessary further researches are to give him all the facts that he needs. This is in marked contrast to the economists of the older classical school in England who had a rounded-out system which they believe to be almost perfect. John Stuart Mill thought very little remained for the economist to do with respect to value, and Jean Baptiste Say said that the economist is not eager for facts. The modern economist hesitates to make predictions. For one thing, he knows how misleading the predictions of the past have been. Nowhere has this been more strikingly portrayed than in the case of agricultural production. Let us take one impressive illustration. In 1898 Sir William Crookes, as President of the British Association, chose as the subject of his annual address, "The Wheat Problem." He regarded this as a very serious problem because, as he said, population was increasing very rapidly, and especially the world's bread-eating population, and this meant a demand for more and more land. He did not know where the wheat was to be found to supply hungry mouths with bread. At that time, he stated, we were starting out with a deficit of over 100,000,000 bushels and this deficit was going to increase constantly. He said: "It is clear we are confronted

[1] Herbert D. Simpson, "Influence of Public Improvements on Land Value," *Annals of the American Academy of Social and Political Economy*, March, 1930.

with a colossal problem that must tax the wits of the wisest." [1] At that time, Sir William Crookes claimed, the position was a very gloomy one and he looked forward to the future with little hope. In the preface of his book he uses these words:

> "I have no wish to be gloomy and certainly no wish to consider myself infallible. If at the end of another generation of wasteful culture my forecast is invalidated by the unforeseen, I cheerfully invite friends and critics to stone me as a false prophet."

In the 1930's the world was confronted with a wheat problem producing great distress in the United States and ruining farmers; but it was a surplus of wheat and not a lack of it that gave rise to the situation.

As a result of the earlier theories a great deal was said about taxing land in order to bring it into use. Now the question is not how to bring land into use but how to put out of use the marginal and submarginal land which, owing to the influences already described, exists in such vast areas. Even in the case of urban land we have an overproduction of suburban land; and a serious problem has risen, that of limiting the waste involved in an excessive supply of urban land.

In the case of forest land it is now clear that deforestation, for the purpose of producing agricultural land, has gone too far. The great land problem at present is not to bring idle land into use, but to put each kind of land into its right use at the right time; to preserve as waste land that which should not be used at all, and to keep for very extensive use poor land upon which little or no capital and labor have been or should be expended. Proper proportionality, considering costs, incomes, and rate of investment turnover, is what we need in practical land policies. We should avoid waste in bringing land into use prematurely, and putting land to other uses than the best uses. In many fields researches are being conducted to find out just exactly how to plan the best use of our natural resources so that they may render us the greatest services with the least cost. The very bounty of nature aided by human ingenuity is producing distress to farmers and others because we have not yet co-ordinated our mastery of nature with our human relations. Further control of nature and improved social organization are needed to enable

[1] Sir William Crookes, *The Wheat Problem*, John Murray, London, 1809, p. 15.

us to continue our technical progress in the use of land in such a way as to confer the greatest possible benefits on the greatest possible number of people.

Social Implications of the Ricardian Theory of Rent

John Stuart Mill's ideas on taxing land.

A logical consequence of the older classical theory of rent, with its insistence on "natural monopoly" and upon what was called by post-Ricardian writers "unearned increment," was a system of taxation which aimed at putting all or most of this unearned increment into the public treasury. It was felt by many that the State, not the individual, ought to be the beneficiary of any increases in the value of land. Several of the classical economists, notably John Stuart Mill, were in favor of heavily taxing the increase in land values which they considered inevitable. J. S. Mill wrote:

> "I see no objection to declaring that the future increment of rent should be liable to special taxation; in doing which all injustice to the landlords would be obviated if the present market-price of their land was secured to them; since that includes the present value of all future expectations." [1]

It may be noted here that J. S. Mill's theory of taxing the "future increment of rent" exercised considerable influence in England; but when it was attempted, in the famous Lloyd George budget of 1909–1910, to impose an "increment-value" duty on land, it was found necessary completely to exempt agricultural land and small properties, and also to safeguard landowners from hardships arising from depreciation in land values.

The single tax theory.

The social implications of the Ricardian theory of rent have been very influential in the United States, contributing largely to the development of the "Single Tax" theory. Henry George, the founder of the "Single Tax" movement, devoted all the ardor of a generous disposition and all the ability of a naturally gifted writer to expounding a system of taxing land values which he hoped would destroy poverty and bring about a social millen-

[1] John Stuart Mill, *Principles of Political Economy*, Longmans, Green and Co., 1909, Ashley ed., Book V, Chap. II, p. 819.

nium. There could be no doubt, in Henry George's estimation, of the absolute validity of Ricardo's concept of rent. "Fortunately, as to the law of rent, there is no necessity for discussion," [1] he writes. Not all of the premises on which Ricardo's theory of rent is based were, however, acceptable to Henry George, for he rejected outright the assumption that population tends to press against the limits of subsistence. This, he declared, had never been the evil that has afflicted mankind. "Compared with its capacities to support human life, the earth as a whole is yet most sparsely populated." [2] Land values, however, were always sure to increase by leaps and bounds in a developing community. What then is the reason for this continual increase? The answer is *speculation in land.* "The tenacity with which a speculative advance in the price of land is maintained in a developing community is well known." [3]

Henry George believed that along with the speculative advance in land values, wages tended continually to decrease, so that the landowners became richer and richer and the workers poorer and poorer.

> "There is nothing strange in the fact that, in spite of the enormous increase in productive power which this century has witnessed, and which is still going on, the wages of labor in the lower and wider strata of industry should everywhere tend to the wages of slavery — just enough to keep the laborer in working condition. For the ownership of the land on which and from which a man must live, is virtually the ownership of the man himself, and in acknowledging the right of some individuals to the exclusive use and enjoyment of the earth, we condemn other individuals to slavery as fully and as completely as though we had formally made them chattels." [4]

Does this mean that Henry George condemned all private property? — Not so; for property other than land was, he thought, the product of labor, while land was the product of nature. "There is to everything produced by human exertion a clear and indisputable title to exclusive possession and enjoyment." Interest on capital was, he considered, perfectly fair and legitimate; for it was the result, not of a particular social organization but of the "laws of the universe which underlie society." To

[1] Henry George, *Progress and Poverty*, D. Appleton and Co., 1881, p. 150.
[2] *Ibid.*, p. 92.
[3] *Ibid.*, p. 249.
[4] *Ibid.*, p. 313.

regard land as a form of capital was absurd in his opinion. To call land one form of capital is, he said, "very much as if one who proposed to teach algebra should begin with the declaration that he would consider the signs plus and minus as meaning the same thing and having the same value." [1]

Henry George saw in society an antagonism not between labor and capital, but between "labor and capital on the one side and land ownership on the other." The remedy for all social ills was, therefore, the confiscation of private property in land through the instrumentality of the "Single Tax."

> "What I, therefore, propose, as the simple yet sovereign remedy, which will raise wages, increase the earnings of capital, extirpate pauperism, abolish poverty, give remunerative employment to whoever wishes it, afford free scope to human powers, lessen crime, elevate morals, and taste, and intelligence, purify government, and carry civilization to yet nobler heights, is — *to appropriate rent by taxation.*"

All taxation except that upon land values was, in this scheme of things, to be abolished.

The Single Tax considered.

The single tax theory of private property rests on the assumption that individual human labor constitutes the only justifiable title to property. If this were so, how could any private property be considered justifiable? As Professor E. R. A. Seligman has well expressed it:

> "Individual labor, it may be said, has never by itself produced anything in civilized society. Take, for example, the workman fashioning a chair. The wood has not been produced by him; it is the gift of nature. The tools that he uses are the result of the contributions of others; the house in which he works, the clothes he wears, the food he eats (all of which are necessary in civilized society to the making of a chair), are the result of the contributions of the community. His safety from robbery and pillage — nay, his very existence — is dependent on the ceaseless co-operation of the society about him. How can it be said, in the face of all this, that his own individual labor wholly creates anything? If it be maintained that he pays for his tools, his clothing, and his protection, it may be answered that the landowner also pays for the land. Nothing is wholly the result of unaided individual labor. No one has a right to say: This belongs absolutely and completely to me, because I alone have

[1] *Ibid.*, p. 31.

produced it. Society, from this point of view, holds a mortgage on everything that is produced." [1]

Henry George's social philosophy was based, also, on the fundamental distinction he drew between land and capital. He took this distinction so much for granted that he was at no particular pains to defend it. But modern economic thought has come to recognize that land, like capital, is an agent of production which owes its usefulness to human toil.[2] Land, in the economic sense, can be said to exist only in so far as it is brought into use by man, and, in this sense, the supply of land, like the supply of capital, is susceptible of increase in response to demand. Henry George, who recognized the truth of the assumption that man can, by bringing the forces of nature more and more under his control, produce the means of subsistence in quantities sufficient for his present and future needs, allowed his prejudice against landowners to lead him into illogical reasoning when he failed to recognize that this assumption is followed by the corollary that land, as a productive agent, is the result of stored-up effort, and, as such, is similar to capital.

The practical aspects of the Single Tax.

Perhaps the greatest obstacle in the path of those who would like to see the Single Tax applied would be the difficulty, or even impossibility, of separating the value of the bare land from the value of the improvements on it, improvements due to capital invested and to the toil of man. We have seen that it is impossible clearly to separate the "indestructible powers of the soil" from man's labor and his efforts to make land utilizable. Any attempt to distinguish bare land values from the value of improvements would most certainly result in unjust assessment. Other practical disadvantages with regard to the Single Tax are pointed out in the chapter dealing with Public Revenues. It will suffice to notice here a few of the main points relating to the practical aspects of Henry George's system of taxation.[3] One of the cardinal defects of the Single Tax would be its lack of elasticity. In every source of taxation there should be a reserve

[1] E. R. A. Seligman, *Essays in Taxation*, The Macmillan Co., 1923, pp. 70–71.

[2] Even economists who, like Marshall, accept the Ricardian theory of rent in its essential features, admit that the distinction between land and capital is a loose one. Cf. A. Marshall, *Principles of Economics*, Macmillan, London, 1920, 8th ed., p. 144.

[3] See also E. R. A. Seligman, *op. cit.*, Chap. III, on which the following observations are largely based.

on which to draw in case of emergency or sudden need. If the total value of bare lands were taxed (assuming that this value could be ascertained), to the exclusion of all other taxation, there would be no reserve power on which to draw. The Single Tax could not be increased. Where nothing has been left, nothing can be taken. Even if the entire value of the land were not taken, the Single Tax would inevitably intensify inequalities resulting from unjust assessments, inequalities already apparent in the standards of assessments applied to real estate taxes in the United States, which frequently vary from county to county, and even from property to property in the same county. As a fiscal measure, the income tax is far less susceptible to abuse and inequality of burden.

The Single Tax would be a precarious source of public revenue. Henry George's assumption that land values continually increase has not always been borne out by experience, either in this country or in Europe. While it is true that, in large cities, land values increase in certain localities, it is equally true that they decrease in other sections of the city.

The effect of the Single Tax on farmers.

The most caustic criticism of the Single Tax ever written came from the pen of Voltaire, who was familiar with the physiocrats' idea of the *impot unique.* The physiocrats arrived at the same conclusions as Henry George, though by a different route. Holding that agriculture was the only "productive" occupation, the French economists of the eighteenth century advocated that it alone should be taxed. The land, when man's labor was expended upon it, produced a peculiar surplus over and above the rewards of labor and capital. This surplus, known as the "net product," included all the available revenue of the nation. All taxation, therefore, should fall on the land. Voltaire replied to this by describing the lot of a French peasant who toils laboriously to make a scanty living and suffers from untold hardship during years of agricultural distress. His piece of land would be worth an income of 40 crowns to him if it were not taxed at all. Under the single tax system he is asked to pay 20 crowns in taxation. When he fails to find this sum, he is thrown into prison. After his release he meets an old acquaintance, originally poor but now rolling in wealth and living in proud style, for he has inherited

an income of 400,000 crowns a year. The peasant says to him: "You pay, of course, 200,000 crowns to the State, for I, who have only 40 crowns, must give up half of that sum!" Voltaire's irony is well displayed in the answer he attributes to the rich man:[1]

> "'I contribute to the needs of the State?' he said. 'You are joking, my friend. I inherited my fortune from an uncle who had made 8 millions. . . . I have not one square inch of land; my whole wealth is in securities and in money. I owe nothing to the State. It is for you to give half of your substance. You, who are a landowner. Don't you understand that, if the minister of finance called upon me to assist in supporting the State, he would be a fool who couldn't even make a simple calculation. . . . If, after having imposed a single tax . . . I should still be asked for money, don't you see that this would be double counting? . . .
>
> "'You pay, my friend, you who peacefully enjoy a clear, net revenue of 40 crowns. Serve your country well, and come and dine sometimes with my lackeys.'"

The moral Voltaire wished to point is still applicable today; on what grounds of justice or ethics shall the landowner be singled out for taxation?

Effect of the single tax movement.

One of the beneficial aspects of the single tax movement in this country lies in the fact that the followers of Henry George have been active in pointing out the theoretical and practical defects of the general property tax in the United States. "So far as the destructive side is concerned, single-taxers and other tax reformers may go hand in hand."[2] The modern single tax movement has done much to pave the way for a more equitable distribution of taxation. Furthermore, the writings of Henry George proved stimulating and awakened a renewed interest in economic questions. As the senior author stated some years ago:

> "Now, one may object to Henry George's teachings — as I do most decidedly — and yet rejoice at the good which his works are doing in stimulating the thoughts and promoting the generous aspirations of the people. It would, indeed, not be an easy matter to overestimate the educational value of that one work *Progress and Poverty*. A not inconsiderable part of the wholesome growth of interest in economics is due to its publication."[3]

[1] Œuvres Complétes de Voltaire, Tome 57, *L'Homme de Quarante Ecus*. De l'Imprimerie de la Societe Litteraire-Typographique, S. 1, 1785, pp. 128–131. This apt quotation was brought to our attention by E. R. A. Seligman, *op. cit.*, p. 79.

[2] Seligman, *op. cit.*, p. 75.

[3] R. T. Ely, *The Labor Movement in America*, Crowell, 1886, p. 126.

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CHAPTER XXIII

INTEREST

Interest is the price paid for or imputed to the services of capital. It appears in two forms: loan interest, the amount paid by one man to another for advances of money, or other forms of individual wealth, and *imputed or implicit interest*, that portion of the value of the products of industry which is attributed or imputed to the services of capital goods, as distinct from the services of land and labor. Interest is usually expressed as a rate *per centum* of the amount of a loan or investment. Like other things which are sold or leased in an organized market, loan capital takes many forms adapted to the wants and whims of the customers, in this case the borrowers.

Gross interest and net interest.

Net interest is pure interest — the amount necessary to recompense the marginal lender for his "abstinence" from immediate consumption expenditure. Gross interest — the interest actually paid on loans — includes payments for other elements as well. In the first place, actual interest often includes payment for the supervision which the capitalist has to give to his investment. Even the man who "lives on his income" usually devotes some time to the investigation of the safety of different possible investments, to the collection of interest and principal, and similar activities. The net earnings of savings banks — the difference between the interest they get on their investments and the interest they pay their depositors — are partly a payment for this element of supervision.

A second element in gross interest is the payment for the risk borne by lender or investor of losing all or part of his expected return (including principal and interest). This does not mean that gross interest contains an element of insurance, because when people invest money they cannot insure themselves against loss,

for no central fund exists into which premiums are paid and from which losses can be made good. The fact is simply that investors will not take greater risks without the prospect of greater gains. There is some element of speculation in all investments but the very safest, and the extra income received on the more hazardous loans is profit rather than insurance.

Objections to interest taking.

It is only in modern times that interest has been generally considered a legitimate and necessary form of income. The strong denunciations of usury contained in both the Old and New Testaments are denunciations of interest taking, for the word "usury" formerly meant any kind of interest, and not merely excessive interest, as at present. The opinion of early thinkers upon this subject is illustrated by Aristotle's dictum that "money was intended to be used in exchange, but not to increase at interest." During the greater part of the Middle Ages the authority and teaching of the Church was set definitely against the taking of interest in any form. In the middle of the fourteenth century the prohibition of usury was incorporated in the civil law. These objections, however, related generally to loan interest, and particularly to interest on money lent for personal consumption; for capital was not considered one of the factors in production until comparatively modern times. In the fifteenth century, when opportunities for the profitable use of money had appeared in such forms as the purchase of rights to receive land rents, or partnership ventures in trade (where interest was held to be justified by the risk incurred), the writers on church law admitted the legitimacy not only of such gainful employments of money, but also of interest on loans in many cases. The justification of loan interest at first assumed many curious forms. It was regarded in some cases as a fine for delay in repaying a loan, so that lenders often resorted to the subterfuge of lending money gratuitously for a nominal period, the real agreement being that they were to get back their principal, with a fine for the delay added, at a later date. In other cases loan interest was justified as a payment for the loss of the possible gains which the lender might have got by using his money himself. Usury, which at first meant any kind of loan interest, came to mean interest on money loans to relieve personal needs rather than for gainful

employment, then interest on loans in which the element of risk was lacking, and finally, excessively high interest. Even today, many socialists insist that interest is only a result of the system of the private ownership of capital and that with the abolition of private property in production goods what is now counted as interest would become part of the wages of labor. It is important, therefore, that we should understand clearly why interest has to be paid, as well as that we should study the factors determining the rate of interest. We shall find that the explanation of the necessity of interest is really a part of the explanation of the rate of interest.

Inadequate explanations of interest.

An idea that naturally suggests itself is that interest has to be paid for the use of money because "money can be profitably employed in business." But this assumes that interest already exists. What we want to know is *why* and *how* money can be profitably employed in business.

A similar attempt at an explanation is conveyed by the statement that interest is paid because "capital is productive." By the use of capital goods, it is pointed out, the product of industry is greatly increased over what could be produced by labor and land alone. This of course is true, but it does not explain interest. The problem of interest relates to the *value* of the product not to the *amount* of the product. How does the use of capital increase the selling value of the product *enough to pay not only for the capital actually used up in production, but also to pay in addition a surplus in the form of interest upon the capital employed?*

How interest is possible.

We shall find the analysis of our problem somewhat simpler if we divide it into parts: first, how interest is *possible;* and second, why interest *must* be paid.

Interest is possible because *capital goods under the guidance of entrepreneurs* are productive. Mere tools and machinery do not *produce value:* men have spent years in constructing so-called perpetual-motion machines that are worthless. Even land will not produce an income without the expenditure of man's energy and initiative; land will grow weeds as well as potatoes; and some gentlemen farmers spend a dollar to "produce" a bushel of potatoes which sells for 60 cents. But capital goods under the

guidance of wise entrepreneurs do help to produce both things and values. It is the business of the entrepreneur to see that land and labor are used wisely; and from his point of view they are used wisely if they are used in the production of things that consumers want, and want intensely enough to pay such prices as will enable the entrepreneur to pay for the land and labor employed. He will not employ capital goods in production unless the prices he expects to get for his products will cover the expenses he incurs by using capital. It is possible to pay interest for precisely the same reasons that make it possible to pay wages and rents.

Why interest is necessary.

Interest is possible because capital goods are productive, physically and in the pecuniary or value sense. Interest is necessary because capital goods are scarce: their supply is limited. As explained in Chapter VI we impute no "productivity" to free goods like air. They may be indispensable to production in the physical sense; but because their supply is unlimited we impute to them no part in the production of value.

Why is the supply of capital goods limited? Because it takes time and labor to produce them. The time element in their production is what we are chiefly interested in at this point. So long as the members of a community produce only what they consume directly, or so long as they spend all their money incomes for things used up immediately in the satisfaction of their wants, there will be no accumulation of capital. In order that capital goods shall be available, it is necessary that some members of the community turn aside from producing things used in satisfying immediate wants and devote their time to the production of goods that will be used in further production. Whether they do this on their own account, or whether they are paid for their work by others while they are doing it, some *postponing* of consumption is necessary. In the one case, those who produce capital goods give up temporarily the immediate satisfaction they might otherwise have procured. In the other case, those who pay for the work of producing capital goods give up immediate satisfactions. In either case, the production of capital involves the sacrifice of *waiting* on the part of some members of the community. This element of postponement or waiting is of the essence of capital.

But why should waiting be called a sacrifice? Are not those

who give up present satisfactions in order that capital goods may be produced fully repaid if they get back as much as they give up? Why should capital not be furnished for productive purposes if those who furnish it get back an exact nominal equivalent? *Why should an additional payment in the form of interest be necessary?*

Time preference.

The answer is found in time preference. In general we appraise the present use of wealth higher than its future use. We visualize the present more vividly than we do the future; we yield sometimes to the temptation of satisfying the more trivial wants of the present, even when we know that we are thereby rendering uncertain the satisfaction of more important wants in the future; and when we take considerable periods of time into account, we may say that the uncertainty of life itself gives us rational ground for preferring present to possible future satisfactions. Notwithstanding the vast difference between civilized men and savages in this respect — for many of the latter seem to have absolutely no regard for future needs — waiting is a sacrifice. To induce saving in the volume required for capitalistic production, a premium or reward for waiting has to be paid in the form of interest. This is most fundamental in the explanation of interest.

It must not be inferred that, in the actual economic life of today, *no capital* would be supplied if interest were not paid. Other motives besides the receipt of payment induce men to save parts of their incomes. The desire to provide for old age and for such contingencies as sickness and accident, or to make provision for one's family in case of death, would result in a considerable amount of saving. The mere pride of accumulation, and the fact that the satisfaction of many important wants such as the desire to own a house, or the desire for foreign travel, necessitate the gradual accumulation of what is to most persons a considerable sum of money are also stimuli for the supply of capital by many savers. *But none of these motives would induce men to invest their savings in productive undertakings if no interest at all were paid. The savings might just as well be hoarded.* The investment element is essential. We use the words "waiting," "time preference," "postponement," as connoting this idea of sacrificing immediate use or possession by investment. A very low rate of interest

would bring about investment in productive undertakings. Even this low interest rate would be sufficient to balance, in some cases, the difference between the intensity of present and future wants. In a similar way every increase in the interest rate would induce more persons to save.

At any given time, accordingly, the interest rate is considerably higher than is necessary to induce a large part of the waiting by those who furnish capital funds for productive purposes. It is just high enough, however, to compensate for *marginal waiting*, which is the waiting that would not take place if the interest rate were any lower. If the interest rate is 5 per cent, a dollar today is worth a dollar and five cents a year from today, not to *all* savers, but to the *marginal* savers.

The demand for and the supply of capital.

In the preceding pages we have mentioned some of the controlling factors of the demand and supply which determine interest as the price of the use of capital — particularly capital in the liquid form of loan funds.

The principal part of the demand comes from the business world, where loans are needed for new enterprises, for the development of established concerns, and for the replacement of worn-out capital to finance trade and so on. In addition, consumers demand capital to build residences to be occupied by their owners, to meet emergencies arising in times of sickness and death, and to satisfy the fleeting extravagances of wastrels. Governments make very large demands for capital and use the funds partly for production (*e.g.* the reclaiming of land), partly for consumption (*e.g.* facilities for public recreation), and in very large part for military preparation and war.

It is difficult to say of what the marginal demand consists. At times it appears to come from speculators who may occasionally pay as high as 12 or 15 per cent for call loans and take such loans in large volume. Or it may come from those classes which constituted the principal borrowers in medieval days when interest was condemned as immoral — spendthrifts or necessitous consumption borrowers upon whom the loan-sharks prey. In these cases, it is not the productivity of the loan which makes it possible to pay interest. Many of these loans are never repaid, or when they are repaid, it is frequently from subsequent saving. This

calls attention to the large amount of borrowing now done as a method of saving. Many thrifty people borrow to buy bonds, gradually clearing off the debt by later savings. This use of loans was popularized by the Liberty Loan campaigns of the World War. Whoever may constitute the marginal "demanders" this much may be said: it is "productive" use which makes it possible to pay most of the interest which is paid; and the withdrawal from the loan market of the "productive borrowers" would exercise a greater immediate effect upon the interest rate than the withdrawal of all other borrowers combined.

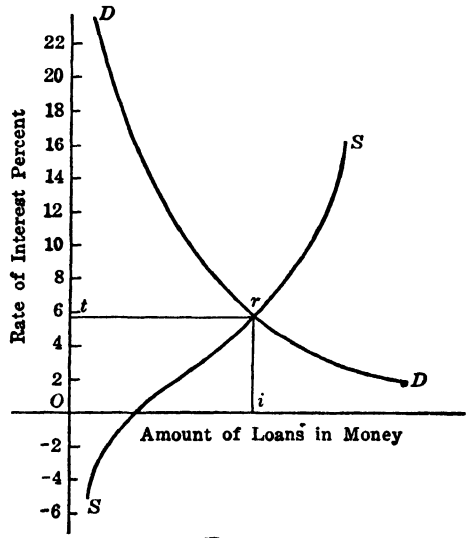


FIG. 1

When considering the various classes of people who supply capital, we begin with the small class of savers who — if necessary — would *pay* some trustworthy custodian to keep their savings for them; the savers who would take *negative* interest rather than make no provision for their own future wants. Then comes an important class of savers who are bent upon putting aside enough money before they die to leave their families with a minimum income, the desired amount of which is more or less definitely fixed in their minds. Such people will actually save more when interest rates are low than when they are high, but even this class saves largely because interest is paid. They may save more when the interest rate is 4 per cent than when it is 5 per cent; but it is highly improbable that they would save more if the maximum interest rate were 1 per cent.

The several constituent elements of demand and supply may be combined into hypothetical schedules of potential demand and potential supply which graphically takes the form used to illustrate the interaction of demand and supply in fixing the price of consumption goods. (Figure 1 on this page does not rest on a statistical basis and is purely illustrative.) The supply curve

starts *below* the horizontal axis, illustrating negative interest and the small potential supply of capital to safeguard for which the savers would, if necessary, pay something to a trusted custodian. In this diagram *ir* equals the rate of interest. The curves of demand and supply are shown to be comparatively inelastic, as they are believed to be under average conditions.

The rate of interest.

In the preceding sketch of the factors which determine the interest rate, nothing has been said about the effect of the supply of money upon the interest rate. In the past, recurrent agitations have arisen for "more money" or "cheaper money" based largely on the belief that interest (as the "price of money") would go down as the quantity of money available went up.

The belief that in the long run a larger volume of money will bring about lower interest rates has practically no foundation. A sudden increase in the available supply of money may have that immediate effect, although even in the short run different results may follow. But in the long run any permanent increase in the volume of money results in higher prices and not in lower interest rates. There is no reason why interest, as the premium for the use of dollars, should be different for cheap dollars than it is for dear dollars. Any force which affects in the same way numerator and denominator of the fraction which constitutes the interest rate cannot affect the rate itself.

Fluctuations of the interest rate.

Paradoxically, two outstanding characteristics of the interest rates are constancy and variability. Taking a long-time view, their constancy impresses one. It is difficult to make wholly trustworthy comparisons of the rates that have prevailed at different periods, because some important conditions, such as the amount of risk attached to particular types of loans, are by no means constant. Furthermore, interest rates are generally higher in a country where capital is relatively scarce and productive opportunities relatively plentiful — as in the United States before the Civil War — than in a country where the supply of investment funds is relatively large, — as in England at the same period. In Holland — then one of the leading commercial nations — rates of interest in the seventeenth century were as low as 3 per cent. In England during the eighteenth century rates

were, on the whole, not far above what they were during the nineteenth century, although a definite general trend downward was noticeable. The change was small as compared with the revolution in methods of production and the enormously increased use of capital in industry. *It would seem that in seeking an explanation of the movement of interest rates through long periods of time we must attach especial importance, not to the "productivity" of capital, or to the changing effectiveness of roundabout, capitalistic methods of production, but to the persistent traits of human psychology.* "Impatience," "time preference," "the sacrifice involved in waiting" are terms used to express this enduring and apparently fairly constant element of human nature.

Within shorter periods of time, however, interest rates are found to exhibit marked fluctuations. In particular, they advance in periods of rising prices and decline when prices fall, although generally their movement lags somewhat behind the movement of prices. At one period in the business cycle surplus bank reserves create a supply of potential investment funds, but under the pressure of the demand created by advancing prices and profits interest rates rise until such time as the slackening of demand again gives bank reserves an opportunity to recuperate. Then a period of low rates generally ensues until prices and profits move upward again.

The real gains made by the money-lender, however, are often less when prices and interest rates are advancing than when they are declining. For the increase in the interest he is able to get is usually less than the shrinkage in the purchasing power of the principal of his loan or investment. In August, 1923, the discount rate of the German Reichsbank stood at 24 per cent. That rate seems extremely high, and yet because of the rapid decline of the purchasing power of the mark, a loan for 30 days made at 24 per cent per annum would have involved a loss to the lender.

Banks and the supply of investment funds.

What has just been said above about the influence exerted upon interest rates by the state of bank reserves may suggest to the reader that some modifications are necessary in the general theory of interest that has been outlined in this chapter. The amount of money available for bank reserves, together with the extent to which the general organization of a country's banking system

makes it possible to erect a structure of credit upon the foundation of the available bank reserves, may seem to be quite as important in determining the amount of the supply of investment funds as is the amount of voluntary saving. Such a view would be both right and wrong. It is wrong in that it fails to take account of the fact that in the long run increases in the supply of bank credit, like increases in other forms of purchasing power, are absorbed in higher prices. In the end the net effect of a permanent increase in the supply of bank credit is that both capital goods and consumption goods command higher prices. Other things being equal, there will be no change in the amount of present goods that must be sacrificed in order to secure a given quantum of future goods.

The real significance of banking in its relation to the supply of investment funds is that it profoundly modifies the mechanism by which savings are actually effected. Business profits are probably the most important single source of investment funds. In periods of advancing prices and advancing profits a relatively large proportion of the national income is invested in capital goods instead of being expended for immediate satisfactions. This does not mean that in such periods entrepreneurs as a class are making unusually heavy sacrifices by "saving." Quite otherwise. Such curtailing of consumption as occurs in such periods falls very largely upon other classes. High prices are the mechanism by which the burden of saving is spread over the whole body of consumers; and the way in which that burden is apportioned depends upon the way in which the money incomes of different classes of consumers are affected by the advance of prices. Just as monetary inflation at the instance of the government involves a disguised form of taxation, so cyclical expansions of bank credit involve a disguised form of involuntary saving. Although this is a "short-time" phenomenon, its long-run effects are by no means negligible. The capital goods produced and accumulated in a typical business cycle are quite certainly somewhat different in kind and probably considerably greater in amount than would have been produced and accumulated in the same period if there had been no cyclical movement of credit, prices, and profits. Banking, therefore, as at present conducted, probably has the net effect of accelerating the rate at which capital is accumulated.

The replacement of capital.

The preceding analysis makes it clear that saving is a prerequisite to the formation of *new* capital, or to an *increase* of the supply of capital goods already in existence. We must, however, take into account the fact that almost all kinds of capital goods are continually being used up in production. This using up may be the result of a single use, or it may be a gradual wearing out.

There is no reason why unproductive capital goods should be kept intact in amount. He would be a foolish business man who would continue to reinvest money in raw materials in the face of a diminishing demand for the finished product. Even when profitable, capital goods used up need not be replaced unless the entrepreneur so chooses. A farmer may have saved for years in order to buy a reaper. The reaper will enable him to raise more wheat or to produce the same amount of wheat at less expense. In either case, it will mean an increase in his net money income. He may, if he chooses, set aside enough of this added income so that, when the first reaper wears out, his accumulated funds will replace it. In this way the reaper "replaces itself." But the farmer may, if he prefers, use all of his increased income in the purchase of additional comforts and luxuries for himself and his family.

Similar illustrations can be found in other fields. Many business enterprises have failed because business men have "lived beyond their incomes" — which often means simply that they have not replaced their income-yielding capital as rapidly as they have used it up. At one time it was possible for American railways to maintain a spacious prosperity for years by paying "unearned dividends," that is, by letting their capital (roadbed, rolling stock, and buildings) deteriorate through not expending enough of their gross income in the maintenance of way and equipment.

The stock of capital goods in existence at any one time is the result of past savings. *But this stock of capital goods cannot be maintained intact without more saving.* Thus, the sacrifice of present satisfactions for future satisfactions which society undergoes in order to reap the advantages of capitalistic production is not something done "once for all," but must be a continuous process.

Even if a fixed and definite annual sum were devoted to maintaining the stock of capital goods, it would not be used wholly in replacing the particular sorts of capital goods that had been used up in production. Entrepreneurs often prove to be mistaken with respect to the profitableness of certain sorts of capital goods. New inventions or new methods of production may upset their calculations, and capricious changes in demand may have a similar effect. Even if there were no *increase* in the aggregate stock of capital goods, there would be a continual shifting from the less to the more profitable forms. The ease with which investment can be shifted from some sorts of capital goods to others, the nicety with which the supply of different varieties of capital goods can be adjusted to the current demand for the products to which they contribute, as well as the accuracy with which the aggregate supply of capital goods of all kinds can be adjusted to changing economic conditions, depend in part upon the degree to which capital goods are specialized and durable.

Specialized and unspecialized capital goods.

Specialized capital goods can be used only for one purpose. A railway roadbed or an irrigation ditch is absolutely specialized and useful only for the particular purposes for which it was constructed. If the railway or the irrigation project should fail, the money put into constructing the roadbed or digging the ditch would be lost. A manufacturing firm may install expensive specially-designed machinery. If the new machines prove unsuccessful, or if their intended use proves unprofitable, their money value may sink to their price as scrap iron.

Unspecialized capital goods are found in the forms of tools and machines of standard models that may be used in different industries, raw materials that can be made up into different varieties of finished products, and the like. The distinction here emphasized is only one of degree. Some capital goods are partly specialized, in the sense that they are better adapted for some uses than for others. Buildings intended for office purposes are sometimes given over to small manufacturing concerns, while a building intended for a factory may serve fairly well as a warehouse.

The durability of capital goods.

Some forms of capital goods are destroyed by a single use. The fuel and raw materials used in a manufacturing establishment

and the merchant's stock in trade belong in this category. The merchant's stock in trade becomes consumption goods in the hands of consumers; raw materials reappear in the finished product, as do other sorts of capital goods, although in a less apparent manner. These forms of capital investments yield their services only once, and afterward cease to be capital, though they may have successors in new forms of capital goods.

From such transient forms we pass by imperceptible gradations to capital goods which yield a long succession of services, the series culminating in such durable forms as buildings used for productive purposes, or railway roadbeds. If a particular sort of capital goods lasts exactly a year — the period usually taken as a unit in computing the rate of interest — estimating the expense of using it is a simple matter. If, for example, the rate of interest which an entrepreneur sets as his desired minimum is 6 per cent, he will not invest $1,000 in such capital goods unless he estimates that it will increase his product by an amount that will sell for at least $1,060.

In the case of the more transient forms the computation is usually made by taking into account the "rate of turnover." If the raw materials a manufacturer purchases during a year cost $3,000, but if only $1,000 is invested in raw materials at any time, the capital is said to be "turned over" three times during the course of the year. The interest rate is computed only on the average amount of capital "tied up," so that interest of 2 per cent on each turnover would amount to 6 per cent on the actual investment.

In the case of the more durable forms of capital the computation is more complicated. Here the entrepreneur has to take into account not only the original cost of the capital good and the amounts which it will add to his annual products, but also its durability, and the fact that a large part of the income which it will earn for him is *future* income. This future income will not be appraised so highly as the same amount of present income would be.

Capital and wages.

Wages are commonly advanced to workmen before the goods they produce are sold. A farmer, for example, has to pay his harvest hands before he sells his wheat. Whether he borrows

the amount needed for wages, or whether he pays it out of his own savings, interest on the amount advanced has to be counted among the expenses of production, and the wages advanced are, for the time being, an investment. In most manufacturing establishments a more or less lengthy average period of time elapses between the work actually done by the workmen and the sale of the products of their work. In such establishments a considerable amount of capital is invested in wage advances. This does not mean that we are to consider the laborers as being in any sense capital goods. For the gradual process by which the raw material becomes the finished product is itself a continuous investment of capital. *All of the various expenses of production are really different ways of investing money in capital goods.* Add to the cost of the raw material all of the expenses (including wages and payments of rent and interest as well) incurred in order to produce the finished product of the establishment, and the sum is the total investment of capital goods in the finished product. A complete inventory of capital goods would include buildings, machinery, raw materials, finished products that are ready for sale, and also the products on hand at any one time in a partly-finished state. Thus the payment of wages is only one of the ways in which money is invested in capital goods.

Investment a cumulative process.

Not only does the entrepreneur invest in machines and buildings, but his purchases of raw materials, his advances of wages to laborers, the interest he pays on borrowed funds, the rent or purchase price he pays for his land, and his various competitive selling expenses are also investments. No such investments can be regarded as remunerative unless the entrepreneur gets in the selling prices of his products enough to provide interest upon such outlays as well as to cover the outlays themselves. These facts have already been noted, but the full significance of the role which capital plays in production does not appear until we view the activities of the individual entrepreneur as only a link in a continuous chain.

The point of special significance is that the finished products sold by some entrepreneurs constitute the capital goods (raw materials, productive appliances, advertising media, and the like) bought by other entrepreneurs. When one entrepreneur sells

his products to another entrepreneur, his period of waiting is completed, so far as the production of these particular units of goods is concerned. But the waiting is only transferred to the other entrepreneur, who adds further expenditures of money and, in turn, gets his remuneration from the sale of his product. The important conclusion to which this analysis leads is that (so far as entrepreneurs have been accurate in their estimates) the prices consumers are paying today for finished goods cover not only all the money expended in the past in producing these goods, but also the interest on all such expenditures from the time when they entered the production chain until the time when the finished goods are sold to the ultimate consumer.

Similarly, the expenditures made by entrepreneurs in producing goods that will directly or indirectly satisfy future wants must (so far as these entrepreneurs and the others who will control the remaining steps in the productive process are accurate in their estimates) be covered, together with accrued interest, by the prices consumers will pay in the future. Present wants are satisfied by means of the productive efforts of the past. Those productive efforts were paid for out of past income, but the outlays were made in the expectation that present prices would suffice to repay them, with interest. A particular entrepreneur may be interested only in disposing of his product at remunerative prices to the entrepreneurs who stand next to him in the productive series, but this does not affect the essential nature of investment, which is a cumulative process from the social point of view.

One further fact appears clearly: If we could trace the expense of producing any consumption good back through the complete series of services and of production goods that have contributed to its making, we would find that this expense reduces itself, ultimately, to *rent, wages, and interest,* not counting what remains in the hands of entrepreneurs as profits.

The sources of investment funds.

The most important source of investment funds and the most important form of investment is found in the entrepreneur's customary practice of reinvesting a large part of his gross income in the business so as to maintain his investment intact. The effect of the control exercised over business policies by modern accounting is to strengthen this practice. The capital assets

of a solvent business corporation will at least be maintained at a constant level, since maintenance and replacement is counted as part of the current expense of conducting a business undertaking.

It rarely happens, however, that income and expense are so evenly balanced that the one always suffices to provide for the other. A temporary surplus may be followed by a temporary deficit. Borrowing at the banks helps to smooth out some of these irregularities. Moreover, while the entrepreneur need not continue to renew his capital investments unless he chooses, he is at liberty to do even more than that if he pleases and if he is able. That is, his *profits* — the excess of his gross income over his necessary and normal expenditures — may be drawn upon to increase his investment. Savings of the type mentioned above serve merely to maintain and replace the country's stock of capital goods. Savings made out of profits result in *additions* to that stock. Business profits are today the largest single source of new investment funds. Dr. W. I. King, in a study of the total amount of savings in the United States from 1909 to 1918, concludes that "the business enterprises of the country are normally responsible for about 40 per cent of the entire savings of the nation," and that "this percentage increases in years of business prosperity and diminishes in times of depression." [1]

Such statistical data as are available show no correspondence between interest rates and the volume of corporation savings. Interest rates rose from 1919 to 1920, but corporate savings fell off. Again, interest rates were lower in 1922 than in 1921 but the volume of corporate savings probably increased more than threefold.

Corporations do not build up surpluses to take advantage of high interest rates, but for entirely different purposes: to stabilize dividends, to make extensions, and for a variety of other purposes not affected by the interest rate. Above all, corporations save when they can, or whenever they are prosperous. On this point the statistical evidence is convincing. Both individual and

[1] "The Net Volume of Savings in the United States," *Journal of the American Statistical Association* (December, 1922), Vol. XVIII, p. 470. The proportion of the total supply of investment capital that is contributed by business profits in our opinion is larger than Dr. King's figures indicate. His estimate of the total volume of saving includes the net increase of the stock of durable consumption goods, and his estimate of the amount of "business savings" does not include profits that are reinvested after being "taken out" of a business, *e.g.*, in corporation dividends.

corporate savings increase with prosperity. The well-to-do save a larger proportion of their incomes than the poor. But both rich and poor save more when times are good. The fact is significant in many connections. It supports the conclusion, based upon substantial evidence, that in prosperous countries capital grows at an accelerating rate if not checked by war.

The connection between prosperity and capital accumulation should not be misinterpreted. By prosperity we do not mean speculative booms. Even the speculative boom may accelerate saving by a process of compulsion and it is possible that the new or additional saving may not be wholly lost in the following period of depression; but such increase in capital is bought at the price of an inequitable redistribution or concentration of wealth and of a contagious dissemination of unwholesome speculative habits.

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CHAPTER XXIV

PROFITS

In the definition and analysis of profits we again observe that while the substance of economics remains unchanged in its essential elements, these elements are variable in both their material values and their social importance. In a dynamic society, economic concepts, which are few and simple when the society is young, grow in number and complexity with the passing of time. The study of profits presents a conspicuous example of this evolutionary change. Four quite distinct concepts of profits have been developed, and, in addition, the term is frequently used in derivative or auxiliary forms. The four distinct concepts are *ordinary profits*, *business profits*, *economic profits*, and *pure profits*. Auxiliary concepts of profits include "speculative profits," "promoters' profits," "gross profits," "net profits," and "unearned profits."

Ordinary profits.

When business was confined to the owner-manager type of enterprise, profit was a simple matter of ordinary business gain calculated by subtracting the direct outlay of the business during a given period from the concurrent receipts or total income. The difference between total income and direct outlay represented *profit* or *loss*. This concept of profits continues to prevail in the single entrepreneur and the partnership type of business organization, especially, when analytic accounting methods are not used.[1] We, therefore, begin our definition of profits with the designation of *ordinary profit as the difference between the total receipts realized from a business and the direct costs of conducting the business.* The recorded profit may be either a gain or a loss — the balance shown on a simple loss and gain account. Ordinary profits are

[1] In recent years the Department of Agriculture has endeavored to place agriculture upon a "business basis" and to install a scientific system of farm accounts which will eliminate the apparent inaccuracies of "ordinary profits" and reveal "business profits" instead.

also customarily associated with detached business transactions. For example, railway shares are bought at 75 and sold a week later at 77. The profit is reported to be $2 a share, incidental brokerage and interest charges being neglected. Again, a residence may be purchased for $15,000, and a year thereafter sold for $17,000. Account may be taken of commissions and taxes paid, interest and depreciation accumulated, and rentals received, during the period intervening between purchase and resale, thus arriving at a net profit of say $1,500. However, in either case, the principle of "buying for a little less and selling for a little more" remains the basis of this concept which we call *ordinary profit.* Ordinary profits may be expressed as *gross* or *net.* The latter, of course, being the more accurate manner of expression.

Business profits.

With the growing prevalence of the joint stock company and the corporation, the method of accounting profits was necessarily changed because of the replacement of the owner-manager in the business organization by the stockholder and the salaried manager. In this instance, the manager's services are compensated, in part at least,[1] by a salary, or "wages of management," which becomes a part of "costs." Furthermore, a larger part of the capital is borrowed than is customary in one-man and partnership units, and the resulting contract interest paid for borrowed capital also becomes a direct cost item. A proper accounting of executives' salaries and contract interest materially reduces the residual amount referred to above as "ordinary profit." This amount, which more accurately denotes the net annual proceeds of the business than does ordinary profit, is called *business profit* or net earnings, and usually becomes available for dividends to stockholders. This method of designating business profits as the peculiar prerogative of the stockholder indicates a second concept of profit sometimes designated as accounting profit. *Business profit is defined as the residual sum available for distribution to owners or stockholders of an enterprise after deducting from the total receipts all direct and indirect costs of maintaining and operating the business, excepting interest on capital contributed by the owners or stockholders.*

[1] The prevailing practice, especially in larger enterprises, of the payment of annual bonuses to officials during prosperous times supplies an elastic supplement to salary scales.

factors governing the supply and demand of labor are in some respects very different from those governing the supply of and demand for commodities.

We must also consider the contribution which labor makes to production. How can it be measured? How can we distinguish it from the part of the total product attributable to land and capital? We cannot say that the product of labor is to be measured by the difference between the total product produced by the co-operation of labor, land, and capital and the product which would be produced by land and capital working alone; for this last of course would be zero.

Marginal productivity may be considered a determinant of labor's share in the total product, especially in the sense of fixing a maximum limit to its share. Although it is extremely difficult in any given case to allocate a specific physical or pecuniary evaluation upon labor's marginal productivity, for theoretical purposes we may consider it to be that share of the final aggregate product which is added by the employment of the marginal worker, or which would be lost by the discharge of one of the existing force employed. A careful entrepreneur will seldom pay wages equivalent to a larger share than that so fixed, because to do so would mean diminished profits, possible losses, or even ruin for himself.

The minimum limit of wages appears to be fixed by the subsistence income necessary to maintain the labor force at the level of numbers, efficiency, and morale required by the productive system. The wages actually paid in money, and hence the real wages and the share in the total product, will ordinarily fluctuate between these limits in accordance with the relative strength in bargaining power of the laborer and the entrepreneur, a factor which varies with the business cycle, with location and environment, and with many other circumstances.

It cannot be concluded that the marginal productivity theory of wages or production has been confirmed statistically. Its statistical basis is highly defective in parts; and it may never be possible to test the theory adequately by statistics. In the final analysis its chief basis is found in business competition. If entrepreneurs wish to make money, as they do, and if they compete for the services of efficient laborers, as they do, then how is it possible that wages shall do other than approximate the present worth of the imputed marginal product of labor? If wages are

help determine wage scales and prices, and may even undertake to assure a "reasonable return" to the business.

Pure profits.

The concept of economic profit may be modified to fit the situation just described by placing management on a salary scale, comparable to labor, and insuring, at the expense of the business, all "acceptable" risks of the enterprise, including the lives of the more important managers whose death might result in a serious loss to the business.

Considering the enterprise as a whole, and merging management with skilled-labor on a salary basis, everything that goes into the business is paid for, practically, on a contract basis. All personal services from the president down are salaried, land and capital are hired, materials are bought, and insurable risks are placed with agencies established for this purpose. Economic profit, thereby, becomes for the most part absorbed in costs. But, after all annual payments have been made, there may be something left over — this is a profit accruing to the enterprise itself. This profit, which excludes all shares or payments attributable to land, labor, capital, or salaried management, is called *pure profit.* It is possible, however, that instead of a surplus over interest, wages, salaries, rent, cost of insurance risks, etc., there may be no *surplus* as profit. There may be instead an equilibrium between receipts and expenditures, or there may be a loss which must be made up out of past or future profits. Whether or not there is an aggregate pure profit or loss in enterprise existing at the present time is a question to which there is no certain answer.

The concept of pure profit as the net income of a business as a whole, rather than the income of the production factors used in the business, is most effectively presented by John Bates Clark, "dean of American economists," in his epochal work *The Distribution of Wealth.*[1] Clark reasons upon the assumption that a naturally competitive economic system *tends* to approach a normal condition which is *static* — an equilibrium of perfect competition. When this normal adjustment is achieved, profit will disappear. Business managers must, of course, receive compensation, but their reward will be of the nature of wages, a payment for organizing and administrative ability. It will contain nothing in the

[1] John Bates Clark, *The Distribution of Wealth.*

nature of a surplus which they may claim merely by reason of their strategic position in the business organization. But, until a state of balanced competition is reached, when the best available methods will have been adopted and advantages equalized among all competing firms, gains and losses will continue. When there are such gains, they result from the imperfections of competition, have no necessary character as a reward to any factor of production and consequently accrue as *pure profits* to the enterprise.

Of course, Professor Clark entertained no expectation that the "normal state of competitive equilibrium" will ever be reached, but he did argue that the trend of the present economic system is in that direction. Consequently profits will continue as a *pure surplus* or unnecessary *return to fortunate enterprise* in excess of costs of production.[1]

Pure profits *are defined as net income accruing to business units after all expenses, both direct and indirect, including costs of materials and personal services and charges for insurance and for the use of land and capital, have been made.* They tend to disappear as a state of balanced competition is approached.

Comparison of different concepts of profits.

The first two concepts of profit defined and briefly outlined above are not fundamentally different. *Pure profit* is a "common" component of each. *Ordinary profit* differs from *pure profit* only in the amount of salaries (including wages), rent, and interest which, as a matter of practical convenience, may be permitted to remain undifferentiated in the residual value-product of the enterprise. For example, in the owner-manager type of enterprise the sole proprietors or the co-partners, as the case may be, not only exercise the initiative, authority, and responsibility of *management*, but also contribute the invested capital, may own the occupied land or location, and may perform a part or all of the labor required. When all direct "expenses" for the year are paid, there remains an amount which includes unpaid salary for such labor and management as were performed by the owner-managers, also unpaid interest on the capital they contributed and unpaid rent on their land or other properties used. By proper accounting, these derelict cost items may be separated or allocated

[1] Clark, *op. cit.*, p. 77.

and added to operating costs and fixed charges. The result will be a differentiated statement of *all costs* and a residual item of *pure profits.*

Referring now to the modern accounting of "business-profits," as applied to corporation gains,[1] we note that in the corporation, both labor and "management" are salaried. Economic profits excepting chance gains are therefore merged with wages in the expense account. The capital account provides for the payment of interest on all borrowed capital and depreciation on all properties, and also the payment of rentals and taxes. The residual annual earnings of the business, after "operating expenses" and "fixed charges" are deducted from total receipts, becomes available for the payment of dividends to stockholders. But the stockholders appear to have contributed only a *part of the capital* essential to the conduct of the business and little or none of the *management.* Is the "business profit" thus converted to dividend payments to be considered as a specific reward for the use of that part of the total capital which was contributed by the stockholders? If so, why differentiate between interest on borrowed capital and the return on the subscribed capital of stockholders? What possible relation can dividend payments of this kind have to the economic concept of profits, *i.e.*, compensation for management, or to the concept of pure profits, *i.e.*, an undifferentiated return to the business as a whole? These questions are particularly pertinent when the dividend payments are far in excess of any reasonable interest rate on the capital equity of the stockholders; they are equally pertinent when dividend rates are below current interest rates on contract capital. In order to arrive at reasonable answers to the above queries it is necessary to examine certain aspects of profits that have been passed over in the above definitions.

Risk and profits.

It has been said that "risk taking is nearly synonymous with enterprise." This statement, which is only a half-truth, is sometimes taken to justify the frequent assertion that "profits are compensation for risk-taking." From the latter assumption, a plausible deduction frequently has inspired the wholly meaningless proposition that "a fair profit should be commensurate with the

[1] Also to other forms of business units; see p. 506.

risk of the business": meaningless, because business risks, by their very nature, are incommensurable.

From whatever point of view one considers the future, it is charged with uncertainty and risk. There are certain businesses and certain stages in the development of every business that are burdened with great uncertainty and consequent risk. In fact, any business, during the period of promotion, organization, and initial operation occupies a precarious position. Farming, the mining of rare and precious metals, fishing, speculation, and the theatrical business are examples of the more heavily risk-burdened occupations. In contrast, public utilities, in general, occupy a much more certain position as regards the future, although the claim of right to receive a profit because of the assumed risks of the business is most often heard from them.

The principal factors of risks which imperil business are the (1) vicissitudes of nature, (2) uncertainties of demand and supply which will determine future prices, (3) uncertain costs of materials and services used in the business, and (4) pure chance or erratic, unforecastable conjunctural circumstances. The fact should not be overlooked that the results of incompetence and dereliction in business management are often explained in terms of the hazards just enumerated. Indeed, defective management (personal failure in judgment, technical knowledge, diligence, or integrity) might well be listed as a fifth factor of business risk. Many unforeseen conditions which contribute to the misfortune of business are not necessarily *unforeseeable*. In other words, an understanding of past and present conditions constitutes a sound basis of judging the logical sequence of cause and effect and of forecasting probable changes and future conditions. Thus, scientific analysis, made possible by modern methods of statistics, may be relied upon to take some of the hazard out of business and is becoming an accepted attribute of standard management methods.

A second consideration in the elimination of business risks is *insurance*. Erratic variations in business conditions which are themselves unforeseeable and uncontrollable are nevertheless subject to the "law of averages," and consequently, are insurable. Agriculture, which is the victim of the most hazardous visitations of nature — frost, drought, flood, hail, insect pests, and diseases of domestic plants and animals — might logically be relieved from most of these risks by insurance. Frost, hail, and lightning

insurance are well known forms of co-operative risk-taking in many farming districts. Drought insurance and crop insurance plans are now being projected under government auspices. Risk of loss by fire, theft, flood, transport, and war are generally insurable by financial corporations specifically created for that purpose. Lloyd's of London is prepared to offer insurance covering risks of nearly every conceivable nature, including "acts of God and the public enemy."

Inasmuch as many business risks are subject to elimination or reduction by the exercise of scientific principles of management, and, since many unforeseeable risks are insurable, the idea that profits are "compensation for risk-taking" is misleading, if not wholly unsound.

Speculation is mentioned above as an occupation involving much risk. This statement requires explanation and reservation. The business of insurance, in general, may be said to deal in risks — risk is its stock in trade. Uncertainties of the future, taken in large numbers and over considerable periods of time, yield to the law of averages and, by statistical treatment, are reducible to probabilities and, in many cases, almost to certainties. For example, at the birth of a child, the age to which it will live is quite uncertain, but of every 100,000 male children born in the United States in any year, almost exactly 59 per cent will survive 50 years and, of 100,000 female births, 64 per cent will probably attain the age of 50 years. Children born in Denmark have a better chance; 68.3 per cent of the males and 80 per cent of the females will reach 50 years of age.[1] The above figures are based upon many thousands of cases averaged over a period of 10 years. An experience of 20 years would give slightly more accurate results. Insurance companies have reduced many uncertainties of both social and economic experience to probabilities "on the average" and over "representative" periods of time. In making business contracts based upon these averages they are not taking risks themselves, but they are able to convert the composite uncertainties of their many clients into very accurate probabilities and can safely "underwrite" them for an annual fee or "premium" and a probable profit. This is "speculation" in the economic sense, the elimination of risk in order to insure profits.

[1] These estimates are based on international experience tables of 1901–1910. Later figures for both countries will doubtless show higher rates of life expectancy.

In contrast with the insurance company, the individual speculator or dealer on the stock exchange, or in the money market, or on the grain and cotton exchange, in his daily transactions, faces the hazards of constant price changes and expects to take losses along with his gains. He believes, however, that his superior understanding of the causes and symptoms of price changes will enable him to forecast such changes on something better than a 50 per cent average. Each "deal" on the speculative markets may be said to be a competitive transaction. Both buyer and seller expect to make a gain. A trader whose judgment is guided by superior experience, skill, and knowledge will, on the average and in the long run, excel his less competent competitors and will show a balance of gains over losses. However, the most experienced and scientifically trained operator on the exchanges is seldom in possession of positive knowledge of the future course of the market; consequently, every transaction carries possibility of loss. Except for the opportunity under certain conditions of "hedging," he has no means of insuring or protecting himself against possible loss. His is, in fact, an occupation of risk-taking for a probable profit. For every chance of gain he risks a chance of loss. From his personal point of view, however, his profits do not appear to be a reward for risk-taking so much as a return to his superior judgment of the future course of the market. It is doubtful if the sum total of speculative transactions of this kind produce any net profit.

In neither of the two outstanding types of risk-taking business do we find convincing evidence that profits are traceable, either in character or amount, to the risk or hazard of the business.

Promoters' profits.

Profit making enterprises are brought into existence as a result of promoting an idea or embryo project into a successful business unit. Reorganizations, combinations, and consolidations involve precisely the same creative scheme of (*a*) an idea, (*b*) a project plan, (*c*) organization, and (*d*) development. These initial essentials of enterprise constitute an "investment" of superior ingenuity and judgment, time, professional services, and sometimes considerable funds. Only projects conceived and guided by superior ingenuity and judgment may be expected to surmount competition and emerge into the zone of pure profits.

Having attained a position whereby earnings are in excess of concurrent expenses the resulting profit, for a time at least, is legitimately claimed by the promoters of the enterprise. It is customary, in fact, necessary in most cases, for promoters to accept as compensation certificates of common stock in the new business. These stocks do not represent *bona fide* capital investments but constitute a continuing claim upon profits in the event of successful development. Professional services are also paid for in common stock. Furthermore, as an incentive in the promotion of industrial and utility consolidations the exchange of a larger number of shares of "new stock" for a given number of shares of "old stock" of each consolidating enterprise is a common practice. It is also a prevailing custom of boards of directors of successful corporations to declare "stock dividends" from time to time, thus augmenting the nominal capitalization of the business without adding to the investment. As a result of these inflationary issues of capital stock a large but unknown proportion of all existing dividend receiving stocks is issued for other than capital raising purposes. The claims of these securities upon the net earnings of enterprise are traceable to the recognition of promoters' rights in the profits of successful enterprise. The original recipients of promoters' rights (non-capital shares) usually dispose of them at market prices determined by actual or anticipated profits of the enterprise and such securities remain a permanent residual charge against the earnings of the corporation.

It is probable that the common stocks of many highly integrated corporate enterprises represent only a nominal or negligible investment of capital and are properly described as evidence of the perpetuated rights of promoters to receive the net profits of enterprise. This assumption fairly well fits the modern concept of business or corporation profits which concedes to the common stockholder residual earnings after all costs are paid. This amount would appear to include actual earnings of any capital investment their shares may represent plus gains due to successful promotion. When the project fails of success, promoters' rewards and consequent profits disappear.

The capitalization of profits.

Thus far in the discussion of profits they have been treated as a share of the product or the return from an enterprise quite dis-

tinct from interest returned to capital. It is a noteworthy peculiarity of corporation finance that any enduring element, quality, or facility of a corporation which consistently contributes to its value as a going concern, although not originally a part of capital, is subject to "capitalization." For example, an invention resulting from the ingenuity or chance observation of a workman is patented at the expense of a few dollars and utilized in the technical improvement of the plant. If this results in an annual increase of $5,000 in the value of the plant, without any additional capital investment, the book value of the plant is arbitrarily increased by $100,000. Possibly, because of this increase in annual profits resulting from plant improvement, 1,000 shares of new securities are issued as stock dividends or are sold for $100,000. This sum, if added to the permanent financial resources of the enterprise, will no doubt also be added to the book value of the enterprise. The skill and ingenuity of a workman has been capitalized at $100,000. In like manner, improvement in the *organization* of the enterprise, a direct result of managerial ability, may be reflected in the annual profits of the enterprise, advancing the dividend rate, in a $1,000,000 enterprise, let us say, from 6 per cent to 9 per cent. Financial practice under the circumstances (unless restrained by public authority as might now happen within the field of public utilities) would doubtless indicate a 50 per cent increase in book value, or additional issues of $500,000 in capital stock, or both. An annual profit of $30,000, due to managerial ability, has been capitalized at $500,000 or more and the return accounted to capital.

Inasmuch as all technological improvements and all managerial improvements tend to be reflected in corporation profits, financial and accounting practice tend to the *capitalization* of any substantial growth in net earnings which appears to be permanent. When such growth in net earnings is traceable to improved or superior management, the principle of economic profits would assign the increase to the compensation of management. The principle of business profits and the resulting system of accounting capitalize the profit increment, increase the book value and probably also the capital stock of the enterprise.[1]

Many years of capitalizing returns from managerial betterments

[1] Land rents are also customarily capitalized in this manner so that the distinction between land and capital, rent and interest, has largely disappeared from business parlance.

have, in many great corporations, entirely destroyed any possibility of distinction between returns to capital invested and returns to management. Consequently, much that appears as capital, presumably accumulated from savings and investments, is an accounting fiction resulting from the capitalization of profits — particularly monopoly profits.

Summary of definitions.

The four concepts of profits defined and discussed above do not constitute a "mutually exclusive" classification of different types of profits, or even definitely different points of view. Obviously, therefore, taken together they do not form a scientific or satisfactory basis for a general treatment of profits. A brief re-examination of ordinary profits, business profits, economic profits, and pure profits will reveal a certain amount of overlapping or duplication in the concepts which they represent. They also present striking differences which, upon examination, are nothing more than degrees of refinement in analysis of production costs. By the elimination of insignificant differences and identifying veiled likenesses, the four concepts of profits, in their essentials, are reducible to two.

Ordinary profits and business profits are identical in principle and differ only in the manner of cost accounting. If an individual or a partnership firm is not obliged to hire labor, land, or capital, there is no immediate point in maintaining a system of accounts which segregates interest, rent, wages, and management costs when none of these things were paid for. A simple system of bookkeeping which maintains a record of actual expenditures and receipts and reveals a balance of proprietor's loss or gain is quite adequate for the needs of the business. What matter if the method of accounting fails to show a complete analysis of direct and indirect costs or of what *would* be paid in interest, wages, rent, and managers' salaries *if* these factors of production *were* hired and paid for? Such facts might be of hypothetical interest but they have no substantial value.

When a business takes on the organization, size, and complexity of a corporation, the system of accounting necessarily becomes more complex and is carried to a point of more complete analysis of the expenditures and receipts and the distribution of gains. In principle, however, the *business profits* thus derived do not differ

substantially from *ordinary profits* — they are what are left after necessary expenses are paid. Some wages, interest, and possibly rent are separated from ordinary profits and added to expenses, but the extension of cost accounting is only because there are more contract payments to be made from receipts and correspondingly fewer proprietor services to share in the residue. There is, therefore, nothing basically different in the concept of business profits from that of ordinary profits except a refinement of accounting essential to the larger and more complex business organization which is not necessary to the simple business unit. Business profit is *therefore* seen to be merely a modification of the concept of ordinary profits which differs only in the practical technique of accounting. It is observed, however, that the determination of business profits falls short of a complete analysis of production costs because it does segregate all capital costs. Such capital costs as are chargeable against the business on accounts of *bona fide* investments represented by dividend receiving securities are permitted to remain undifferentiated from other elements entering into "net earnings" or profits.

Finally, when we approach the concept of *pure profits*, the accounting and segregation of all costs of the respective factors of production is assumed and the residium over costs incorporates only gains (or losses) which are imputable to imperfect competition. These latter include gains attributable to monopoly, chance, and differential advantages. By this logical progression of cost accounting we observe "ordinary profits," "business profits," and "pure profits" to lie within the same theoretical concept, namely, the difference between the *receipts* of the enterprise and the accounted costs coincident thereto. Indeed, they are, respectively applicable, in practice, to the three comprehensive types of business enterprise — the first to the owner-manager type of business characterized by the single entrepreneur and the copartnership; the second by the private corporation; the third by the quasi-public corporation.

The concept of economic profit stands alone in contrast to the first three concepts of business profits. It assumes that management organizes the business unit, that management selects, employs, co-ordinates, and directs the factors of production which, without the initiative and continuing supervision of management, would remain latent, that management disposes of the joint

product in the market, that it arranges on behalf of the enterprise the payment of wages, rent, and interest, and that management is the actual recipient of the residual value-product. The concept of economic profits does not assume that business necessarily approaches a state of competitive equilibrium. It definitely recognizes the existence of monopoly, chance, differential circumstances, differential efficiency of the factors of production, and differential qualities of management.

Are economic profits a myth?

In the case of the owner-manager enterprise, the automatic operation of the principle of economic profits is not difficult to demonstrate. It is only necessary to set up a system of accounts in which rent, interest, and wages shall be calculated and charged against the enterprise for such land, capital, and labor as are contributed by the entrepreneur. The calculation of such charges should be made proportionate to payments actually made for equivalent land, capital, and labor, or to what would have to be paid for equivalent land, capital, and labor if they were hired. When these imputed amounts of rent, interest, and wages payable to the proprietor are included in the *expenses* of the enterprise, the residual return represents economic profits. This method of determining profits actually is in use in many small commercial and industrial units. The method, in a modified form, was incorporated a few years ago in a system of farm accounting designed by the Bureau of Agricultural Economics to determine "agricultural profits." Although the technique of its application is probably subject to criticism, the logic of the method has not been seriously questioned.

To a superficial observer it might appear that, in large business units where corporate organization prevails and officers are salaried from the president down, the principle of economic profits must be entirely eliminated. Such a conclusion would be hasty indeed. Executives' salaries are seldom, if ever, actually "fixed" in a progressive enterprise. When salaries are apparently determined by contract, they are in fact made flexible by the bonus system, and the annual bonus not infrequently exceeds the annual salary. In no department of industry or commerce is competition so keen and quality of services so quickly recognized as in management. Superior management is invariably reflected in

superior returns to the enterprise. There always is room at the top for better men at higher salaries. Alternative opportunities always are available for competent managers. Many managers are in position to estimate closely their actual "value to the enterprise" and can confidently demand a commensurate salary. In many cases the executives of corporations are in position to determine their own salaries and bonuses, even to the extent of trespassing upon the probable deserts of other factors of production in the enterprise.

From available data it is, of course, quite impossible, to prove that "salaried managers," in general or on the average, do enjoy returns approximating economic profits. However, the publicity of salary lists and executives' bonuses officially made available within the last four years seems to indicate that, in certain important fields of endeavor, at least, the "management" has rather unrestricted access to the residual returns of enterprise after competitive interest, rents, and wages are paid — some evidence, at least, that the automatic flow of the residual return of enterprise to the entrepreneur tends toward reality.

To what extent economic profits are represented by dividend payments is also beyond actual calculation. It is pointed out on page 266 that dividend receiving stocks frequently represent negligible contributions to the invested capital. Likewise stockholders, generally, render no managerial services — unless it be as directors of the corporation. In the latter instance, direct compensation is customarily provided which in most cases is commensurate with their services. Within what category, therefore, do dividends fall? To a considerable extent they represent earned interest on actual capital invested. This is particularly true in respect of "operating" corporations which have not diluted their capitalization by non-investment issues of stocks coincident with reorganizations, consolidations, and stock-bonuses. To a considerable extent, also, dividend payments represent pure profits which, under the corporate organization, are subject to the legal claim of stockholders as residual claimants. For example, corporate reorganizations, amalgamations, pools, syndicates, and monopolies are the results of managerial activities. The earlier returns from such profit-making "inventions" usually are secured in advance by the promoting managers as economic profits, but the "economies" and other benefits derived therefrom may continue long

after the managers who contrived them are in position to recover the returns which flow from them. Such subsequent returns, therefore, may become business profits receivable by stockholders. Technical improvements in industry, also due to management and sometimes to the inventions of wage earners, likewise ultimately contribute to the residual "net earnings" which are subject to the lawful claims of stockholders as proprietors of the enterprise. These profit-producing betterments within the business organization and its technical departments, which represent no specific capital investment, but which for various reasons escape the possession of the managers as economic profits are ultimately "capitalized" and returns therefrom become the prerequisite of the stockholders as business profits.

The measurement of profits.

The manner of measuring and expressing the amount of profits, in any case, is a matter of convenience and, therefore, is determined by the purpose in view and the accuracy required. The measurement of business profits is, of course, most often required in practice since pure profits and economic profits represent theoretical principles rather than actual shares in distribution. Business profits may be measured with reference to units of production, merchandise or services, or with reference to periods of time. Measurements may be expressed in absolute terms or relative terms.

In a business where conventional units prevail, of which expenses of production or costs are known, profits per unit are easily calculated, for example, a baker's profit of one cent on a loaf of bread.

In industries occupied with producing or merchandising goods of many varieties under conditions involving joint costs, monthly or annual profits are more easily and accurately calculated. For example, the profits of a toy factory calculated to be $25,000 for the year 1936.

Whether measured by the unit or by periods of time, profits may be expressed in terms of money, or as a percentage relative. For example, the unit profit on a pair of shoes costing $4 and selling for $5 may be expressed as "$1" or as "25 per cent of cost." The annual profit of an enterprise, having net annual earnings of $200,000, net sales of $10,000,000, and an invested capital of

$2,500,000, may be expressed as "$200,000," or as "2 per cent on net sales," or as "8 per cent on capital investment." This method of expressing profits as a *percentage of invested capital* is more generally applied to business profits and makes it possible to compare the relative profits of different enterprises and of different kinds of business. Thus we may say that the respective profits of two department stores are 8 per cent and 10 per cent, that the profits of commercial banking establishments average 6.26 per cent,[1] that the average profits of corporations in the United States is 4.1 per cent on their capital value,[2] and that farms since 1922 have, on the average, made "less than no profit."

All measurements of profits, especially business profits expressed in percentages, are subject to suspicion until all details of the accounting and statistical methods by which they are derived are known. The above statement concerning farm profits is a case in point. So, also, was the conclusion of a "profit analysis" published a few years ago by the Illinois Manufacturing Association to the effect that, over a period of several normally prosperous years, the average aggregate profits of its entire membership was less than nothing, after taxes were paid and necessary reserves were set up. Because of the vagaries of accounting practice, the expression of business returns as a percentage of "invested capital, or capital value," or capitalization, has made "profits" one of the most confused and varying categories of business terminology.

Ordinary profits and pure profits, as well as business profits, may also be measured either with respect to specified units of product (*e.g.* profits per bushel of wheat), or with respect to sales (usually per $100 of net sales). Each method of measurement has its peculiar advantages and its peculiar difficulties. The measure based on sales is particularly serviceable because trustworthy information regarding the invested capital is frequently lacking and the allocation of profits to specific products is often impossible. Profits per unit of product are particularly difficult to measure in the case of joint products, because of the difficulty of allocating joint costs to specific products. Some of these difficulties are noted in the discussion of joint expenses of production on page 195.

[1] All members of the Federal Reserve System, 1923–1932, *Statistical Abstract*, 1933.
[2] All corporations, Income Tax Reports, 1921–1931, *ibid.*

Economic profits may be measured only by a careful accounting of actual and imputed costs of the services of labor, land, and capital employed by an enterprise over a given period of time, and the subtraction of this sum from the concurrent gross earnings of the enterprise. Economic profits may be expressed only in terms of concrete value. It is quite possible to calculate separately the economic profits, the pure profits, and the business profits of a particular enterprise or industry for a given period. The results would probably show little relation for any given year, but the respective trends of annual profits of an enterprise so expressed should show a perceptible correlation over a representative series of years.

Profits for the industry and profits for the establishment.

We must note at this point an important difference between the production of standardized goods — where one establishment's product is like another's — and the production of goods or services which are distinguishable as the output of particular establishments.

In agriculture, for example, some standardized products are produced for a general market. If certain farmers make larger incomes on the average than their neighbors, it is generally because they are more efficient farmers. This may show itself in two ways. First, a good farmer will get a larger product with a given expenditure. He will apportion and use his productive agents to better advantage. Second, because he gets a larger product by means of a given expenditure, he will be able to push his expenditures further before coming to the margin beyond which it will not pay him to go. That is, he can advantageously "farm on a larger scale" than his less efficient neighbors. But while these advantages increase his income, they do not, in themselves, create pure profits.

If the farmer gets pure profits, it is because he has successfully experimented with some new crops or some new methods, or because he has been individually fortunate in some other way, or because he *and other farmers* have been able to sell their crops at profitable prices. This last point is the important one. In agriculture and other industries producing standardized products for a general market, by far the most important profits (and losses) are those which come to the industry *as a whole.*

Except for the effect of such things as local droughts or frosts or blights, when the wheat growers of the country prosper they prosper together, and when they lose they lose together, — and so with the corn growers and the tobacco growers and the cotton growers. Wars, tariffs, crop failures abroad, — these and other things beyond their control will affect the demand for their products. The supply will depend in part upon weather conditions, but more largely upon the amount of these crops that farmers *as a group* have thought it worth while to grow. These conditions of supply and demand are beyond the control of any individual producer, although he may attempt to foresee them and to regulate his own acreage and output accordingly. A succession of profitable years is almost sure to result in an increased output, with lower prices and ultimately lower profits unless new markets are found for the increased output. In agriculture, except in particularly lean years, there are rewards for the efficient and energetic producer, but, with minor exceptions, the farmer's chances of getting pure profits are dependent upon the fortunes of the industry as a whole.

In the fields of business in which each entrepreneur can mark off his product or his establishment as distinct from others, the situation is very different. The manufacturer or jobber who can in some way identify his products by special brands, and the retailer dealing directly with the consumer, are able to secure pure profits (and to run the risk of corresponding losses) on their individual undertaking, over and above such profits and losses as arise from general business fluctuations.

Many of the expenses incurred by entrepreneurs in such fields are what have been called "competitive investments," that is, they will be devoted to creating a market for particular products rather than to creating those products. The quantities that a particular entrepreneur can profitably produce and, within limits, the prices he can charge, will be determined very largely by his success in inducing purchasers to prefer his goods or his store to others. The profits of cotton growers are directly conditioned by the aggregate demand for cotton and aggregate supply of cotton. But with the retail dealer and with the manufacturer of breakfast foods or canned fruits or clothes or soap or fountain pens or almost any other kind of branded merchandise, profits depend very largely upon controlling the *preference* of consumers for certain

stores or for certain makes of goods. The getting of profits is not merely a matter of indirect competition among industries; it is a matter of direct competition among individual establishments. One competitor may gain even in the face of a generally unprosperous condition of business.

Profits as costs of production.

A problem which until recently has seldom entered into the consideration of accounting methods of private business, but is of much interest to the economist and very significant in the determination of certain relations between government and business, is the extent to which profits may legitimately be considered to be *costs of production*. As government expenses and the need for public funds have rapidly mounted in this and other countries, the practice of placing this burden upon business in the form of corporation taxes and profits taxes of various types is coming to be a general public policy. An examination of the different concepts of profit with the purpose of distinguishing between those elements which are essential to production (production costs) and elements which may be non-essential to production is, therefore, important.

As a general principle of public finance, taxes are first levied upon forms of income and wealth which are least essential to production. Again, in the control of quasi-public industries, it is a general principle of regulative policy to reduce costs of public services to actual and essential expenses of production. Consequently, in this field of enterprise, accounting is no longer confined to the determination of business profits and their distribution, but also is of necessity directed to the analysis of production costs with a view to the possible elimination of all other charges against consumers of public utility services. One might say, therefore, that the interest of the public, as consumers, indicates that all profits should be taken out of public utility business either by taxation or reduced consumer rates. On the other hand, enterprisers who established themselves in this field when it was considered to be a zone of unrestricted private opportunity, and those who as "innocent investors" became owners of public utility securities before restrictive regulation was anticipated, desire to retain as much as possible of the customary flow of private profits from the business. In the first

instance, zealous contenders for the recognition of the public interests affirm that, inasmuch as modern business costs, in the aggregate, are covered by wages, rent, interest, and salaries of management, the profit residue may logically and fairly be taken by the government as a public revenue without depriving anyone of just compensation for his services or the use of his capital resources. In the second instance, those who undertake to defend the rights of vested interest assert that profits are both the primary *motivating force* and the chief *objective of business* and should continue as a necessary incentive to private initiative in progressive industry. They, therefore, undertake to revise the technique and terminology of accounting in such a way as either to define profits as a cost of production or to eliminate the concept of profits entirely from the language of accounts. Leading accountants now find that the analysis of profits by economists and the varying use of the term by public service commissions are so bewildering that they propose "to abandon the term profits and to use such expressions as operating revenue or income available for dividends." [1]

Ordinary profits as costs. — Ordinary profits do not constitute a homogeneous income determined by any one principle or set of principles.

The detached entrepreneur not only assumes responsibility for the general organization of the business — for the general co-ordination of land, labor, and capital — but does most of the managerial work, and usually, as in the case of the farmer, a considerable amount of ordinary labor. The return for his contribution of time and effort is often called "wages of management." In some respects it is like ordinary wages, but it is attended or characterized by a different kind of risk. The hired laborer or the hired executive gets his stipulated salary. The typical or representative entrepreneur must doubtless get his pay for management in the long run, but he assumes the risk of having to close down his plant and a further risk of sustaining a competitive loss in years of active business. Even over long periods of time, some entrepreneurs actually earn less on their own account than they would receive if employed by others.

Many entrepreneurs delegate nearly all of the managerial work to paid executives. But there are some final decisions and

[1] Frank H. Knight, *Encyclopaedia of Social Sciences*, Vol. 12, p. 480.

responsibilities which the entrepreneur cannot delegate. He must at least take the pains to select managers or officers and negotiate terms of compensation with them. There are ultimate decisions which only the entrepreneur can make; ultimate risks which the entrepreneur can neither insure nor shift to others. What has been said about the independent entrepreneur's compensation for labor (imputed wages) applies even more strongly to interest and rent which may properly be "imputed" to his capital and land used in the business. In any particular year the entrepreneur assumes a greater risk of losing rent and interest altogether than the man who hires out his capital or his land to others.

It is plain that the entrepreneur will not continue to perform his function unless he receives profits approximately equal to what he would receive if his labor, capital, and land were hired out to others, or what he would have to pay, if he hired equivalent labor, capital, and land from others. It is presumed, also, that his services as an executive might command a salary from an employer higher than the wage he could earn as a laborer. The reasons for using the qualifying term "approximately equal" are significant. Some men prefer to be their own masters even at a smaller income than they could receive by contracting their capital and their services to others; while other men shrink from the responsibilities of an independent business life even if a larger income were attached to it. It is reasonable, therefore, to conclude that compensation for the actual labor, capital, and land (imputed wages, interest, and rent) contributed by the owner-manager are properly chargeable to "costs" of the business. If the excess of the entrepreneur's probable salary value over his probable wage value in the employ of another could be calculated, this amount also might fairly be considered as a cost item. The net result of such an accounting of costs against receipts would result in a balance showing approximately *pure profits*. These imputed costs — wages, interest, rent, and salary — of services supplied by the entrepreneur can only be estimated, but there is reason to believe that such calculations may, in many cases, be made within a reasonable degree of accuracy. The reality of the category of ordinary profits implies that putting one's time and capital resources "at the risk of the business" is, in fact, not the same as contracting for their use at stipulated rates payable to others. There is possibly no other difference between ordinary

profits and the other forms of managerial income than that imputed salary (including wages), rent, and interest are placed at the risk of the business in a sense and degree to which contractual salary, rent, and interest are not.

Business profits in relation to costs of production. — Business profit may be so construed by accounting technique as to vary in its composition from a conglomerate of gains and losses from monopoly, differential advantage, luck, risk, and conjunctural circumstances to a larger concept including all of these, and, in addition, a variable part of interest on invested capital and compensation for management. Obviously, this composite must be further analyzed before it is possible to say what part of it may properly be ascribed to "costs."

In so far as "invested capital" is confined to *bona fide* capital funds "used and useful" in the business, interest thereon is clearly a part of costs. Any part of business profits which in any instance is traceable to essential compensation for management also belongs to costs. Beyond that amount, any residual sum would appear to make no *definite* contribution to costs of production. At this point, however, the question becomes debatable. If it be agreed that the possibility of gains from chance, luck, and monopoly are essential to the *undertaking* of productive enterprise, they or part of them should be admitted to costs. On this point the weight of opinion, even judicial opinion and that of recognized economists, is divided. Indubitable proof of consensus of opinion in this issue is not clear, but during the last 25 or 30 years within the public utility field, the trend of opinion, as expressed by legislative bodies, the higher courts, and administrative commissions, has been definitely against the inclusion of such items among production costs.

With respect to "uninsurable risks," the logic of the situation is possibly more favorable; but, inasmuch as uninsurable risks and chance gains are counterparts of the same concept of "luck," they would seem to belong in the same category.

The relation of pure profits to costs. — A somewhat similar but not definite answer must be given to the question of the relation of pure profits to the expenses of production. Any uncertainty here arises from the fact that, if monopoly be excluded, we do not know whether in the long run pure profits are a positive quantity, a negative quantity, or merely negligible. It is obvious that they

consist in part of gains resulting from the assumption of certain unavoidable and non-insurable risks which are inherent in business. But in this they are one side of the game of chance in which gains and losses are equal. From the social point of view, the desire to be one's own employer is so strong and the lure of possible profits such a powerful incentive, that in the long run entrepreneurs receive no pure profits and may actually receive something less than the prevailing wages for their labor and contract interest on their capital resources. For example, it is generally asserted in mining circles, and probably true, that "more money has been sunk in gold mines than has been taken out." There is also a growing, but dubious, belief that "losses" sustained in agriculture exceed the "profits" therefrom.

The extent of losses in modern business are little appreciated. Probably the world has never known, on a large scale, a period of more feverish prosperity or of more colossal business profits than that enjoyed by the United States in the four years 1916–1919. But in those four years corporations in the United States reported to the Bureau of Internal Revenue net deficits aggregating $3,000,000,000, which equaled about 8 per cent of the total net income reported by the corporations showing a positive net income. For the years 1928 and 1929, the net corporation deficits reported were, respectively, 29 per cent and 30.5 per cent of the net incomes reported. In 1931 there were 175,898 corporations with net incomes, and 283,806 with no net income.

In 1932 the number of corporations reporting no net income increased to 369,328 with an aggregate deficit of $7,796,687,000; the number of corporations reporting net incomes decreased to 82,646, with an aggregate net income of $2,153,113,000. These figures reflect the widespread business depression. In 1933 the number of corporations showing deficits decreased to about 337,056 and those showing net incomes increased to 109,786. The year 1934[1] marked a further decrease in the number of corporations showing deficits to 324,671, with an aggregate deficit of $4,150,694,000; in the same year the number of corporations showing net incomes increased to 145,089, with an aggregate net income of $4,264,917,000.

These figures, of course, reflect the peculiarities of methods of accounting business earnings for purposes of taxation and require

[1] Returns filed to December 31, 1935.

careful "editing" before they should be used as a basis of measuring profits. They do, however, indicate in a general way the doubtful reality of pure profits as a considerable part of the returns to enterprise. From the standpoint of the individual entrepreneur, especially of the promoter who operates upon the basis of rather distant expectations, the anticipation of pure profits would seem to be a particularly necessary and essential motive of productive expenditures. Risk, uncertainty, responsibility: these are disutilities for which the expectations of returns in some form cannot be denied. But it is more important that pure profits should be obtainable than obtained. To induce even the most intense competition for a prize it is not necessary that each contestant should receive a prize.

From the social point of view and in the long run, it is probably true that pure profits are negligible or, possibly, even a negative, quantity. In the aggregate, society probably secures the services of entrepreneurs without paying anything additional to what would be regarded as a fair estimate of the return necessary to compensate all expenses of production including a competitive valuation of his own productive services. But the chance of securing pure profits must be held out to the individual entrepreneur as a possible and legitimate reward for keeping his expenses of production below the prices which he can secure for his products. Collectively considered, therefore, pure profits are at once necessary and probably non-existent. They represent actual gains and actual losses at certain times to certain individual entrepreneurs, but they do not constitute a considerable or significant social expense of production.

Economic profits as a part of production costs. — In contrast with the varied and incommensurable relations of ordinary profits, business profits, and pure profits to production, the relations of economic profits are comparably direct and measurable. The respective contributions of natural resources, labor, and capital to production are no more distinct in their character and certain in their measurement than is that of the co-ordinating factor of production — management. In the productive organization of society, management is as distinctive as are natural fertility, capital efficiency, and the co-ordinated brains and brawn of labor. Management may be significantly defined as the *power to co-ordinate factors of production.*

Like land, labor, and capital, management measures its productivity in terms of the competitive utility of its own units. These units may be individual entrepreneurs competing in agriculture and in village shops, or management groups competing in the organization and direction of mass-production units of the heavy industries.

Management units normally function, in production, as do land and capital and labor units, subject to the natural law of competition and yield to the principle of marginal utility in the evaluation of their relative contributions to the social dividend. These services, therefore, become a charge against the joint product of industry, or conversely, a part of the costs of production. In general, the compensation of independent entrepreneurs, of composite entrepreneurial groups, and of individual managers within such groups tend to approximate, in amount and relativity, the marginal utility of their respective services. This statement concisely defines economic profits as conceived by John Bates Clark — an evolutionary concept which approaches realization with the perfection of competition. Therefore, economic profit will in practice always be contaminated with such residual chance gains or monopoly profits as may remain in the possession of the entrepreneur, exempt from proprietorship claims of corporation stockholders.

Normal profits and average profits.

Such statistics and concrete information as we have regarding profits bear out the theoretical analysis of profits which has been presented. Business profits being a speculative residue, they vary greatly from year to year, not only for particular business concerns and particular industries, but also for large groups of industries. Thus the net incomes of corporations reported for purposes of federal income taxation amounted to $4,714,000,000 in 1913, a good prewar year, fell to $3,940,000,000 (a decrease of 16 per cent) in 1914, rose to $5,310,000,000 (an increase of 35 per cent) in 1915, and in 1917 reached the enormous aggregate of $10,734,400,000. This figure was again retained in 1928 and advanced to $11,653,886,000 in 1929. In 1931, it dropped to $3,683,368,000.

The year 1932 saw the total net incomes reported touch a new low of $2,153,113,000, while 369,328 corporations showed an

aggregate deficit of $7,796,687,000. These figures took a turn for the better in 1933 when the total net incomes reached $2,985,-972,000. This upward trend continued in 1934 when the aggregate net incomes of corporations advanced to $4,264,917,000.

To cite another illustration, the net earnings of member banks of the federal reserve system averaged 7.69 per cent of their capital and surplus in 1923, rose to 8.75 per cent in 1929 — a crisis year, it may be noted — fell to 0.20 per cent in 1931 and showed a loss of 4.50 per cent in 1932. This loss advanced to 7.26 per cent in 1933. Whole industries, such as farming or steam transport, may for a considerable period of years earn no net earnings, and it is not always true that the balance is adjusted by a succeeding period of fat years — an industry may, unknown to most of its followers, be dying out.

Among the entrepreneurs of any particular industry, in any year, the range of profits is likely to be very wide. Ralph C. Epstein made a study of 16 automobile manufacturing companies in the period between 1919 and 1927. For the duration of this period the companies engaged continuously in business, participated in no important mergers, and published financial reports for all the years of the period. The 16 corporations included in this study, for all of which continuous series of data are to be had up through the year 1927, produced in that year over 99 per cent of the total number of passenger automobiles. The 16 concerns comprise 25 per cent of the number of establishments for the period, and 40 per cent of the number for 1927. The data are not only continuous, but include both large and small concerns (the investments of which average 85 per cent of the industry's total capital throughout the period, and the total passenger car production of which amounts to over 90 per cent of the industry's aggregate output).

In 1920 the size of the corporations considered ranged from 2 to 425 millions. In this year the income varied from a deficit of 18.9 millions in one case to a net income of 39.9 millions in another. In 1927 when the size of the corporations considered varied from 3 to 789 millions, the returns varied from a deficit of 50.7 millions to a net profit of 48.7 millions. The average returns for the period varied between a deficit of 4.7 millions in one case to a net income of 39.8 millions in another case.

From the detailed data which he collected concerning each of

these corporations, Mr. Epstein drew the following conclusions: (1) In nearly all the years the firm enjoying the highest return is that which, in point of invested capital, stands at or fairly near the median size. (2) There was found to be no strong connection between size and stability of profits. (3) High earnings and relatively stable earnings on the whole accompany each other. To the extent that other industries possess the characteristics of automobile manufacturing, viz., the production of a branded, non-staple product, subject to a fairly continuous change in specification and not selling at a standardized price, these conclusions probably hold true. There is no exact competitive market price because each producer possesses a monopoly of his own article. The study of the automobile industry is important as an indication of conditions in other industries because the range of "competitive" industries in which the absence of a "competitive price" is the rule rather than the exception is wider than is imagined.[1]

But authorities differ on the question whether for particular years or periods of years the data tend to cluster around the average in such a way as to suggest the existence of a *type* or rate of normal profits. One writer thinks that the statistics do point to a type or norm for "rates of capital return," *i.e.*, for business profits treated as including interest on borrowed capital.[2] Another authority, however, concludes: "The most that can be said for normality of profits is that the amount of capital that earns the average rate of profits will remain a fairly constant percentage of all capital. Also, that the amount of capital that earns less than the average rate or more than the average remains about the same one year with another. But the average itself is highly variable and the diversity of earnings for individual establishments is enormous even in so conservative and steady a business as banking. In fields like manufacturing and mining it has varied widely under the influence of war conditions. Even in times of peace there is pronounced variation of earnings from industry to industry within the same year, and in the earnings of the same establishment from year to year. It is quite probable that there were a considerable number of people, even in times of peace,

[1] Ralph C. Epstein, "Profits and the Size of Firms in the Automobile Industry, 1919–1927," *American Economic Review*, December, 1931, p. 646.

[2] M. C. Rorty, *Quarterly Publication of the American Statistical Association*, XVII, p. 154.

who were earning at a rate fully as high as the so-called profiteers made during the war." [1]

Regulation of profits, profiteering, and the excess-profits tax.

The foregoing facts indicate how difficult it is to regulate prices or rates so as to yield a fair or normal profit, or to decide fairly whether under given circumstances a business concern has been "profiteering." The difficulty starts, as has been pointed out, with the uncertainty and difference of opinion about what constitutes a normal rate of profits. After the outbreak of the World War the conditions controlling profits were abnormal, so that it is better, in forming our ideas, to go back to conditions as they existed before the war. In regulating rates of public utility companies before the war, courts and commissions in the several states were using as "fair" or "normal," rates of return which varied by more than 33⅓ per cent (*e.g.* from less than 6 to 8 per cent), to settle cases which to all appearances were essentially similar. At the time the national banks of the country were earning considerably more than 8 per cent upon their capital and surplus; indeed, for the period of fifty-five years ending June 30, 1929, the earnings of the national banks averaged over 8.65 per cent upon their capital and surplus. The corresponding figure for the year 1932 was a loss of 4.97 per cent. Yet banking would appear to be both a safer and more stable business than that conducted by the average public utility corporation. Rates in manufacturing and mercantile business are higher still, and an investigation of 7,000 miscellaneous corporations for the three years 1911–1913 shows average profits of 11 per cent upon their invested capital. Much more significant than these general averages is the fact that in every year in every industry there were corporations which produced at a loss and those which produced at a high profit. Diversity of fortune and a wide range from heavy losses to handsome profits is the "normal" condition. In typical or normal years such as 1923 and 1926 nearly one-eighth of the gross business of manufacturing corporations, and nearly one-sixth of the gross business done by corporations in trade, is done by corporations which report "no net income" to the Bureau of Internal Revenue. What is probably the usual or typical condition in a fairly good year is shown by figures for

[1] David Friday, *Profits, Prices, and Wages*, Harcourt, Brace, New York, 1920, pp. 45, 46.

"total manufacturing and trade" in the year 1923. The general average rate of profit on the capital investment in that year was 11.9 per cent; but the lowest quarter of the corporations (measured by capital) earned less than 5.6 per cent, and the highest quarter earned more than 16.9 per cent.[1]

When we have decided upon a fair or normal rate of profits, its application raises equally difficult questions. The "fair rate" is used ordinarily in regulating prices over short periods of years, or as the basis of judgment of whether profits of a particular concern in one year or a short period of years have been excessive. But for either use or purpose the mere fact that actual profits or earnings have been above the normal may mean very little. The "supernormal" profits may represent fruits of exceptional efficiency, exceptional courage, or exceptional foresight. The last factor is of peculiar importance; and frequently the only way we can determine whether exceptional foresight has been shown is by the very profits which it is sought to reduce. In all judgments, some regard must be paid to the developmental losses which the entrepreneur has sustained in prior years, to the losses which he may possibly sustain in subsequent years, and to the losses of other concerns in the same line of business — because it is the opportunity of securing high profits which induces business men to run the risk of sustaining the losses which examination may show occur with frequency in the industry under consideration.

The foregoing facts, elementary though they be, throw considerable light on many practical questions of importance, although of course they do not completely settle or dispose of them. As regards *profiteering*, they suggest that a sound judgment must be qualitative rather than quantitative. We should look to the manner in which the profits were earned as well as their amount or relation to the investment. If the entrepreneur has participated in some combination in restraint of trade, or has indulged in unfair trade practices, or has imposed upon the weakness or good faith of his customers, he may properly be condemned. But if he has chanced great personal loss to promote an enterprise rendering essential public services, he may make correspondingly high profits in any one year or series of years without being fairly subject to criticism. During the war, for instance, the bituminous coal

[1] See p. 956 for discussion of undistributed profits tax in Revenue Act of 1936.

industry made very high profits. As has been pointed out, some companies earned over 500 per cent on their invested capital. But the industry had been notoriously unattractive before the war. Losses were unusually common, and even during the war statistics indicate that nearly half of the profits were taken in federal taxes. Since the war the losses in this field have been enormous.

Profits and business cycles.

The prospect of profits is the motive which attracts the investment of capital into business enterprise. Since profits are obviously the motivating influence in the expansion and contraction of business activity, many economists believe that the determining factor in business cycles is profits. When there is a general mood of optimism, enterprisers are likely to make errors of judgment in the direction of overinvestment. In these errors of judgment some economists find the cause of business fluctuations. Whether profits are *the* dominant factor in business cycles we cannot say; however, the association between profits and alternating prosperity and depression cannot be denied.

Profits and the justification of the competitive system.

One of the strongest arguments for the superiority of the competitive system over any possible substitute for it lies in the claim that, under competition, the guiding of production into the channels indicated by the search for money profits will result in the maximum satisfaction of human wants. This seems to follow from the fact that the prices people are willing to pay for different commodities measure the importance which they attach to the possession of those particular commodities. The shifting of labor and capital from less profitable to more profitable uses means, in general, that more intense wants will be satisfied with the same expenditure of productive energy.[1] This argument, that under free competition the pursuit of money profits leads to the best adaptation of productive efforts to the satisfaction of the wants of consumers, is one that has rarely been squarely met by those who attack the competitive system. There are, however, several important considerations that lessen to some extent its force.

[1] In the words of J. B. Clark — Competition "insures to the public the utmost that the existing power of man can give in the way of efficient service."

In the first place, the extent to which the wants of any individual affect the ordering of the productive process depends upon his purchasing power, that is, primarily, upon his income. It is manifestly absurd to say that the shifting of labor and capital from the production of necessities for the poor to the production of luxuries for the rich, simply because it may be more profitable, necessarily means a better satisfaction of human wants. The extent to which wants are satisfied depends on the way wealth is distributed, as well as upon the amount and kinds of things produced.

Moreover, even granting that the stimulus of money profits leads to the best practicable satisfaction of the wants of present consumers, this may sometimes be achieved by putting added difficulties in the way of the want-satisfactions of future generations. The lines of procedure that will bring maximum profits to entrepreneurs sometimes run counter to the more permanent interests of society. We all recognize, for example, that there may be such a thing as a too rapid exploitation of natural resources.

A still more important qualification of the statement that competitive profit-seeking works for the best interests of society, viewed as a body of consumers, is found in the fact that when we begin to speak of the interests of society, we introduce, of necessity, the ethical point of view. This means that we must consider not only the *quantity*, but also the *quality*, of want-satisfactions. For purposes of the economic analysis of market forces, we make no distinction between different kinds of wants, but it is impossible to discuss social well-being without taking into account the fact that from the point of view of the interests of society some kinds of want-satisfactions are good and some are bad, and that even the better kinds of want-satisfactions vary greatly in their importance, when measured by any rational criterion of social welfare.

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CHAPTER XXV

THE PERSONAL DISTRIBUTION OF WEALTH AND INCOME

In this chapter, we shall consider the distribution of wealth and income among individuals as such, and not as agents of production or as owners of productive agents. Before so doing, we must point out certain limitations of the discussion of personal distribution of wealth and income:

1. The distribution of wealth and income is to be clearly distinguished from the distribution of final consumption. A man with vast possessions may be frugal in his consumption, acting with respect to most of his property virtually as a trustee for society. But the personal distribution of wealth and income, or their control, is important in relation to the problem of the cleavage between social groups, the progress of industrial democracy, or the differences in personal independence and influence of individuals. Wealth and income yield power as well as consumers' satisfactions.

2. The inquiry into personal distribution of wealth and income assumes two distinct and independent aspects: first, we are concerned with the improvement in the condition of the great mass of individuals; second, we are interested in the changes in relative shares of total production, whatever they may be in different years, obtained by some groups at the expense of, or to the benefit of, other groups. Since these shares of the national income are expressed for each social group as percentages of 100 per cent, the actual amount of income received by any one group may increase, and its percentage increase, provided the incomes of the other groups increase more rapidly. Thus, as revealed in Table I, although the amount of net income realized by individuals in private production from salaries and wages declined steadily from 1929 to 1932, the percentage of total income from this source held its own and even increased.

Statistics of distributive shares.

Inquiries into these problems are dependent to a great extent upon the use of statistics, and data relating to wealth and income must therefore be accorded much attention in this chapter. The reader is forewarned, however, that statistics of wealth and income are even more defective in accuracy than most other quantitative data, because they are based upon mere estimates to a greater degree. Moreover, their interpretation is rendered more difficult by very confusing problems of definition and meaning. The following observations may assist in the use of these statistics:

1. They portray certain conditions or tendencies with such emphasis, and within such wide classifications, that their general results may be accepted as reliably demonstrated, despite their defects. This is especially so in the case of evidence of concentration of income and wealth in the upper classes. Few people observe such figures for the first time without experiencing a decided shock, yet they must be accepted as substantially accurate, because this concentration is observed in nearly all studies of the dispersion of wealth and income. The pecuniary system breeds inequalities of money, wealth, and incomes.

2. The relationship between monetary statistics and welfare is neither direct nor immediate, because the former do not include consideration of the benefits derived from leisure, from the services of governmental agencies, or from the services of those who do not receive compensation in the form of money incomes. In general, the joy of living is probably not concentrated in the richer classes to the same extent that money and wealth appear to be, although the reader may formulate his own conclusions on this point. Yet, provided they are used very cautiously in their interpretation in terms of social welfare, the facts relating to money incomes are highly significant.

3. Considered as absolute magnitudes, the statistics of total national wealth and income are almost worthless, but, with care, they can be used to yield useful coefficients of change and variation. If both the numerator and denominator of a fraction are affected by errors of similar proportion, the resulting ratio will be substantially correct; it is thus possible to derive conclusions which are probably correct from statistics which are subject to a considerable degree of error.

The functional distribution of income.

Table I shows the division of the total realized income from private production among the factors of production, in the form of wages and salaries, rents, interest, and profits. The data include years of prosperity, depression, and recovery, and serve fairly well as an illustration of the relative proportions in which that income is distributed between the groups depending for income upon their services, and upon their ownership of property. Throughout the years of depression which followed 1929 the relative proportions of realized income from private production received by the factors of production remained remarkably stable. During the entire period of 1929–1934, salaries and

TABLE I. — PRIVATE PRODUCTION INCOME REALIZED BY INDIVIDUALS, BY TYPE, 1929-1934 [1]

TYPE	1929	1930	1931	1932	1933	1934
			Million Dollars			
Salaries and wages	45,833	41,253	33,641	24,898	23,238	26,272
Entrepreneurial income	14,147	11,964	9,483	7,144	7,526	8,822
Dividends	5,692	5,568	4,148	2,606	2,079	2,315
Interest	2,514	2,642	2,577	2,245	1,720	1,550
Net rent	1,217	907	637	456	474	581
Total	69,403	62,334	50,486	37,349	35,037	39,540
			Percentage of Total			
Salaries and wages	66	66	67	67	66	66
Entrepreneurial income	20	19	19	19	21	22
Dividends	8	9	8	7	6	6
Interest	4	4	5	6	5	4
Net rent	2	1	1	1	1	1
Total	100	100	100	100	100	100
			Index, 1929 = 100			
Salaries and wages	100	90	73	54	51	57
Entrepreneurial income	100	85	67	50	53	62
Dividends	100	98	73	46	37	41
Interest	100	105	103	89	68	62
Net rent	100	75	52	37	39	48
Total	100	90	73	54	50	57

[1] Robert F. Martin, *National Income and Its Elements*, National Industrial Conference Board, Inc., New York, 1936, p. 17.

TABLE II. — SIMPLE AND CUMULATIVE DISTRIBUTION OF INDIVIDUAL RETURNS FOR 1933, BY NET INCOME CLASSES, SHOWING NUMBER OF RETURNS, NET INCOME, TAX, AND PERCENTAGES [1]

(Money Figures and Net Income Classes in Thousands of Dollars)

NET INCOME CLASSES	RETURNS					
	Simple Distribution		Cumulative Distribution from Highest Income Classes		Cumulative Distribution from Lowest Income Classes	
	Number	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*
Under 1 (estimated)	397,676	10.68	3,723,558	100.00	397,676	10.68
1–2 (estimated)	1,480,717	39.77	3,325,882	89.32	1,878,393	50.45
2–3 (estimated)	914,198	24.55	1,845,165	49.55	2,792,591	75.00
3–5 (estimated)	599,075	16.09	930,967	25.00	3,391,666	91.09
5–10	229,754	6.17	331,892	8.91	3,621,420	97.26
10–25	75,643	2.03	102,138	2.74	3,697,063	99.29
25–50	18,423	.49	26,495	.71	3,715,486	99.78
50–100	6,021	.16	8,072	.22	3,721,507	99.94
100–150	1,084	.02	2,051	.06	3,722,591	99.96
150–300	695	.01	967	.04	3,723,286	99.97
300–500	141	.01	272	.03	3,723,427	99.98
500–1000	81	.01	131	.02	3,723,508	99.99
1000 and over	50	.01	50	.01	3,723,558	100.00
Total	3,723,558	100.00				

[1] *Statistics of Income for 1933* (Bureau of Internal Revenue, United States Treasury Department), p. 6.

TABLE II.—SIMPLE AND CUMULATIVE DISTRIBUTION OF INDIVIDUAL RETURNS FOR 1933, BY NET INCOME CLASSES, SHOWING NUMBER OF RETURNS, NET INCOME, TAX, AND PERCENTAGES — *Continued*

(Money Figures and Net Income Classes in Thousands of Dollars)

NET INCOME CLASSES	NET INCOME					
	Simple Distribution		Cumulative Distribution from Highest Income Classes		Cumulative Distribution from Lowest Income Classes	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Under 1 (estimated)	264,784	2.41	11,008,638	100.00	264,784	2.41
1–2 (estimated)	2,093,292	19.01	10,743,854	97.59	2,358,076	21.14
2–3 (estimated)	2,295,586	20.85	8,650,562	78.58	4,653,662	42.27
3–5 (estimated)	2,207,458	20.05	6,354,976	57.73	6,861,120	62.32
5–10	1,537,875	13.97	4,147,518	37.68	8,398,995	76.29
10–25	1,112,086	10.10	2,609,642	23.71	9,511,081	86.39
25–50	630,005	5 72	1,497,557	13 61	10,141,086	92.11
50–100	401,049	3.64	867,551	7.89	10,542,136	95.75
100–150	129,159	1.17	466,502	4.25	10,671,294	96.92
150–300	139,215	1.27	337,343	3.08	10,810,509	98.19
300–500	54,570	.50	198,128	1.81	10,865,080	98.69
500–1000	56,700	.52	143,558	1 31	10,921,780	99.21
1000 and over	86,857	.79	86,857	.79	11,008,638	100.00
Total	11,008,638	100.00				

wages accounted for approximately two-thirds of the total. Only in 1933 and 1934 was there a shift, and a slight one at that, from dividends and rent to profits and interest. This may be largely attributed to the sharp increase in the income returns to farmers as a result of government aid and a better price situation, and to corporate policy of curtailment of dividends in 1933 which enabled corporations to reduce corporate losses.

Statistics of personal distribution.

The preceding section dealt with the functional distribution of income, but indicates little directly concerning social classes. Although wages and salaries constitute the principal, and often the only incomes of most individuals, conclusions drawn from changes in the relative shares of "service" and "property" incomes are at least partially inapplicable to the problem of personal distribution. Some wages and salaries are received by very wealthy individuals, some of whom have rendered very little actual service in production in return for these incomes; while rents and interest, although these payments are usually considered to constitute the income of the wealthy, are very often a part of the incomes received by poor people, and may in some cases constitute their only source of income. Therefore, the problem of personal distribution of income is better approached by a consideration of incomes classified according to size or amounts of individual incomes, from whatever source obtained. Such data, however, must be examined with care. The relative position of the social groups is of paramount importance in this connection. Total national income may rise and the income of the lowest group may also rise, but this is no indication of an increasing dispersion of wealth. The price level may have risen, leaving the lowest group in much the same position as before.

Statistics of incomes arranged on an individual basis have been very defective in the past, but since the institution of a federal income tax in the United States, in 1913, we have had, within the limits of taxable incomes, a fairly dependable sample of income distribution from which to derive conclusions. Net incomes too small to be taxed, which comprise by far the greatest number of incomes can, of course, be estimated, but the task is fraught with difficulties. Even in this crude form, the facts concerning personal income-tax returns are useful and ex-

tremely illuminating, as may be observed in Table II, on page 522.

Inequalities in the distribution of incomes.

The facts relating to income distribution are interpreted in different ways by different analysts. Some consider that the data reveal a tolerably satisfactory condition of affairs, others view them as indicating a grossly unjust and inequitable distribution of the social product. Much, although not all, of this disagreement arises from differences of opinion as to the proper criterion of equality in income distribution. What do we mean by "equality" in the distribution of income?

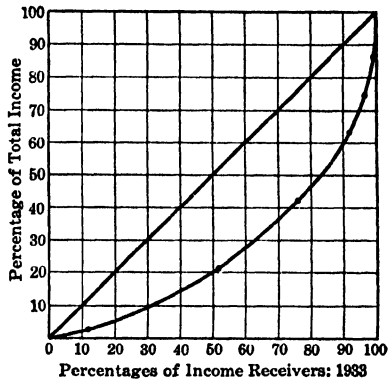


FIG. 1

Several possible concepts of equality of income distribution are shown in Figs. 1 and 2. In Fig. 1, the straight diagonal line indicates one type of equality, representing the absolutely flat and equal distribution, in which 10 per cent of all income-receivers would receive 10 per cent of the income, 50 per cent would receive 50 per cent of the income, and 90 per cent would receive 90 per cent of the income. The curved line indicates the actual distribution of incomes in 1933, and the divergence of the two lines shows the degree of inequality of income distribution in that year as contrasted with this particular standard of equality. However, this standard is considered by many to represent an impracticable and probably an undesirable goal.

The statistics in Table II reveal at a glance the percentage of income received by any given portion of the income-receivers. Thus, we note that 10.68 per cent of the latter received only 2.41 per cent of the national income; that almost three-fifths of the total income (57.73 per cent) was concentrated in only 25 per cent of those who received incomes; and that slightly over seven-tenths of 1 per cent of the income-receivers had returns amounting to approximately 23 per cent of the total. Reference to Fig. 1 shows us that these statistics are not exaggerated — 70 per cent of the population received little more than 40 per cent of the total income.

Another standard of comparison is indicated in Fig. 2, the curves in which represent a hypothetical "normal" distribution. It is termed "normal" because it corresponds to the way in which groups of events determined by chance or by the operation of many independent or unbiased forces and influences are found to be arranged.

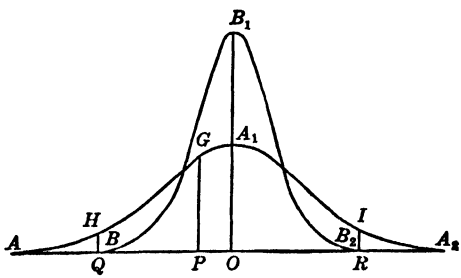


FIG. 2

Suppose different sizes of incomes to be represented by successive points on the straight horizontal line AA_2, with the minimum income at A and the maximum at A_2. Then let vertical distances measured upward from this line represent the *number* of incomes that are of the designated amounts. Thus the number of incomes of size P would be PG, while there would be QH incomes of size Q. The curve AA_1A_2, which connects the tops of these imaginary vertical lines would then represent the "frequency distribution" of incomes. Two important characteristics of this curve will be noted: first, the most common or "frequent" income is the median or average income; second, the curve is symmetrical, that is, as many incomes exceed the average by $1,000 as fall short of it by that amount. The curve BB_1B_2 is precisely the same sort of curve and represents just as many incomes, but it is constructed on the assumption that income is only half as variable as is indicated by the curve AA_1A_2, that is, that incomes are more evenly distributed in the sense that they do not deviate so much from the average. Either curve might represent (1) a normal distribution of ability and efficiency and a perfect proportioning of income to ability and efficiency, or (2) a random or chance distribution of incomes, under the influence of complex but unbiased forces.

The actual frequency distribution of incomes in the United States in 1933, according to the returns of the Bureau of Internal Revenue of the United States Treasury Department, is depicted in Fig. 3. Incomes over $10,000 are not shown. To cover the whole range of incomes, so as to show the further approach of the curve toward the horizontal base line, the diagram would

have to be several hundred times as wide as it is. Compared with the "normal" curve, this diagram is asymmetrical, being skewed to the right. If it were symmetrical the peak would be, not at a point between $1,000 and $2,000, but at $2,956.48,[1] the

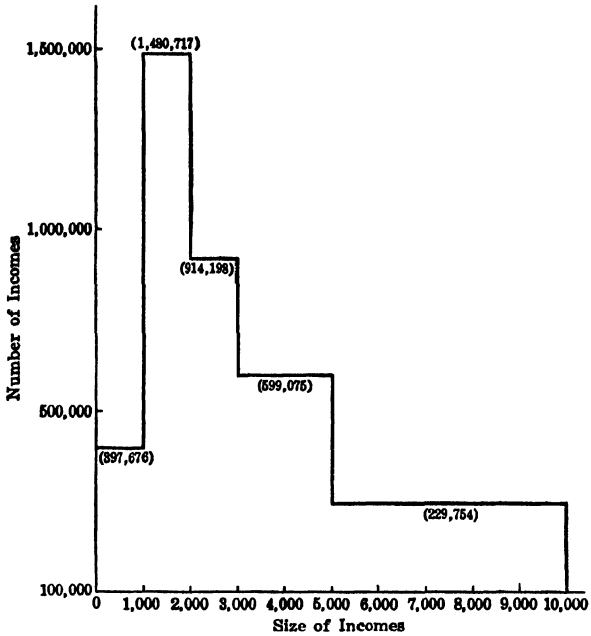


FIG. 3. Frequency distribution of incomes in the United States, 1933

arithmetic average of all income tax returns. Viewed in this way inequality in the distribution of incomes has *two* different meanings: (1) the *dispersion* of incomes over a larger or smaller range, as measured by the extent to which they deviate from the average; and (2) the *asymmetry* of income distribution, measured by the skewness of the curve of incomes. The difference between these two criteria may be inferred from the fact that even if incomes were distributed "normally," if the average income were $2,956.48, and if, further, half of all incomes were within $500 of the average, 70 per cent of the aggregate income would go to the richer half of the population and 30 per cent to the poorer half.

A study completed by Dr. W. I. King for the National Bureau of Economic Research throws much light on the concentration of income in the United States. The principal results are summarized in Tables III and IV following, covering the years 1916–

[1] Average net income for all returns. *Statistics of Income for 1933*, p. 5.

TABLE III. — AMOUNTS AND PERCENTAGES OF THE TOTAL REALIZED INCOME OF THE PEOPLE OF THE UNITED STATES REPORTED AS RECEIVED BY CLASSES REPRESENTING FIXED PROPORTIONS OF ALL INCOME RECIPIENTS [1]

	Calendar Year	Entire Realized Income of the People of the United States	Class IV — The 99% of Income Recipients Having the Lowest Incomes	Class III — The Richest 1% of Income Recipients Excluding Classes I and II	Class II — The Richest $\frac{1}{5}$ of 1% of Income Recipients Excluding Class I	Class I — The Richest $\frac{1}{10}$ of 1% of Income Recipients
Income of Class in Millions of Dollars	1916	$43,288	$37,168	$2,885	$1,862	$1,373
	1917	51,331	44,531	3,500	2,006	1,294
	1918	60,408	54,268	3,570	1,491	1,079
	1919	65,949	58,729	4,340	1,820	1,060
	1920	73,999	67,159	4,530	1,547	763
	1921	63,371	58,191	3,130	1,430	620
	1922	65,925	59,125	4,175	1,715	910
	1923	74,337	67,077	4,540	1,806	914
	1924	77,135	68,935	5,000	2,065	1,135
	1925	81,931	71,621	5,985	2,670	1,655
	1926	85,548 [a]	75,148 [a]	5,975	2,675	1,750
Per Cent of Total Realized Income of Nation	1916	100.00	85.86	6.66	4.30	3.17
	1917	100.00	86.75	6.82	3.91	2.52
	1918	100.00	89.84	5.91	2.47	1.79
	1919	100.00	89.05	6.58	2.76	1.61
	1920	100.00	90.76	6.12	2.09	1.03
	1921	100.00	91.83	4.94	2.26	.98
	1922	100.00	89.69	6.33	2.60	1.38
	1923	100.00	90.23	6.11	2.43	1.23
	1924	100.00	89.37	6.48	2.68	1.47
	1925	100.00	87.42	7.30	3.26	2.02
	1926	100.00	87.84 [a]	6.98 [a]	3.13 [a]	2.05 [a]

[a] Preliminary estimate.

1926, inclusive. The share of the entire realized income received by the richest 1 per cent varied from a little more than 14 per cent in 1916 to a little less than 10 per cent in 1923. The years 1916 and 1926 were years of prosperity, while 1920 and 1921 were years of comparative depression for business. The tables show that in the prosperous years the share of the upper 1 per cent was greatest, while the lower 99 per cent received its largest *share* in 1921 and its next largest *share* in 1920. On the other hand, the actual per capita income of the 99 per cent was not relatively

[1] *News Bulletin*, National Bureau of Economic Research, Inc., New York, No. 34, Nov. 8, 1929, pp. 2, 3.

high in 1920 and 1921. Indeed, when measured in "constant" dollars of 1913, the purchasing power of the per capita income is shown to have been particularly low for all classes in 1920 and 1921.

While 1916–1926 is too short a period to afford a safe basis for generalization, there is much reason to believe that the results noted immediately above are typical of the long-time movements affecting the concentration of wealth and income. War, inflation, and booming business increase the concentration of wealth and income in the upper or wealthier classes. Depression exerts an equalizing influence and increases the share of the total income received by the less well-to-do. But it does not increase their wealth or income measured absolutely; in material comfort and purchasing power all classes suffer in periods of depression.

In general, the facts respecting the distribution of incomes are such as properly to constitute a cause of grave concern. Despite the relatively high per capita production of wealth, poverty still persists, — as indicated, albeit imperfectly, by the very small incomes at the lower end of the income scale. At the other end of the scale are a relatively small number of incomes that are almost absurdly large. And the whole scheme of distribution is skewed or twisted in such a way as to constitute a problem in itself.

In material comforts, undoubtedly, the people of this generation are, in general, better off than those of any earlier day. The work of settlement in which so many of our forefathers engaged was laborious and exhausting. Food was often scarce, disease was rife in many settlements, and the women and children in particular suffered greatly. After the wilderness was cleared, there ensued a period of "rude plenty." Food was abundant, but it was coarse in quality and restricted in variety, whilst everything that had to be brought from a distance was very expensive. Education was difficult to secure, books scarce, and the lives of most people were, in the main, monotonous and uneventful.

Speaking generally, money wages have steadily risen, and the hours of labor have declined, with minor interruptions, since the colonial period, while prices have fluctuated irregularly. In the last quarter of the nineteenth century there was a steady and notable increase in the real wages of labor. In the first fifteen years of the twentieth century, however, money wages in the

TABLE IV. — PER CAPITA INCOME IN EACH OF FOUR CLASSES OF INCOME RECIPIENTS [1]

CALENDAR YEAR	CURRENT DOLLARS				1913 DOLLARS			
	Class IV	Class III	Class II	Class I	Class IV[a]	Class III[b]	Class II[c]	Class I[c]
1916	$ 971	$ 8,295	$53,535	$355,239	$ 887	$7,796	$50,315	$333,871
1917	1,142	9,872	56,579	328,510	888	8,216	47,908	278,163
1918	1,356	9,814	40,987	266,947	880	7,091	30,451	198,326
1919	1,471	11,954	50,128	262,766	818	7,551	32,936	172,645
1920	1,692	12,556	42,881	190,322	832	6,954	24,658	109,443
1921	1,437	8,501	38,840	151,552	835	5,078	23,299	90,913
1922	1,441	11,197	45,993	219,648	906	7,027	28,603	136,597
1923	1,601	11,918	47,409	215,923	990	7,419	29,355	133,698
1924	1,608	12,832	52,995	262,125	991	7,998	32,957	163,013
1925	1,646	15,126	67,479	376,479	992	9,229	41,121	229,420
1926	1,699[d]	14,861	66,531	391,762	1,019[d]	9,073	40,617	239,171

[a] Amount in current dollars divided by weighted average of indices for urban employees, farmers, farm laborers, and $5,000 class.
[b] Amount in current dollars divided by index for $5,000–$25,000 class.
[c] Amount in current dollars divided by index for $25,000 class.
[d] Preliminary estimate.

[1] *News Bulletin*, National Bureau of Economic Research, Inc., New York, No. 34, Nov. 8, 1929, pp. 2, 3.

TABLE IV (*Continued*). — RELATIVE PER CAPITA INCOME

(Income in 1916 = 1.00)

CALENDAR YEAR	CURRENT DOLLARS				1913 DOLLARS			
	Class IV	Class III	Class II	Class I	Class IV	Class III	Class II	Class I
1916	1.00 [a]	1.00 [a]	1.00 [a]	1.00 [a]	1.00 [a]	1.00 [a]	1.00 [a]	1.00 [a]
1917	1.18	1.19	1.06	.92	1.00	1.05	.95	.83
1918	1.40	1.18	.77	.75	.99	.91	.61	.59
1919	1.52	1.44	.94	.74	.92	.97	.65	.52
1920	1.74	1.51	.80	.54	.94	.89	.49	.33
1921	1.48	1.02	.73	.43	.94	.65	.46	.27
1922	1.48	1.35	.86	.62	1.02	.90	.57	.41
1923	1.65	1.44	.89	.61	1.12	.95	.58	.40
1924	1.66	1.55	.99	.74	1.12	1.03	.66	.49
1925	1.70	1.82	1.26	1.06	1.12	1.18	.82	.69
1926	1.75 [b]	1.79	1.24	1.10	1.15 [b]	1.16	.81	.72

[a] The year 1916 may not be typical It is used as a base merely because it happens to be the first year for which data are available.
[b] Preliminary estimate.

United States, as elsewhere, failed to keep pace with the persistent rise of the price level, so that the wage earner lost some ground. Despite the further rise of prices brought about by the inflation attending the World War, labor managed with remarkable success to hold its relative position, so that the subsequent fall of prices meant another advance in the real wages of labor. The advance in the real economic position of actual wage earners and of their descendants has undoubtedly been much more rapid. The ranks of the more poorly paid laborers have been continually recruited by immigrants from other countries, until recent years. The relatively low position they took at first in American economic life constituted a real advance over their former status. Their coming retarded the advance in the general level of wages, but it gives added meaning to the fact that the general movement of the earnings of particular laborers and their descendants has been very definitely upward.

But poverty nevertheless remains. Certain English investigations show that well toward the end of the nineteenth century more than one-fourth of the population of the cities of London and York were below the poverty line. To be sure, it is not easy to determine definitely how poor a person must be in order to be "in poverty," but the statement was based upon standards that are undeniably conservative. A number of those actually in poverty have enough income to purchase their minimum physical requirements if they knew how to spend their money wisely. But those who most require consuming skill are usually least capable of exercising it.

An American writer has estimated that ten million persons in the United States are in poverty, not all in distress, but "much of the time underfed, poorly clothed, and improperly housed." The estimate is based on statistics of unemployment, returns of boards of charity, court records of evictions, and pauper burials. Whatever the correct figures may be, they would doubtless be startling in comparison with statistics of our industrial progress.

Statistics of wealth distribution.

The process of estimating makes statistics of wealth even more approximate than statistics of income, for this reason: in appraising the value of some of the most important classes of wealth we must estimate the probable future income derivable from the

property in question and then capitalize this estimate at an estimated interest rate. Not as much reliance then may be placed upon statistics of wealth as upon statistics of income distribution. The following estimates (Table V) made by a disinterested and ingenious statistician are presented primarily to illustrate the

TABLE V. — THE ESTIMATED DISTRIBUTION OF WEALTH AMONG PROPERTY OWNERS IN THE CONTINENTAL UNITED STATES, DECEMBER 31, 1921[1]

WEALTH PER PERSON	SIMPLE DISTRIBUTION		CUMULATIVE DISTRIBUTION % ABOVE LOWER LIMIT OF CLASS	
	No. of Persons in Class	Wealth of Class (Millions)	No. of Persons	Amount of Wealth
$0 to $1,000	5,288,378	$3,583	100.00	100.00
$1,000 to $2,000	12,136,688	18,256	87.07	98.73
$2,000 to $3,000	7,428,328	18,154	57.40	92.23
$3,000 to $5,000	7,167,866	27,247	39.25	85.78
$5,000 to $10,000	4,497,750	30,890	21.72	76.08
$10,000 to $20,000	2,140,110	29,805	10.73	65.10
$20,000 to $30,000	922,000	22,710	5.50	54.50
$30,000 to $40,000	510,900	17,512	3.24	46.42
$40,000 to $50,000	186,000	8,268	2.00	40.19
$50,000 to $100,000	371,100	25,619	1.54	37.25
$100,000 to $1,000,000	251,970	61,283	0.63	28.14
$1,000,000 to $5,000,000	6,585	10,297	0.018	6.34
$5,000,000 and over	649	7,535	0.0016	2.68
Total	40,908,324	281,159		

extreme concentration of wealth shown by practically all statistics bearing upon the distribution of wealth in the United States. These figures show even less concentration in the upper or richer classes than most other data dealing with this subject.

These data permit of certain broad generalizations which are important. In the first instance, it will be noted that of the estimated population of over 108,000,000 people in Continental United States in 1921, only 41 million are represented in this table as property owners. Almost two-thirds of the population were without property. While a larger proportion of this propertyless class was made up of housewives and minors, there were, nevertheless, many who were wholly dependent upon their current earnings for a livelihood. If these figures are substantially correct and if conditions are substantially the same as in 1921, more than one-quarter of the wealth of the United States is

[1] W. I. King, "Wealth Distribution in the Continental United States at the Close of 1921," *Journal of the American Statistical Association*, June, 1927, p. 152.

owned by less than 1 per cent, more than one-half by a little more than 5 per cent, and over three-quarters by slightly more than one-fifth, of the property owners. To state the same relationships in a different way: about four-fifths of the property owners of this country own individually less than $10,000 of wealth and in the aggregate account for less than one-quarter of the national wealth. Ninety-eight per cent of the property owners are worth $50,000 or less and own in the aggregate about 60 per cent of the national wealth.

While there are no later data concerning the distribution of wealth among property owners in the United States, Table VI

TABLE VI. — CHANGES IN DISTRIBUTION OF WEALTH AMONG INCOME CLASSES [1]

	1921	1929
	Per Cent	*Per Cent*
$1,000,000 and over	1.27	2.24
500,000 under 1,000,000	1.09	1.50
300,000 under 500,000	1.11	1.74
150,000 under 300,000	3.12	3.30
100,000 under 150,000	4.35	4.41
50,000 under 100,000	5.76	6.96
25,000 under 50,000	8.63	8.95
10,000 under 25,000	13.32	13.44
5,000 under 10,000	14.52	14.21
3,000 under 5,000	14.91	14.23
2,000 under 3,000	14.80	13.99
1,000 under 2,000	12.98	11.27
1,000 and under	4.14	3.76
Total	100.00	100.00

taken from a recent study shows changes in the distribution of wealth among income *classes* between 1921 and 1929. It is apparent that the distribution of wealth among the total number of owners has been remarkably stable over a long period of years.

The growth of the number of millionaires has been used as an evidence of growing wealth concentration, but it should be noted that a growth of population and wealth in a community would cause an increase in the number of millionaires, even if the relative position of the various classes remained the same. Suppose that in 1850 there had been in the United States but fifty millionaires, that three hundred and fifty persons had from $750,000 to

[1] Robert R. Doane, *The Measurement of American Wealth*. Harper and Bros., 1933, p. 33.

$1,000,000, and that six hundred persons had from $500,000 to $750,000. If the population had remained the same and everyone's wealth had been doubled, in 1900 there would have been one thousand millionaires, while if the population had increased four-fold, with the *relative* position of different income-receivers unchanged, we should then have four thousand millionaires. Nevertheless, the increase of large fortunes has been so startling that in spite of these considerations it may be right to regard them as an indication of a growing concentration of wealth. The lists of very rich men published in the United States from time to time are instructive on this point. In 1820 men with a personal property of $20,000 were included; in 1846 a total property of $50,000 was considered very large; in 1855 twice this amount was needed to make a man really rich; in 1892 a man had to be a millionaire to be considered very wealthy, and at present one may even speak of a billionaire.

Causes of inequalities in the distribution of wealth.

The explanations may be divided into two classes: (1) those that emphasize individual responsibility, and (2) those that emphasize social responsibility. According to the first, a comfortable fortune is the reward of efficiency, and poverty the penalty of inefficiency. To find fault with existing wealth distribution, it is alleged, is to find fault with nature for making individual differences in ability so great. That there are idle and worthless persons among the rich is not to be denied, but they, it is said, are to be regarded as the exceptions. As a class, according to this view, the rich add more to the wealth of society than they consume, and they do not in reality deduct anything from the income of the lower classes.

Those who emphasize the second explanation, on the other hand, point to the existence of all sorts of special privileges which enable the few to levy toll on the production of the nation. They assert that the fortunes of most millionaires originated under the shelter of some monopolistic enterprise. As to the poor, they call attention to the fact that inefficiency may be the *result* of poverty as well as the cause of it. Society must therefore take active measures to better the environment of the poor. They must be taught to live wisely, and their children must be given a fair chance in life. Children who do not get enough to eat when

young cannot be expected to take care of themselves when they are men and women. Those who take this second view do not deny that individual differences in ability exist and lead to differences in fortune, but they think that the differences in reward are quite out of proportion to differences in ability.

Some go so far as to hold that ability is solely a matter of heredity, and that environment plays a negligible part. So far as economic efficiency, at any rate, is concerned, this is more than can be granted. Efficiency in many economic pursuits requires training, the mastery of a certain technique, as well as innate ability. So long as some children are forced early in life into "blind-alley" occupations, while others have the advantages of a lengthy and expensive preparation for their life work, it is idle to speak of the distribution of efficiency, or of earning power, as being dependent solely upon the distribution of innate abilities.

On the other hand, those who stress the importance of inherited differences undoubtedly have much truth on their side. Down at one end of the scale, for example, are those whose physical or mental defects put them below the margin of utilization and make them economic dependents. It is probable, moreover, that the poorer classes contain a much smaller proportion of highly efficient persons than do the wealthier. On the other hand, scarcely anyone doubts that there are *some* potentially efficient persons among the poorer classes, just as there certainly are some very inefficient persons who, for one reason or another, enjoy the advantages of wealth.

It does not follow that wealth *is* distributed in proportion to ability. The skewness of the distribution of incomes indicates the presence of inequality in the distribution of opportunity. And the fortunes of the wealthiest are so large as to seem to be disproportionate to any conceivable differences in efficiency. Among the wealthiest men in the world certain native princes of India and certain American captains of industry are commonly named. Is privilege responsible in the one group of cases as in the other? Looking over the sources of great modern fortunes we find that inherited wealth, monopoly, and successful large-scale speculation play an important part. In many instances, however, great fortunes have been made by the successful conduct of competitive or semi-competitive business undertakings. In this connection there are several things which it is important to

remember. In the first place, in business as well as in politics and art, allowance must be made for the appearance of the exceptional "genius." In the second place, even a relatively small difference in the efficiency with which it is conducted may make a very large difference in the earnings of a gigantic business undertaking. It may be real economy for a corporation to pay $100,000 a year to the best man in sight rather than $50,000 to the second-best man. In the third place, many great fortunes have been made in fields of enterprise in which the risks are great. The men who have played for high stakes and lost are forgotten. The few who succeed become conspicuous.

Is greater diffusion possible?

Most people agree that a closer approach to equality of possessions would be desirable if it could be brought about without lessening the incentives afforded by the present system to the more efficient members of society. The ideal of a leisure class whose mission it is to further culture, without substantial contributions to the production of what it consumes, does not find much favor in this democratic age. The disadvantages of wide extremes in wealth have been so often pointed out by social philosophers that they need not be emphasized here. But some who believe that the competitive system roughly apportions rewards according to individual production will say that nothing can be done directly to diffuse wealth. That each individual should bear the consequences of his own conduct, they think, is necessary as a discipline for the race. "Give the children of the shiftless, by thoughtless charity or various systems of poor relief, the right to eat the substance of the efficient and the prudent, and you will soon lose both the capital and the morality under which that capital has been created," [1] says one able writer.

On the other hand, those who think that something can and should be done question the possibility of discovering the real contributions of individual workers with any degree of exactness under modern complex industrial conditions, and think there is little danger of discouraging industry and thrift. If the highest incomes were $100,000 per year, men would struggle just as hard as they do now to get into the highest class. But there is danger of injuring by wrong methods the very persons whom it is desir-

[1] A. T. Hadley, *Economics*, G. P. Putnam's Sons, New York, 1896, p. 49.

able to elevate. Indiscriminate charity may convert poverty to pauperism.

We shall not discuss here the methods of alleviating the suffering that comes from poverty. The best methods of charitable relief are necessary as palliatives. but they cannot cure the evils of poverty.

Modifying the methods of wealth acquisition.

These measures fall into two classes: (*a*) prevention of improper methods of wealth accumulation; and (*b*) eliminating or strengthening the inefficient members of society. Under the first of these falls the problem of reducing to lower terms such incomes as are individually unearned. There must be such control of monopolistic privileges as to keep them from being the means of exploiting the public. Fraud and favoritism must be eliminated so that income shall not be wholly out of proportion to service or needs. Real, not nominal, equality of opportunity must be established and maintained.

The second class includes a large variety of methods. (1) It is possible to do something to prevent defective human beings from being born. There is a growing sentiment in favor of preventing the marriage of persons who are not fit for marriage. No individual would be deprived of any important right if a medical certificate of good health were made a condition precedent to the granting of a marriage license, although here education may prove the more effective remedy. (2) Education should be made compulsory, with the endeavor of making the rising generation not only efficient producers but also wise spenders of what they receive. This should be accompanied by some provision for the support of children of poorer families throughout the educational period. (3) It is possible to provide against the misfortunes of life by insurance of various kinds. If men will not voluntarily make provision for themselves and for those dependent upon them in cases of sickness, accident, old age, and premature death, they should be helped to do so indirectly by some comprehensive system of workingmen's insurance and old age pensions, such as has been enacted by Congress through the passage of the Social Security Act of 1935. (4) The solution of the problem of unemployment depends largely upon indirect measures, such as monetary and banking reform, which steady the progress of

industry, although more efficient labor exchanges and unemployment insurance are direct measures which are of some small help. If business men and political leaders ever become as much interested in the problems of unemployment as in tariff reform, we may expect that productive use will be found for the unemployed so far as they are employable. We shall recognize that society must offer a willing and able man an opportunity to work. (5) Opportunities for saving and methods of encouraging thrift should be multiplied. (6) The health and vigor of the people should be improved by more efficient use of "preventive medicine" and public hygiene in all its various phases, and by improvement in the conditions of work.

To some extent large fortunes disappear without governmental interference, but it takes comparatively slight ability to maintain an inherited estate. It does not seem practicable or desirable to limit directly the total amount of wealth which a man may own, but there is no reason why the government should refrain from consciously encouraging the diffusion of wealth. The regulation and taxation of inheritances exercise a helpful influence if applied with care and moderation.

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PART IV

ECONOMIC PROBLEMS

CHAPTER XXVI

BUSINESS ORGANIZATION

The meaning of "business."

The dominance of "business" in our present economic life sometimes causes confusion as to the actual distinction between *business* and *economics*. An outstanding economist has defined economics as "the social science of business," [1] and business men who are active in advancing the technique and organization of business are sometimes called "economists." Both references are inadequate but they accurately convey the inference that business is, in general, a practical application of scientific principles of economics. This *complementary relation* between economics and business is accurate and important; but other equally significant facts serve to draw clear distinctions with respect to both the nature and the scope of economics and of business. That the *motive of business is profit gaining* and the *chief end of economic activity is making a living* exemplifies the basic contrast between business and economics. Furthermore, business profit is peculiarly a private and personal achievement, while civilized living is peculiarly a collective or social achievement. These are broad and clear distinctions between business and economics.

Business is acquisitive, and although acquisition usually involves production this is not necessarily the case. Business operations consist, fundamentally, in buying or hiring things and in transforming them, using them, and selling them or their services for private gain. The results of business operations are periodically recorded in the "profit and loss account" of business units. Among the things thus bought or hired are merchandise, land, labor, capital-goods, and profitable privileges or advantages, such as franchises, patents, copyrights, and "good-will." Economic life, in its business aspect, is occupied with buying and selling although the processing of materials may intervene between

[1] Herbert J. Davenport, *The Economics of Enterprise.*

the purchase and sale. It is a field of activity in which prices, expenses, debits and credits, contractual relations, and money making are the dominating considerations. The broader scope of economics is also concerned with the evolution of the technical processes of production, the ultimate costs of production as measured in human effort and sacrifice, the ultimate rewards of industry as measured in standards of living, and the achievements of cultural progress and social well-being.

Business involves the private ownership of property and the exercise of contractual obligations; it assumes the rights and responsibilities of their use in the accomplishment of business purposes. A business begins with the acquisition of property or the right to its use; it continues with the use of property and the exercise of contractual rights of purchase and sale. A business dissolves with the disposal of its property and the termination of its contracts. In general, the normal life span of a business may be divided into five successive periods.

1. *The business project* includes an analysis of the business possibilities of a potential undertaking and the formulation of general plans of organization and operation.

2. *Promotion* requires the formation of an initial management unit for the purpose of working out detailed plans, making necessary legal arrangements, enlisting required personal support, laying out the financial plan, exploring ways and means of securing stocks and disposing of potential goods or services and, finally, securing the initial investment capital.

3. *Organization and development* include the acquisition of location rights and properties, completion of plant and installations, contracting for materials and for disposal of products, employment of operating and executive personnel, putting the establishment in motion, tuning up the organization, and traversing the experimental period of operation to a point where net earnings begin to be realized.

4. *Growth and maturity.* — Businesses gradually come to maturity and realize partial or complete achievement of the purposes for which they are designed. Often in their growth businesses expand beyond their original design and also frequently penetrate into unanticipated spheres of activity. There seems, however, to be a limit to the size beyond which any given type of business enters a zone of "diminishing returns." It seems also that the

passing of time, together with related factors of obsolescence, conservatism, and inertia, tend toward superannuation in business as elsewhere. It is sometimes possible, when weakened by these disabilities, for a failing business to be rejuvenated and enabled to continue, usually by a process of reorganization or by combination with a more virile business unit.

5. *Dissolution.* — The possibility of dissolution always treads close upon the heels of any business no matter how seemingly successful or secure it may be. Probably 80 per cent of all business projects die in infancy or during the period of promotion, and less than half of the remainder survive the experimental stage of development to enjoy a substantial period of profitable operation. Ultimately, when profits cease to accrue, the life of a business comes to an end. A business enterprise may be formally discontinued by voluntary dissolution or by insolvency usually followed by bankruptcy. A business is insolvent when its assets are insufficient to meet its demand liabilities. A business is bankrupt when, because of insolvency, control of its assets is undertaken by the courts for the protection of its creditors.

Types of business organization.

The individual entrepreneur. — Any individual may set himself up as a business man, an entrepreneur, without any legal formality other than the payment of the license fee which most states impose on a few kinds of business undertakings and which some states, especially in the South, impose upon many kinds of undertakings. The individual entrepreneur still dominates the field in agriculture, in small retail trade, in local "shop industries," and in personal service enterprises.

In their legal aspects, the obligations of a business conducted by an individual entrepreneur are the personal obligations of the entrepreneur. All of his possessions — of whatever kind — [1] are jeopardized by his business risks. If the entrepreneur conducts two distinct business undertakings, the assets of one may be seized, if necessary, to satisfy the liabilities of the other. The personal liability of the individual entrepreneur is accordingly said to be *unlimited.* The usefulness of this kind of business unit is confined, obviously, to small undertakings, where the

[1] The "exemption laws" of some states constitute an exception which does not affect the principle involved.

capital and credit of the individual are adequate and the problems of management are simple.

There are certain advantages enjoyed by the individual enterpriser. *Flexibility of management* enables the owner-manager to adjust his methods and policies to accord with sudden changes in business conditions without consulting partners, directors, or stockholders. *Comparative freedom from taxation* results from the customary legal exception of the small business enterprise from numerous levies which are imposed upon corporations.

The partnership. — A firm or partnership represents a joint undertaking by several entrepreneurs. Partnerships are most common in mercantile undertakings of moderate size, in small manufacturing establishments, and in professional service enterprises. This joining of interests makes larger undertakings possible, but increases the personal liability of the individual members of the firm. Each member is personally liable for all of the obligations contracted by the firm, including those contracted in the ordinary course of business by any other member of the firm.[1] The partners may have a contract binding among themselves as to their respective contributions, shares in profits, and liabilities. But a member released from personal liability by an agreement of this kind is still liable for all obligations incurred by the firm. The agreement, however, affords a basis for instituting legal proceedings to recover the amount of any personal losses from the other members of the firm.

Aside from the excessive personal liability involved, the partnership is open to objection from the business man's point of view, because: (1) A partner cannot retire from a firm without dissolving the partnership and possibly breaking up the business. (2) The death or insolvency of any partner has the same effect. (3) A new member cannot enter the firm nor can a member transfer his interests to another person without the consent of all the members of the firm. (4) The partnership form of organization is not adapted to undertakings requiring large investments of capital, a wide distribution of activities, or the co-operation of a large number of persons.

[1] The statutes of many states provide for a special form of *limited partnership*, in which one or more of the partners are *special partners*, who are not personally liable, save for their investment in the business, and who are not allowed to take active part in the management of the business. In a few states there is a special form called a *limited partnership association*, in which the liability of all the partners is limited. These are practically joint-stock companies with non-transferable shares.

The advantages of the partnership reside in the ease with which it can be organized and dissolved, its comparative freedom from government regulation and taxes, and its elasticity, — that is, the ease with which the contractual relations among the partners, binding among themselves, can be altered to suit contingencies that may arise. However, the latter advantage disappears as the number of partners becomes greater and the administration of the business is liable to confusion because of the conflicting authority of the partners.

The joint-stock company represents a metamorphic form of the business unit which partakes of the nature of both partnership and corporation. In ownership it resembles a partnership, but the capital shares of the several partners are represented by transferable stock certificates. The holders of stock certificates are legally subject to full liability as in a general partnership. Like the corporation, its managerial control is vested in a board of directors and such executive officers as may be chosen. It also escapes the uncertain continuity of the partnership and avoids the difficulties of management inherent in partnership. Joint-stock companies may sue and be sued in the names of their officers. Most states forbid the ownership of real estate in the name of the company. Joint-stock companies in England are more numerous than in the United States and resemble more closely our business corporations.

The Massachusetts Trust is a modern form of the old common law trust, or express trust, by which a number of persons, the trustees, hold property for the benefit of others, the *beneficiaries*. The Massachusetts law, before 1912, forbade the creation of corporations for the purpose of dealing in real estate.[1] The organization of an association under the terms of a *deed or declaration of trust*, whereby two or more trustees may take over and manage the capital, business, or other property supplied by the beneficiaries, provided a successful means of circumventing the above mentioned prohibition of the statute.[2] Such associations are commonly known as Massachusetts Trusts. This type of business organization has so successfully combined the capitalization and administrative advantages of the corporation with the above

[1] Since a corporation is deemed to have continuous succession, it was feared that a land-holding corporation might sometime challenge the power of the state itself.

[2] The interests of the beneficiaries in the trust are represented by certificates of *units of beneficial interest*.

mentioned advantages of the partnership as to gain rather wide popularity in other fields than that of its original use.[1]

The business corporation. — The unusual magnitude of business undertakings which became possible with the development of the western hemisphere gave rise to a need for business units quite different from the types which had been in customary use. Larger capital funds, a wider spread of operations, more diversified managerial talent and technical knowledge, and a better prospect of continuity or "succession" were necessary in the comparatively large-scale business projects of the New World. It was needful, also, that the direct personal relation between ownership and management which dominates the one-man business and the partnership organizations should be removed. In brief, the conditions of large-scale and geographically diffused enterprise required a form of organization which would permit numerous proprietors to join in contributing capital and to share in risk and profits and which would definitely place authority and responsibility upon managers chosen because of their presumed skill and integrity in directing the varied activities of the business. This kind of organization has gradually developed into several types which collectively are known as the modern business corporation. The importance of *centralized authority and responsibility* in matters of business control, of *technical diversity in management*, and of *elasticity of proprietorship interests* should be particularly noted as characteristic of the business corporation.

The corporation was not entirely unknown before the exploitation of America where it has attained most rapid and varied development. Long before the business corporation, as we know it, was developed, settlement companies and trading companies were operating on the west coast of the Atlantic under royal charters; kings had exercised their sovereign powers to create "bodies corporate." Organized groups of persons had been granted, collectively, specified rights, privileges, and responsibilities whereby, under the law, they were treated as having a legal individuality somewhat analogous to that of a natural person. Such corporations, having been endowed by royal edict with names, domiciles, and private rights, could own property, make

[1] The following are examples of the Massachusetts Trust type of business unit: Amoskeag Manufacturing Company, Associated Simmons Hardware Companies, Chicago Elevated Railways, Massachusetts Gas Companies, Great Northern Iron Ore Properties, and Montgomery Ward Warehouse Associates.

and execute contracts, and sue and be sued in the courts. In the beginning, corporations were created for the convenience and promotion of public or ecclesiastic interests and not for private profit. Municipalities, universities, monastic orders, and gilds were commonly incorporated by royal charter long before business corporations of the modern kind arose, — for this did not occur until the rise of "capitalism" in the sixteenth and seventeenth centuries. The great trading and colonizing companies, such as the British East India Company, the Virginia Company, the Guinea Company, and the Hudson Bay Company, were the prototypes of the modern business corporation. In connection with these trading companies the *joint-stock* principles, which had already been used in a few isolated instances of banking, were developed. This was the practice of issuing certificates to those who made contributions to the "joint stock" (or capital) of a company, which entitled the holder to a proportionate share in the profits accruing to the joint stock. The modern business corporation, like these early trading companies, is based essentially on the combination of the joint-stock principle with the legal recognition of the business unit as a distinct entity.

The modern business corporation, like many complex and rapidly changing economic institutions, is difficult to define. The formal definition most quoted in this country is that of Chief Justice John Marshall pronounced in the famous Dartmouth College decision — "A corporation is an artificial being, invisible, intangible, and existing only in contemplation of law . . . it possesses only those properties which the charter of its creation confers upon it. . . . These are such as are . . . best calculated to effect the object for which it was created. Among the most important are immortality and . . . individuality. . . . They enable a corporation to manage its own affairs, and to hold property without, the perplexing intricacies . . . of transmitting it from hand to hand. . . . By these means, a perpetual succession of individuals are capable of acting for the promotion of the particular object, like one immortal being." [1]

The American law of corporations, starting with the judicial opinion of John Marshall, in 1819, and English definitions which preceded it,[2] holds the following attributes to belong to the

[1] *Trustees of Dartmouth College* v. *Woodard*, 4 Wheaton 518, 636, U. S., 1819.
[2] Blackstone, *Commentaries*, Book 1, p. 471.

corporation: (1) It must have been created by authority of a sovereign power. (2) It represents a control whereby the sovereign power permits its existence under certain defined conditions. (3) It represents the purpose and embodies the agreement among themselves of at least two persons. (4) It is endowed with such concrete individuality that the law recognizes a complete separation between the corporation and the human beings who own and control it.[1]

Legal definitions of the corporation suggest very little of the nature and nothing of the importance of the role of the business corporation in the drama of American economic life since the days of John Marshall.

At the beginning of the nineteenth century the few corporations then in America were, for the most part, banks, insurance companies, and canal and turnpike companies. The construction of railways after 1830 greatly stimulated the organization of corporations, because these undertakings required larger investments of capital than could be furnished by any individual or partnership. This was really the initial period of the modern type of corporation.

A second period of corporate enterprise began when industries which were nurtured by the requirements of the Civil War assumed national importance as producers and distributors of essential products of peace. In addition to a growing railway network, the beginnings of "big business" enlisted larger capital and required a more complex operating organization and flexible financial structure than had ever been needed before. This period was also marked by the spontaneous appearance of an organized and systematic national securities market.

A third period of corporation development was entered in the 1880's when a wave of industrial combinations and consolidations advanced the march of business organization into the notable epoch of integration known as the trust era. Corporate organization was applied to all types of enterprise with the exception of agriculture and the professions. Initial short railway companies were consolidated into trunk line companies and trunk line companies were later combined into systems. Many independent industrial enterprises were formed into groups of like

[1] Arthur Stone Dewing, *The Financial Policy of Corporations*, 3d ed., p. 6, Ronald Press, New York, 1934.

industries which were later combined into "trusts" in the effort to establish monopolies.

A fourth period in the history of corporations dates from about 1905 to 1930. It may best be characterized by the dominance of the holding company. Holding companies appeared in Pennsylvania as early as 1870, but were practically unknown until about 1892. By 1905 their superiority as a means of integrated control was established.

The tide of corporate integration in the railway field was checked in 1910 by a severely restrictive amendment to the Interstate Commerce Act; but in the following year a liberal judicial interpretation of the Sherman Anti-Trust Law definitely stimulated the centralization of corporate management in industry and trade. The "rule of reason" announced, in 1911, by the Supreme Court, in the Standard Oil case and the American Tobacco case,[1] removed the strict prohibition of the Sherman Law upon *all* combinations and agreements in restraint of trade and substituted therefor *combinations and agreements in undue restraint of trade.* The opinion of the court was soon thereafter incorporated by Congress in the Clayton Act and the Federal Trade Commission Act of 1914. The status of the holding company, as a device of centralized business management within the field of industry and trade, was thus adequately defined and confirmed for the first time. In the theory of the law, the interstate operations of holding companies were made subject to regulation by the federal anti-trust laws to the end that no "undue discrimination or restraint of trade" should result. The administrative control of interstate industrial and trade corporation was lodged with the Federal Trade Commission.

Holding companies. — A holding company may be described as a corporation which makes a business of acquiring and holding the shares of other corporations. By this method, a holding company, organized and managed by a small group of stockholders and officers, may itself become a major stockholder in one or more "operating" companies, and thus control their business policies. Corporations so controlled by holding companies are known as "subsidiary" companies. Their minority or independent stockholders usually are deprived of any influence in selecting the company directors and officers, these details

[1] See Chap. XXVIII, pp. 639–640.

being attended by the controlling holding company. The directors and officers of subsidiary companies, having been chosen by the management of a holding company, are of course subservient to the policies dictated by the holding company.

Most corporations have authority, by the terms of their charter, to become stockholders in other corporations, and thus to establish inter-corporate "affiliations" in addition to exercising their ordinary business functions. But in recent years, numerous corporations have been created for the specific purpose of acquiring controlling interests in other corporations, and thus centralizing in their directors and officials the control of many operating companies. Holding companies of this type may in turn become subsidiaries of holding companies of a higher or "second degree" — holding companies of holding companies. This integration of corporation management by the holding company device has resulted in concentrating the control of great aggregations of capital invested in transport, industry, trade, and banking in a group of entrepreneurs who represent a very minor proprietorship equity in the basic resources and facilities of American business. It is this comparatively modern aspect of our economic evolution, more than any other one thing, that has precipitated the wave of criticism of democracy and capitalism which probably constitutes the greatest national hazard of the immediate future.

The transient emergency adjustments during the World War served to relieve business, for the time being, from most of the regulative restrictions previously made effective by anti-trust legislation and commission control. They served, also, as the prelude to a remarkable acceleration of business integration from 1923 to 1929, comparable to and exceeding that of the years 1897–1904. During this period practically all industries, save agriculture, showed a notable tendency to concentration. Important mergers took place in food products, automobiles, motion pictures, iron and steel, communications, and most conspicuously in banking and public utilities. There was also a rapid consolidation in merchandising — a movement comparatively new since 1917. The growth of chain stores in the grocery, drug, and tobacco fields was particularly significant. During this period also international business controls, which had appeared before the war and were greatly amplified during the war, became so deeply rooted as practically to internationalize the American

business corporation. The progress of concentration in public utilities, industry, and banking from 1919 to 1929 is shown in the table below.

TABLE I. — MERGERS AND ACQUISITIONS IN PUBLIC UTILITIES, MANUFACTURING, AND BANKING, 1919–1928

YEAR	PUBLIC UTILITIES	MANUFACTURING AND MINING	BANKING
1919	22	89	80
1920	15	173	77
1921	74	89	104
1922	285	67	125
1923	426	67	120
1924	580	95	124
1925	402	121	120
1926	1,029	139	154
1927	911	207	259
1928	874 [a]	221	—

[a] Computed from the list given in the *Electrical World*, January 5, 1929, pp. 45–49.

Most pretentious, probably, was the complicated unified structure of financial control in the field of public utilities. In 1915, the sixteen major utility groups controlled only 22.8 per cent of the power generating capacity of the country; in 1925 the sixteen largest groups (including 11 holding companies) controlled 53 per cent of the national capacity.[1] Holding companies in these public utilities were pyramided to the fourth and fifth degrees. Following 1925, the process of integration, mostly by holding companies, continued until checked by the depression.[2] Effective control of this industry, the so-called "power trust," although partially attained under the Securities and Exchange Acts, of 1933 and 1934, and the Public Utility Act of 1935, remains an important economic and political issue.

An illuminating example of centralization within the field of banking is the consolidation, in 1930, of the Chase National Bank and the Equitable Trust Company. Each of these institutions represented a sequence of mergers extending over a period of many years, and their consolidation, under the name of the Chase

[1] Federal Trade Commission, *Electric Power Industry*, etc. 70th Congress, 1st Session, Senate Document 46, p. 176.

[2] The leading public utility group, five of whom are said to have controlled 46.9 per cent of the total output, were deeply involved in the stock market crash of 1929. Although the underlying operating organizations were generally sound and survived, the superstructure of control and speculative exploitation was, to a considerable extent, eliminated.

National Bank of New York created the largest financial institution in the world. It is also significant of the trend of financial integration that the 30,104 banks of all classes in the United States, in 1921, declined to a total of 23,718 in 1930. During the same period, total bank resources increased from $42,496,-100,000 to $73,905,500,000.[1] Throughout this period of corporate integration of business control, the holding company has been the most important instrument of centralized management.

The conspicuous experience in the field of banking, namely, a complete occupation of the business by the corporation, followed by a rapid centralization of control and coincident decline in the number of corporations, clearly forecasts the probable course of general business organization in the future. The federal census of 1919 showed that 32 per cent of the manufacturing undertakings included in that enumeration were organized as corporations and produced 88 per cent of the total manufactured product. Since that time, the proportionate number of corporations has remained practically unchanged, but their proportionate capacity has greatly increased. A downward trend is apparent in certain branches of industry and trade. In the future, any considerable increase in the number of corporations can result only from the corporate organization of agriculture and professional services. Such a prospect is not feasible at the present time.

Corporate organization.

The corporation charter. — The corporation is a creature of the state and its right to exist is dependent on a *charter* or on *articles of incorporation*, granted or approved by the state. Incorporation formerly necessitated a *special act* of legislature signed by the governor. This gave opportunity for favoritism and subjected both legislators and corporations to hostility and suspicion. Most corporations are now organized under general incorporation laws, whereby any group of men can secure a corporation charter by complying with certain prescribed conditions. In fact, all states have such general laws and all but six states have constitutional provisions which forbid the granting of charters to business corporations by special legislative act.

It was formerly a common practice to grant corporation charters in perpetuity, but the decision of the Supreme Court in the Dart-

[1] Annual Reports of the Comptroller of the Currency, 1924–1930.

mouth College case, whereby the corporation charter was held to constitute a binding contract between the state and the corporation, which could not be altered or amended by the state except with the consent of the corporation, led to the general practice of limiting the life of corporations. Fifty years is now a customary period. A corporation may secure a new charter at the expiration of the old, but the limited term gives the state opportunity to change the requirements of charters from time to time or to refuse reincorporation altogether, as may seem most desirable. Moreover, in consideration of changing conditions and the consequent uncertainty of potential "public interests," most states now specifically reserve the right to alter or amend corporation charters, at the will of the legislatures.

A corporation's charter, or articles of incorporation, usually contains details relating to such matters as the purpose for which the corporation is formed, its principal place of business, the number of its directors, and the amount of its capitalization.

The charter of a corporation has been said to serve a two-fold purpose — "It operates as a law conferring upon the corporators the right or franchise of acting in a corporate capacity and furthermore, it contains the terms of the fundamental agreement between the corporators themselves." [1]

Corporation laws of the states. — Many difficulties in the public control of corporations have arisen from the fact that while charters usually are granted by individual states, the activities of many business corporations extend over the boundaries of many states.[2] Moreover, some states are much more lenient than others in such matters as the control of capitalization, requirements as to publicity, limitations on the scope of activity of a single corporation, responsibility of the corporation to its employees, taxes, and fees, etc.

New Jersey at one time became known as the "home of corporation" despite the fact that some other states had more lenient laws than New Jersey. In recent years, Delaware, Maryland, and other states have outdone New Jersey in providing agreeable "homes" for corporations. In New York, where the law of

[1] Victor Morawetz, *Private Corporations*, Sec. 316.

[2] Corporations in interstate activities may be granted charters by the federal government. But such action has been confined to banks, a few transport companies, such government owned corporations as the Reconstruction Finance Corporation and the Federal Housing Corporation, and other public welfare corporations created by Congressional legislation following March, 1933.

corporations is fairly representative of the country as a whole, two-thirds of the incorporators must reside in the United States and at least one must be a resident of the state of New York. In Delaware the law makes no restriction upon residence of incorporators. In New York a director must be a stockholder, but in Delaware there are no prescribed qualifications for a director. New York follows the generally explicit statutory requirement that "dividends shall not be paid out of capital" or at the expense of capital impairment, but Delaware appears to depart from this principle by permitting dividends to be paid from "current profits" even though the capital of the corporation may have been impaired by previous losses.[1] In New York, the liability of stockholders extends to debts owing employees. In Delaware, the liability of stockholders of general corporations is limited to their unpaid balance on subscribed stock.[2]

So far as a corporation organized under the laws of one state carries on any part of its business wholly within the borders of another state, the latter state has the right of refusing to recognize it as a corporation; in other words, it has the right to treat it as a partnership. In practice, however, one state freely recognizes the corporations of other states under the rule of "interstate comity." In order to enjoy the most "liberal" laws and escape as much public responsibility and regulation as possible, many corporations have secured their charters in states beyond the borders of which they do practically all of their business.

Corporations classified. — Corporations are variously classified in consideration of the purposes for which classification is desired. *In respect of their economic functions and relations to the state,* corporations are perhaps best classified as (*a*) public, (*b*) quasi-public, and (*c*) private.

Public corporations are created for political or governmental purposes. They include municipalities, townships, counties, school districts, public improvement districts for purposes of sewage disposal, irrigation, and drainage, etc. A state itself is sometimes referred to as a corporation, or as "the corporate state." So considered, the generally accepted definition of a corporation as "a creature of the state, created by authority of

[1] A. S. Dewing, *op. cit.*, pp. 606–608.

[2] A. A. Berle, Jr., *Investors and the Revised Delaware Corporations Act*, 29. *Columbia Law Review*, 563 (1929).

a sovereign power" requires some legal adjustment in order to include the sovereign power itself.

Quasi-public corporations, under the theory of the law, are conceived and operated in private ownership and management, but, because of the nature of their services, they are held to be "burdened with a public interest." In protection of the public interest, they are subject to special legislative and administrative regulation. Quasi-public corporations customarily include railways, communications, municipal utilities, and banks. However, the zone of "public interests" tends constantly to expand and to encroach upon the sphere of private enterprise.

Private corporations occupy the great field of privately owned and operated industrial and commercial enterprise which remains comparatively free from direct government control.

For administrative purposes, the general corporation law of New York (which is typical) classifies corporations into three major groups: (*a*) municipal, (*b*) stock, and (*c*) non-stock.

A municipal corporation is any territorial division of the state, established by law with powers of local government.

A stock corporation may be either a "business corporation," a "monied corporation," or a "transportation corporation," having a capital stock divided into shares. Monied corporations are specifically subject to the banking and insurance laws.

A non-stock corporation possesses no share-capital and may be a religious corporation, a membership corporation, or any other than a stock corporation.

Corporation management.

The management of business corporations is, as a rule, in the hands of *boards of directors*, elected by the stockholders from among their own number. The details of management are in the hands of officers, chosen usually by the directors. In principle this system achieves something like representative government of the affairs of the corporation. In practice, in the larger corporations and especially in subsidiary companies, some of the directors are known as "dummies" — men exercising no real power or responsibility, made directors in order to complete the number prescribed in the charter. Others are the representatives of great financial interests, and often of competing interests. Directors of this latter sort are not primarily concerned with manage-

ment of a corporation in behalf of its stockholders. They are imposed upon the corporation for the purpose of guarding or promoting alien interests, and in many cases for the purpose of preventing competition from becoming anything more active than an armed peace. In most cases the real direction of a corporation's policies is in the hands of an executive committee or "finance committee" of three or more directors representing the person or persons in actual control of the corporation.

The general theory upon which the law of corporations is based is that the corporation is a democracy with a representative government. That is, the directors are supposed to represent *the interests of the stockholders.* For many small local corporations this theory undoubtedly corresponds fairly well with the facts. But large corporations, with hundreds of thousands of stockholders, living in different parts of the country, and even in different countries, cannot accurately be pictured as representative democracies. Outside of a group of holders of large blocks of stock, the stockholders, whether a minority or a scattered majority, are likely to be not only powerless but voiceless.

It is difficult and probably undesirable to change this general situation. The growth of large corporations means necessarily the growth of widespread participation in large business undertakings. But the participators, whether stockholders or bondholders, are to be regarded as investors rather than active partners. What is needed in corporation statutes, therefore, is a frank recognition of this situation. In many cases directors cannot, in any real way, "represent" the stockholders. For this reason their responsibility as trustees for the stockholders should be emphasized in our laws.[1] And as trustees their duties and responsibilities toward stockholders would be more definite and discernible than they are at present.

Corporation capital and capitalization.

Business men use the word "capital" in two ways. They speak of the total investment — the amount of money actually invested or "tied up" in a business unit — as its capital. This is the better and more common usage. They also speak of the estimated total selling value of the business unit as its capital. This last

[1] On this account the development of the "Massachusetts Trusts" as business organizations is of particular interest.

will depend not so much upon the amount of the investment as upon its profitableness. It is roughly measured by the "capitalized" earning capacity of the business, or by current market value of the corporation's stock and bonds. For purposes of accounting it is necessary to set up a "book value" representing the assessed capital liability of the corporation. The book value may be based upon either of the above principles or may be entirely fictitious.

The capitalization of a corporation should not be confused with its capital. The business man usually means by capitalization the outstanding stock of the corporation plus the permanent or funded debt. Capitalization has been well described as "the sum total of the valuation of both the issued capital stock and bonds as well. In other words, it is the value of all the securities issued by the corporation, whether these be stock of various sorts or bonds."[1] This definition of capitalization, however, is not applicable if the shares of stock are of the no-par-value type. In this case capitalization would be the total par value "of all the stocks and bonds combined which are of the par-value type, increased by whatever sum has been brought into the treasury (of the corporation) by the sale of shares of no-par-value."[2] In a strictly legal sense the capitalization of a corporation is the amount of its authorized capital stock.

Corporation stock is divided into two general classes — *common stock* and *preferred stock*, although many corporations issue only the former. Preferred stock represents a prior claim on the earnings of the corporation. A corporation which has "6 per cent preferred stock" outstanding can pay no dividends to its common stockholders until it has paid 6 per cent dividends on its preferred stock. Preferred stock may be cumulative (in which the prior claims to dividends accumulate from year to year, if unpaid) or non-cumulative. It may or may not have any claim on any part of the surplus profits remaining after a stated dividend rate has been paid on the common stock.

Bonds represent capital borrowed by the corporation. They are interest-bearing promises to pay certain sums of money at definite times in the future. Bonds are sometimes said to repre-

[1] A. L. Bishop, *The Financing of Business Enterprise*, Harper and Brothers, New York, 1929, pp. 149–150.
[2] *Ibid.*

sent "creditor interests" and stock "proprietorship interests." This statement is suggestive and is not inaccurate. In a more general sense, however, stocks and bonds are merely different kinds of equities in a business unit, — conveying the right to receive income, to share in the distribution of the assets in case of insolvency, and to have a voice in the management. Stockholders alone participate in the management of the corporation [1] although bondholders are often able to dictate policies when the affairs of a corporation are in a precarious condition.

Overcapitalization. — Much has been said about the overcapitalization of corporations, — "stock watering," as it is called. On the one hand, it is urged that capitalization is a nominal thing, that it is immaterial whether a corporation pays 12 per cent dividends on $1,000,000 of capital stock or 6 per cent dividends on $2,000,000 of capital stock. On the other hand, it is said that capitalization should not be a merely nominal thing, but that it should correspond to the actual amount of the investment; that, with regard to the amount of the investment, regularly recurring dividends of 12 per cent suggest excessive profits in a way that 6 per cent dividends do not.

There is a prevalent but mistaken belief that overcapitalization is often the cause of exorbitant charges. It is thought that the desire to pay dividends on an inflated capitalization leads corporations to exact a higher return for their products or their services than they otherwise would. But it is not difficult to see that such will not often be the case. For whether its capitalization be high or low the corporation will fix its charges at the level which will yield the greatest possible profits. The magnitude of the corporation's capitalization will have no bearing upon the determination of the most profitable level of charges. The charges which would be most profitable under a low capitalization will also be the most profitable under a high capitalization.

A weightier indictment of overcapitalization is that it has opened the door to a number of reprehensible practices in corporation promotion and management. Where there is no definite correspondence between the volume of stock issued and the concurrent *bona fide* investment it is difficult to make sure that some persons will not be able to acquire the securities of a given

[1] In general, preferred shares do not carry voting privileges in the choice of directors. Also non-voting common stocks have occasionally been issued.

corporation on much easier terms than others. Overcapitalization often makes available, for example, what may be termed a surplus of stock, and this surplus, instead of being distributed equally among the different stockholders, may be used in a disproportionate and extravagant payment to the promoter (or organizer) of the corporation, or to the bankers who have assisted in marketing its securities. Or a group of men in control of a corporation may reap an unfair advantage at the expense of other security holders by turning over to the corporation properties of which they themselves are the owners in return for an exorbitant amount of the corporation's securities.

Operations of the kind just described have too frequently attended the organization of great industrial combinations in this country. American railway history, also, is full of examples of extravagant sums paid by operating companies to "construction companies" which had been organized for the purpose of building the roads and selling them to the operating companies. These payments were usually made in bonds or stocks, and burdened the operating company with either a heavy load of fixed charges or an inflated amount of capital stock. In fact, the time is not long past when it was frequently said of representative American railways that the whole amount of the actual investment in their properties was represented by their bonded debt, while their stock issues represented nothing but prospective surplus earnings. In the promotion of industrial combinations it was common practice to issue enough preferred stock to cover the actual expense of acquiring the various properties brought into the consolidation and to issue in addition a large amount of common stock representing nothing except whatever increase in earning power might result from combination. The common stock, at whatever price it could be sold, represented, in fact, the profits of promotion; and these usually went to promoters and other "insiders."

In both the railway and industrial field, perhaps by force of circumstances rather than ethical considerations, conditions are now much improved. In cases, large additional investments in equipment and improvements have been made out of earnings without a corresponding increase in capitalization; in other cases, corporations have been reorganized, with reduced capitalization. Nevertheless, there are fairly recent instances of unfair

and even fraudulent use of excessive capitalization as a means of securing special profits for those in control of corporation policies. This situation has needed mending for a long time.

Until recently there was very little done in the United States in the regulation of the capitalization, or other conditions of promotion, of ordinary industrial corporations.

The Transportation Act of 1920 took a progressive step in this direction by providing that no securities could be legally issued by any common carrier without the consent of the Interstate Commerce Commission. In order to secure the approval of the Commission it must be shown (1) that the proposed issue is for some lawful purpose and compatible with the public interest and (2) that it is reasonably necessary and appropriate for such purpose.

Many states now exercise a fairly rigid control over the new security issues of railways and other public service corporations. This regulation, however, does not have as its primary motive the protection of investors or of minority stockholders. It is rather to be interpreted as part of a general attempt to limit the earnings of such corporations to a fair return upon a reasonable valuation.

In recent years a mild improvement in the situation has also resulted from the widespread adoption of no-par-value stock. Such stock has, at least, the merit of making no claim concerning the value of the property or investment which it represents, and thereby removing the thoroughly fictitious "stock and bond" method of valuation for purposes of railway and utility rate determination.

In several states also the operation of the so-called "blue sky laws" generally requires that the approval of a state security commission be obtained before a new security can be sold within the state. The tests or standards which must be met vary from state to state, but in most parts of the country they oblige the corporation to furnish proof that it is an organization of high character, that its earnings are substantial, or that it has behind it substantial fixed assets, such as land and buildings. While these laws have not been very successful and cause considerable annoyance to reputable dealers in securities, their effect has been, on the whole, beneficial.

In 1933, Congress passed the Securities Act which required all securities issued by interstate corporations (except those subject

to Interstate Commerce Commission control) to be registered with the Federal Trade Commission. The "registration" was to be accompanied by a detailed and truthful statement concerning the organization and financial condition of the issuing corporation and the nature and purpose of the securities. This information was made available to the public and the law required that all advertising and other sales publicity must be confined to the factual content of the registration statement. The Securities Exchange Act of June 6, 1934, provided for the federal regulation of securities exchanges in the United States. The act also amended the Securities Act of 1933 and delegated its administration, together with that of the new act, to a Securities and Exchange Commission of five members, appointed by the President. This act authorized the Board of Governors of the Federal Reserve System to determine the amount of brokers' loans which may be made available by the banks to finance transactions in securities. This legislation, although by some considered unduly severe, was a logical result of the disclosures concerning the issue and marketing of securities during the speculative period which culminated in 1929 and the resumption of similar practices in 1931 and 1932. It was fully justified in the interest of the general public and it has received widespread approval.

Corporation securities.

It is no uncommon thing for the equities in a railway corporation (in addition to the floating debt, or accounts payable) to be divided among a dozen or twenty varieties of bonds and two or three varieties of stock. This multiplicity of securities is of advantage to the corporation in that it enables it to offer to investors and speculators a carefully graded assortment of risks, and this probably makes the total selling value of a corporation's securities greater than it would otherwise be.

This complex kind of capitalization has, however, some undesirable features. If the owners of a particular security — the common stockholders, perhaps — control the corporation, they may desire to increase the value of their securities for speculative purposes by the payment of unearned dividends, — a proceeding which would be opposed to the interests of the holders of all the other securities of the corporation. Or the holders of preferred stock may wish to put some of the earnings of the corporation

back into improvements in its plant, so as to safeguard its future earning capacity, while the holders of common stock may prefer that all the earnings be paid out in dividends. Moreover, in cases of insolvency and reorganization, it is a difficult matter to untangle and to adjust equitably the rights of the holders of the different kinds of securities.

In times of prosperity, corporations often pay for extensions of their plants from the proceeds of bond sales, because it is estimated that the earning power of such extensions will more than suffice to pay the interest on the bonds and will afford a gratifying surplus for the stockholders. Corporations may thus accumulate in prosperous times an unwieldy load of fixed charges in the form of interest on bonds, — a condition which is invariably a source of difficulty in less prosperous years. Excessive fixed charges have been a common cause of insolvency and receivership, particularly since 1929. The legal restriction of the securities issued by any one corporation to one kind of stock and three or four varieties of bonds is both feasible and desirable. Nor should the bonded debt usually be allowed to exceed the amount of the paid-up capital stock.

Advantages of the corporation as a form of business organization.

From the point of view of the business man the corporation has decided advantages over the partnership for most undertakings of considerable size. Some of its points of superiority are: (1) Stockholders usually have no personal liability for the corporation's obligations except so far as the full par value of their stockholdings has not been paid up.[1] (2) The relative permanence and stability of the corporation are of decided advantage, especially in undertakings requiring large investments of capital in relatively fixed and permanent forms. (3) It is possible for stockholders to enter or leave the undertakings at pleasure. (4) The division of the securities into small units and into different grades and classes affords opportunities to all kinds of investors, — the small and the large, the conservative and the venturesome. (5) The advantages named make it easier for

[1] Exceptions should be made of banking and insurance corporations, in the case of which "double liability" on the part of the stockholders was common prior to the banking act of June 16, 1933. This act removed double liability from national bank stock issued after that date and from previous issues effective July 1, 1937. A few states impose some measure of personal liability upon the stockholders of all corporations organized under their laws.

the corporation to attract and to use efficiently large amounts of capital, furnished by many different investors.

Certain facts are sometimes pointed out as "disadvantages of corporations." In general they are more accurately described as *restrictions* or *limitations* upon the advantages of the corporate form of business organization. They take the form (1) of special taxes to which corporations are subject,[1] (2) the burden of standardized records and official reports required, and (3) government restrictions on the character and conduct of their business. None of these is more than a counterpoise or regulation of definite advantages enjoyed by corporations. Corporation taxes presume either superior ability to pay or enjoyment by the corporation of special franchise privileges properly subject to assessment on the "benefit theory" of taxation.

Trusts.

A distinctive feature of the economic development of the past few decades has been the combination of individual corporations into larger concerns, popularly called "trusts." A trust, in the technical and legal sense, involves either giving a board of trustees the absolute control of the actual properties of the different concerns in the combinations, or what amounted to the same thing, assigning to them the stock of each corporation, with its voting power, in exchange for "trust certificates," on which dividends are paid. The Standard Oil Trust of 1882 was the first important business combination of this kind, but it was speedily followed by several others. In 1890, in a case brought by the state of New York against one of the concerns in the sugar trust, the trust agreement was held to be illegal under common law.[2] Corporate combinations were not destroyed by this decision. They were changed, however, to a more definitely coherent form, — generally one in which a holding company dominated the consolidation.

In most cases holding companies are specifically organized for the purpose of acquiring a majority of the voting stock and

[1] Corporations are subject to the following taxes: Organization, annual franchise, state income, state inheritance, annual property, state stock transfer, federal stock transfer, federal income, federal inheritance, annual excess profits, and annual tax on foreign corporations.

[2] *People* v. *North River Sugar Refining Co.*, 121 N. Y. 582. A similar decision was rendered two years later, by the Supreme Court of Ohio, in *State* v. *Standard Oil Co.*, 49 Ohio St. 137.

exercising financial control of the various concerns in the combination. They do not directly manage plant operations. The holding company exchanges its own securities for the securities of constituent companies, or, when necessary, it buys the securities of the constituent companies with funds secured from the sale of its own securities, — sometimes by the sale of bonds secured by the pledge of securities of the constituent companies as collateral.

A group of capitalists may, by an investment of $1,000,000, for example, control a holding company with a stock issue of $2,000,000, which in turn may control corporations with $4,000,000 of stock outstanding,[1] — and some of these last may in their turn be holding companies. The result is a tremendous concentration of industrial and financial power, with the minimum of liability. The uncontrolled use of the holding company undoubtedly tends to neglect of the interests of minority stockholders in the various subsidiary corporations; to difficulty in fixing the legal responsibility for corporate misdeeds; to an undesirable complexity in the economic and legal relations of the holders of securities of subsidiary corporations; and to the subordination of industrial to speculative ends.[2]

Such aggregative control is by no means confined to the operation of the holding company principle. The interlocking directorate, by means of which the interchange of influential directors among friendly companies assures co-operation and uniform policies, is an effective method of united action. The voting trust and the long-time lease are also dependable means of trust building and have the advantage of flexibility. Being unincorporated and requiring no security issues or capital, they are exceptionally plastic and exempt from taxation and government control. Financial control by banks, exercised through informal credit arrangements, underwriting agreements, and bond holdings, has at times been a strong integrating influence.

[1] It is assumed, for convenience, that the stock in each case is worth par and that the ownership of half of it will give substantial control. In the case of industrial combinations, ownership of all the stock of the subsidiary companies by the holding company is not uncommon; on the other hand, in the case of railways and public utilities the ownership of a substantial minority of the voting stock may constitute control. It is observed also that capital represented by the non-voting securities is subject to this control.

[2] In recent years the holding company has become somewhat less secure, under the law, as a means of intercorporate control, and appears gradually to be giving place to the long-time lease and to the voting trust. The Banking Act of 1933 placed rather effective restrictions upon the holding companies in their operations of chain and group banks. The Public Utility Act of 1935 imposed further curbs on the use of the holding company device.

Trusts as monopolies. — The "trust problem," however, has attracted more attention as a problem of monopoly than as a problem of business organization. Combination and monopoly, it is important to note, are not identical; we may have either one without the other. Monopoly, as we shall see in the following chapter, implies a sufficient control over the output (or some other phase) of the industry to regulate the market price. Combination involves the bringing together of two or more units of an industry under one management without necessarily accomplishing effective control of price. The movement toward combination, however, originated in the efforts of business men to escape from the restraints imposed upon them by competition.

There are forms of combination simpler than the trust and the holding company. Agreements to sell only at certain prices, agreements to limit output, the employment in common of one selling agent, pooling (the distributions of orders to the parties to the agreement in predetermined proportions), and other devices have been used. Such combinations are formed by contracts entered into by a member of individual firms, each of which retains its own autonomy in all other respects. These contracts are unenforceable at common law — being held to be "combinations in restraint of trade" and hence contrary to public policy — so that it is difficult to be sure that any one firm will abide by the contracts any longer than it deems it to be to its own individual advantage. Combinations of this sort still persist.

In combinations of a more unified type, each constituent firm yields up its own autonomy and is absorbed by a corporation, usually a holding company, organized for the purpose. These unified combinations, it was thought, would be valid at common law, and would be less vulnerable under the new anti-combination statutes that were being enacted. Their management could be made more effective, and their comparative permanence and dependability would make possible the adoption of business policies based on long-time considerations.

Alleged advantages of combination. — The motives usually mentioned as the most important causes of corporate combinations are: (1) the economies of large-scale business; (2) the elimination of purely competitive expenses (some kinds of advertising, for example); (3) the power to limit output and control prices.

The first of these factors suggests the difficult question of the most profitable size of the business unit. The question should not be confused with that of the most economical size of the industrial *plant*. Many of our present-day business units are so large that they maintain a number of practically duplicate plants. Sometimes they lie idle or work only to partial capacity. To that extent, at least, they are larger than is necessary to secure the maximum technical efficiency of the plant.

Nor should the question be confused with that of the condition of decreasing expenses in *an industry at large*. Certain productive advantages sometimes attributed to great industrial combinations — such as the power of utilizing highly specialized plants, equipped with highly specialized machinery and located at the most favorable points — are advantages which do not have to wait upon combination, but which are not only available but certain to be developed in any large and growing competitive industry.

Much has been said of the combination's ability to buy its raw materials on the largest scale, and therefore most cheaply, and of its ability to ship its products in large quantities, and therefore most economically. But it has not been shown that the combination has a marked advantage in these particulars over large competitive establishments, unless we should take account of the unfair discriminations that railway companies have in the past too often made in favor of the large combinations.

The real problem is whether the *mere fact of combination*, taken by itself, brings with it any real net economies in production. Probably combination very often effects some real savings. Uniform systems of accounting and cost-keeping can be introduced; noteworthy economies found in any one of the plants can be introduced in all the plants of the same type; high and uniform standards of management can be enforced by the central administration. Especially in combinations of the physically integrated type, there are undoubtedly real economies in the general co-ordination of the different successive stages of the industrial process, in the nice adjustment of the supply of raw materials and intermediate products to the demand for finished products, and in the adaptation of transport facilities to the needs of the industry. The Standard Oil Company undoubtedly effected great economies in the transport of oil by its use of pipe

lines, and these could hardly have been constructed on so large and effective a scale if the industry had remained competitive.

On the other hand, however great, combinations have certain *disadvantages* inseparable from their size. Their economies are largely those of systematization and standardization, and these are prone to degenerate into inflexible and deadening routine. The very losses of competition may sometimes be in the long run a real social advantage, for they result in part from variety of experimentation and from the free scope to individual initiative and individual planning. In competitive industry there is a continuing natural selection of the fittest men and the fittest methods. Nor are the best results always achieved by a hierarchical organization of industry, in which corporation officials, managers, and superintendents watch only over the larger and more general aspects of an industry and depend upon an army of subordinate employees (no matter how scientifically organized and directed) to attend to all details. There is sometimes no effective substitute for intimate personal supervision on the part of those primarily responsible for the success or failure of a business undertaking.

Passing to the second and third general classes of motives advanced as responsible for corporate combinations, it is sufficient here to note that whether purely competitive expenses and competitive prices are eliminated by combination depends upon whether the combination has any real basis of monopoly power over and above the mere fact of combination, which, taken alone, can give at most only a temporary monopoly. For a combination without some real source of monopoly power to attempt to secure monopoly profits is to invite new enterprise and new capital to come into the industry. In other words, it is to induce latent competition to become active competition.[1]

Promoters' profits. — It is plain that if a particular combination has any or all of the three classes of advantages we have just discussed, its earning power will be greater than was the total

[1] "We have at Dearborn a slip of paper that should be copied in every business office in the land — Edison's brief philosophy of business. Writing to Professor William D. Marks in 1891, he said, 'Dear Marks: To my mind the raising of the price from ¼ to 1 cent per lamp hour is a bid for competition. I am a believer in *insuring the permanency of an investment* by keeping prices so low that there is no inducement to others to come in and ruin it. There seems to be a law in commercial things as in nature. If one attempts to obtain more profit than general average he is immediately punished by competition. Yours, Edison.'" — From radio address by W. J. Cameron, Dearborn, Mich., Feb. 9, 1936.

earning power of its separate constituent concerns before they were consolidated. This increment in the selling value of securities has in many cases been the real motive leading to consolidation. Such increased capital value may sometimes reflect real economies. In other cases, it may reflect some measure of real monopoly power. In yet other cases, however, it reflects nothing but unwarranted expectations on the part of investors. Trusts have often been organized by professional promoters, interested merely in securing the increment of capital value arising from the real or mythical advantages of consolidation. A few great trusts, like those which have figured in the oil, sugar, steel, and farm machinery industries, have been conspicuously successful. Many others were "made to sell"; that is, were organized only in order that profits might be gained through the sale of their securities, and were weighted down by a capitalization not justified by their actual earning capacity. Some of them collapsed with the first serious decline of the stock market; some achieved "fair weather" success and have only recently fallen to pieces; others have been reorganized, with diminished capitalization.

> "When judged in terms of the promises of their promoters their histories stand as striking acknowledgments of the inadequacy of mere consolidation as a basis of economic efficiency. Two separate and distinct sets of causes can be discovered to explain why the overwhelming majority of these industrial combinations failed to prove as successful as their promoters had anticipated. One set was psychological in character and concerned with the difficulties attending the administrative management of a large business. The other was economic in character and concerned with the difficulties attending the creation of a business organization sufficiently powerful to dominate an industry in the presence of actual or potential competition." [1]

The post-war combination movement. — During the 1920's a combination movement was developed in the United States; which was exceptional in magnitude, scope, and character. It was not restricted to one phase of business, such as railways, steel, sugar, or oil, but was general in all lines of business activity,

[1] A. S. Dewing, *Corporate Promotion and Reorganization*, Harvard University Press, Cambridge, 1914, p. 558. Professor Dewing's conclusion, quoted above, is based on a careful study of the more important reorganizations of industrial combinations. He finds the following specific causes of inefficiency: (1) Diffusion of responsibility; (2) lack of knowledge of individual employees; (3) lack of loyalty of officers and directors; (4) lack of attention to the laborious parts of the business by higher officials; (5) prejudice of customers against "trusts."

in banking, public utilities, manufacturing, and mining, and in practically all subdivisions of these large classifications. The magnitude of the movement is indicated by the following table, relating to public utilities, manufacturing, and banking, in which the trend toward combination was most pronounced.

TABLE II. — MERGERS AND ACQUISITIONS IN PUBLIC UTILITIES, MANUFACTURING AND BANKING, 1919–1928

YEAR	PUBLIC UTILITIES	MANUFACTURING AND MINING	BANKING
1919	22	89	80
1920	15	173	77
1921	74	89	104
1922	285	67	125
1923	426	67	120
1924	580	95	124
1925	402	121	120
1926	1,029	139	154
1927	911	207	259
1928	874 [a]	221	——

[a] Computed from the list given in the *Electrical World* (January 5, 1929), pp 45–49.

The general trends indicated by these data may be taken as representative of the general combination movement and growth of holding companies. A movement of this magnitude leads to a strong presumption that substantial gains are made through the combination process. It probably remains true, however, that, as past experience has indicated, some loss in productive efficiency tends to accompany the separation of management from direct contact with productive processes which combination involves.

More recent mergers have not generally had as their primary purpose either the formation of monopoly or the profits accruing to their promoters, as was the case in earlier mergers. The advantages derived have been of a different sort. During the past few years, mergers have been quickly followed by new financing — a fact which indicates that need for increased capital resources and augmented financial strength have been powerful motives in the movement. The pooling of funds permits a more economical financing than would be possible if the combined business were dispersed among the constituent companies existing as independent units.

Combinations have also certain marketing advantages over their smaller rivals. Markets have been constantly enlarged and for many lines of industry have already become national and international in scope. Thus the distribution, selling, and advertising of products are more and more becoming problems involving large areas, and a multiplicity of agencies. Combinations can solve these problems more economically by dispersing the cost of distribution and marketing over a greater area, and by eliminating formerly duplicated expense.

Anti-monopoly legislation, which we shall survey in the following chapter, also played an important role in this consolidation movement. Mass production with its attendant standardization threw the burden of competition on price and narrowed considerably the profit margins of business. Reliance, consequently, had to be placed on volume of sales. Escape from the pressure of this competition might have been effected by uniform marketing arrangements of independent competitors were it not for the fact that such arrangements were undoubtedly illegal on the ground of "restraint of trade." By combination, however, a uniform marketing policy could be legally adopted which would have been illegal, if practiced by constituents as independents.

Finally, we have some evidence supporting the view that combination leads to greater stability of earnings through a greater control over all phases of the business. Small enterprises record wider variations in the random and casual fluctuations in business than the larger concerns, while the larger corporations, though subject to wider cyclical fluctuations of production and employment, keep their earnings on a more stable level. This difference in the character of fluctuations is probably the result of a more or less conscious policy on the part of the larger companies to shut down production during times of business depression in preference to cutting prices. These concerns thus elect to take the loss of shut-down rather than the loss on inventory from a drop in prices.

That these advantages are real and worth while, in spite of the possible loss in productive efficiency, cannot be doubted. An increasing proportion of the nation's business has been going to the larger concerns, and their stocks have in general enjoyed greater advances than those of smaller concerns.[1] Such advances, it is

[1] The meat-packing industry is a noteworthy exception to this generalization.

maintained by some authorities, have not been the result of a lowered cost of manufacturing or operation, but of the more intangible advantages of increased good will, enlarged financial strength and stability, and greater flexibility in production management.

Cartels.

There were, in 1914, about 114 international associations in Europe known as *cartels*. They were composed of producers of particular products and services who had found themselves in unprofitable competition in the export markets. Their products included coal, minerals, metals, chemicals, textiles, stoneware and porcelain, glass, paper, and transportation.[1] The cartels were designed to regulate and protect industries that had been developed in neighboring geographic regions, but whose markets, because of the proximity of national borders, were largely "foreign" and beyond the jurisdiction of national controls. They were, in fact, territorial extensions of national business organizations designed for the purpose of co-operating in the marketing of their products. They prospered during the "era of good will" which preceded the World War, were suspended during the war but, for the most part, were revived in the 1920's. These international business organizations became known as *cartels* because of their similarity to the German type of combination, called *Kartel*, which embraced practically all producers in a given industry and which operated to restrict competition by the assignment of production quotas, and thus to maintain a stable and profitable level of prices.

The extension of the German system of kartelle to include production for foreign markets merely required the co-operation and united action, by informal agreement, of competitors in particular lines of goods in common export markets. Such agreements were at first directed toward establishing a level of output for each industry operating under a cartel. This output was computed on the basis of an estimated minimum demand, in accordance with which a participating sales quota was allocated to each member of the group, or a maximum output quota was assigned to each member. This principle continues to prevail. Quotas are more or less elastic to permit adjustments for varia-

[1] *General Report on International Industrial Agreements*, League of Nations Papers, 1931, II, B, 21, p. 29.

tions from the estimated demand, and also to meet the convenience of individual members in adjusting production to combined domestic and export demand. Members may voluntarily exceed their quotas upon the payment of a conventional penalty without violating the basic agreement. While this type of cartel aims primarily to stabilize production, it operates indirectly to affect prices. Consequently, production and sales cartels tend to become *price cartels*, and by further evolution may be subdivided into *export cartels* and *import cartels*.

The membership of international cartels may include any type of business organization — individual, partnership, corporation, or association of corporations. State enterprises also may be parties to cartel agreements. The French government, for example, is a member of the Franco-German potash cartel and the Spanish government of the Italo-Espanol mercury cartel. Four general classes of cartels may be distinguished: (1) regional, (2) production, (3) sales, and (4) price.

The International Rail Manufacturers' Association formed in 1904 and reorganized in 1926, for the purpose of *allocating output* among different markets, is regional. Three types of markets were designated as a basis of distribution, *i.e.*, the reserved market, the protected market, and the free market.

The international production cartel is typified by the International Steel Entente, formed in 1926, by the steel industries of France, Germany, Belgium, Luxembourg, and the Saar. By this agreement a total basic output of 25,287,000 tons was allocated — 31.91 per cent to France, 40.46 per cent to Germany, 12.58 per cent to Belgium, 8.55 per cent to Luxembourg, and 6.50 per cent to the Saar. This cartel was later joined by Czechoslovakia, Hungary, and Austria.

A variation of the production cartel which is sometimes referred to as the "patent" cartel, is operated by industries exercising joint rights in the use of patents, trade-marks, and secret processes. These cartels are primarily concerned with quota production, but inevitably tend to exercise distribution and price controls. The Müller patent in the rayon or viscose silk industry forms the basis for a network of international cartel agreements. So also the Owens patent for the manufacture of glass bottles. Electric bulb patents and processes are internationally controlled by a "syndicate" organized in 1924.

Examples of sales cartels are the International Plate Glass Cartel, organized in 1904, and the European Glue Syndicate. The former with offices in Brussels, operates in Belgium, Germany, and France. Its sales agreements are made from time to time for periods of five years. The Glue Syndicate is said to combine the glue interests of eighteen countries. The executive committee is composed of French, German, and British representatives. The committee fixes minimum prices, but may reduce surplus stocks in any member country by permitting lower prices in non-member markets. For this purpose a compensation fund is maintained. Uniform contracts and sales conditions are observed. From this example it is apparent that sales (distribution) cartels tend to become price cartels also, and ultimately to determine production.

The international Enamel-Ware Cartel is commonly represented as a *price cartel.* It fixes minimum prices and uniform conditions in the export trade. International shipping and passenger rate and fare conferences and agreements have also assumed the nature of a price cartel.

Inasmuch as international law does not extend to the definition or recognition of business contracts, international combinations are confined to voluntary agreements which are only indirectly enforceable. Consequently, nothing of the technical nature of a legal international trust may be organized or developed. International cartels are held together by quite informal bonds and their integrity is subject to suspicion in this country. When the "will to combine" is sufficiently strong the "way" is not too difficult to arrange. Inter-corporate stock ownership, for example, and the holding company device are sufficiently effective to exercise firm control over associated enterprises scattered among different nations throughout the world. There are a few well known so-called international "trusts" and "combines" which, in some cases have achieved a degree of concerted control approaching monopoly. The Nobel Company (dynamite trust), the Borax Consolidated, United Alkali Company, and the DeBeers Mining Company are examples of international combinations. The Dutch margarine combine and the Swedish match trust represent more recent ventures in the international field.[1]

[1] Fischer and Wagenfuke, *Kartelle in Europe*, 1929, presents an excellent general study of the cartel.

The prevalence of nationalistic economic policies during recent years has arrested the drift toward internationalization of industrial and commercial enterprise which was definitely initiated before the World War and vigorously revived for a few years thereafter. Most effective, for the time being, as a deterring influence in international economic co-operation is the confusion of national currencies which has deprived the international markets, for both securities and commodities, of any common or uniform standard of value and exchange, and of any certain terms of expressing future values in contractual agreements.

The Bank of International Settlements, established at Basle, Switzerland, in 1924, deserves mention as an initial step toward an international financial institution combining or consolidating certain cosmopolitan functions of the greater national banking institutions. This international bank doubtless was brought into the world before its time in the abortive attempt to create an institution endowed with the miraculous power of facilitating the payment and transfer of the fantastic international economic obligations resulting from the World War. Of course that object will never be achieved, but there is a very real function for some such international agency which would standardize and correlate the policies of the great financial institutions of the world in so far as they relate to international trade, investments, and payments.

Social aspects of the growth of corporations.

The gap between money-making and service to society (not always identical things) is distinctly widened when those in control of a corporation's policies subordinate the profits to be obtained by the sale of its products to the profits to be obtained by speculation in its securities. The payment of unearned dividends, the non-payment of earned dividends, the direction of a corporation's policy for the benefit of the holders of one type of security among the several types issued by the corporation, the promotion of corporate combinations and reorganizations that will affect the stock exchange rather than the produce market, — such are some of the more obvious results of the unfortunate relation between corporation management and speculation in corporation securities.

It should also be noted in this connection that the growth of corporations has brought with it a subtle but very significant

change in the nature of the institution of private property. So far as a large and increasing proportion of productive wealth is concerned, we are losing that direct relation of ownership between men and goods which Arthur Young had in mind when he said, "The magic of property turns sand into gold." We often have, instead, several layers of corporation securities interposed between the ultimate owners and the ultimate objects of ownership. The effect of this will undoubtedly be to bring about the more thorough domination of business principles in the business world. Sentiment, the honorable traditions of long-established firms, the "pride of ownership," the joy of workmanship (which may be felt by the employer who turns out a good product, as well as by the workman) are bound to yield yet more completely to the sway of the cold logic of corporation accounts and stock market quotations. Business relations will become more *impersonal.* The adequacy of purely business principles as the foundation of our economic life will be tested more thoroughly under the corporation form of organization than ever before.

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CHAPTER XXVII

GOVERNMENT AND THE ECONOMIC SYSTEM

The subject of government and the economic system lies within the "twilight zone" between economics and politics — the territory occupied by the more or less conflicting forces of private business in pursuit of profits and governmental authority in the exercise of social control. In modern economic life this apparent conflict between private business interests and collective social interests has been characterized as the "battle between *laissez faire* and government regulation." It is necessary, therefore, to establish as nearly as possible the concise meaning of the doctrine of *laissez faire*, on the one hand, and, on the other, an understanding of the institutional powers and purposes of government in respect of the methods and motives of business.

Laissez faire, government, and individualism.

The generally accepted origin of the economic doctrine of *laissez faire* is popularly associated with the name of Adam Smith, as developed in his *Wealth of Nations*, published in England in 1776. It is noteworthy that this date is coincident with that of the declaration of the economic and political independence of the American colonies. Adam Smith, in the *Wealth of Nations*, was, however, only echoing the earlier teachings of the Physiocrats in France in proclaiming the doctrine of natural laws and natural rights in opposition to the nationalist policy of mercantilism which then dominated the continent. This was the origin of the maxim of *laissez faire*, meaning that the government should not unduly interfere with private enterprise. As for England, Smith emphasized the importance of permitting individuals to follow their own self-interest, in industry and commerce, as a means of promoting national prosperity, thus strengthening the trend of Anglo-Saxon economic and political thought since the days of Magna Charta.

It was argued that intelligent and fair-minded people, when permitted to pursue their own interests in their own way, generally

find it to their advantage to co-operate and to respect mutual economic rights and privileges, and that, in the long run, their combined self-interest and individual self-respect will contribute to the welfare of the group. In taking this position, Adam Smith emphasized the altruistic motives in mankind, and also the wise guidance of an "Invisible Hand," but was not unmindful of the existence of selfishness and its necessary curbs. Before Adam Smith was known as an economist he was distinguished as a moral philosopher, author of *Theory of Moral Sentiments*.

Nearly a century after the publication of Smith's *Wealth of Nations*, John Stuart Mill, who died in 1873, brought to maturity the statement of the economic principles of *laissez faire* and advocated its practice as a general policy.

It is significant that Smith's *Wealth of Nations* (1776) and Mill's *Political Economy* (1848) were the standard textbooks of economic science in Great Britain and the United States during the formative period of our present political, social, and business institutions. Mill's work will always be regarded as the culmination of the school usually known as the English deductive or classical school. Walter Bagehot said of English political economy: "It is an analysis of that world so familiar to many Englishmen, — the 'great commerce' by which England has become rich. . . . Dealing with matters of 'business, it assumes that man is actuated only by motives of business.' . . . Despite these limitations, the largest contributions that have been made to economic science came from the English classical school."

From the point of view of the motives and functions of government, there exists a great deal of misunderstanding as to the relation of present-day policies and practices of business control to the so-called classical principles of economics. The *laissez faire* doctrine is often falsely represented as predatory individualism, unrestrained private initiative in business, catch-as-catch-can competition, and "hands-off-business" policy of government. Consequently, it is advanced that, inasmuch as our economic sins brought upon us the confusion that followed the World War and the financial crash of 1929, succeeded by the starvation-in-the-midst-of-plenty catastrophe of the great depression, either fundamental economic considerations have changed or our economic philosophy is obsolete. In either case, say these critics, it follows that the existing system of business is radically wrong

and the structure of our social and political institutions is insecure.

Such casual observations and plausible conclusions bear little evidence of careful thought or sincerity. In the first place, there never has been in this country, since Hamilton's installation of the Bank of the United States, in 1791, and the formulation of the first tariff schedule by the Congress during Washington's administration, anything approaching a hands-off-business governmental policy. In this connection the fact must not be overlooked that the beneficent action of government in promoting and fostering private enterprise is quite as contrary to a let-alone policy as is the restriction of private initiative to the legitimate sphere of fair competition. Secondly, in so far as the *laissez-faire* fiction of uncontrolled competition is concerned, there has been an unbroken evolution of effective business controls covering a period of 100 years — from the days of Andrew Jackson to the present. The milestones of government regulation of business may be roughly enumerated as follows: The Independent Treasury (1840), The National Banking Act (1863), The Interstate Commerce Act (1887), The Sherman Anti-Trust Law (1890), The Elkins and Hepburn Railway Acts (1903 and 1906), The Federal Reserve Banking Act (1913) and its amendments (1933 and 1935), The Clayton Act (1914), The Federal Trade Commission Act (1914), the emergency legislation and administrative controls during the World War, The Transportation Act (1920), The Communications Act (1933), The Securities and Exchange Acts (1933 and 1934).

The federal statutes indicated above, and a host of auxiliary or parallel laws enacted by the forty-eight states, are in accord with the provisions of the Constitution of the United States and the constitutions of the several states. These constitutions were written in the spirit of Magna Charta and the Declaration of Independence. They were a perpetuation of the "immemorial rights of Englishmen" to exercise freedom of choice in selecting their vocation, freedom of movement in following their occupations, the right to own, sell, and inherit property, freedom of contract, free press, right of assembly, and the right of citizens to express an opinion about the purposes for which they were taxed; also the right of free speech and representation in matters of government and unrestricted access to the courts in defense of these rights. In respect of these things, *laissez faire* in England brought

to an end the dictatorial powers and privileges of monarchy in industry and trade under the mercantilist system. It was to secure these things for themselves that the American colonists took up arms, in 1776, and thereafter made them basic in the philosophy of the Constitution. *Laissez faire* in principle always has been a doctrine of free and fair competition, a policy of self-respecting and tolerant individualism and of reasonable governmental promotion and guidance of business.

Economic provisions of the Constitution.

The provisions of the Constitution which express the basic relations of government to business are indicated below.

1. *The general statement of the Preamble.*

   "We, the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquillity, provide for the common defense, *promote the general welfare* and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America."

2. *The powers of Congress.*

   "Congress shall have power [Art. 1, Sec. 8]:

   (*a*) "To lay and collect taxes, duties, imposts, and excises, to pay the debts and provide for the common defense and general welfare.

   (*b*) "To borrow money on the credit of the United States.

   (*c*) "To regulate commerce with foreign nations and among the several States.

   (*d*) "To coin money and regulate the value thereof, and of foreign coin.

   (*e*) "To establish post-offices and post roads.

   (*f*) "To secure to authors and inventors, by copyrights and patents, 'the exclusive right to their respective writings and discoveries.' "

   (*g*) Implied powers.

   "To make all laws which shall be necessary and proper for the carrying into execution the foregoing powers, and all other powers vested by this Constitution in the government of the United States, or in any department or office thereof." (This is the famous *elastic clause* of the Constitution.)

3. *The economic prohibitions upon Congress* (Art. 1, Sec. 9).

   (*a*) "No direct tax shall be laid, unless in proportion to the population. [This original provision was modified by the 16th Amendment, 1913, in order to bring the contemplated Income Tax Law, 1914, within the constitutional authority.]

(*b*) "No tax or duty shall be laid on articles exported from any state.

(*c*) "No preferential regulation of commerce or interference with free trade among the several States may be imposed."

4. *The economic restriction upon the states* (Art. 1, Sec. 10).
   (*a*) "No State shall . . . coin money, emit bills of credit; make anything but gold and silver coin a tender in payment of debts.
   (*b*) "No State . . . shall pass any law . . . impairing the obligation of contract.
   (*c*) "No State shall, without the consent of Congress, lay any imposts or duties on imports and exports, except what may be absolutely necessary for executing its inspection laws."
5. *Due process of law and just compensation* (5th Amendment, 1791, and 14th Amendment, 1868).
   (*a*) "No person shall be . . . deprived of life, liberty or property, without due process of law; nor shall private property be taken for public use, without just compensation.
   (*b*) "Nor shall any State deprive any person of life, liberty or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the law."

The constitutional powers of the States.

1. In general, the States exercise all sovereign and institutional powers not specifically granted to Congress or denied to the States by the Federal Constitution (Reserve powers).
2. In particular, the States:
   (*a*) Exercise their police powers in the protection and promotion of the general welfare.
   (*b*) Exercise control of intrastate commerce.
   (*c*) Promote and foster industry and commerce (including highway construction).
   (*d*) Operate and control public utilities and conservation projects.

The aid and promotion policy of the government.

It is not unfair to our political history to say that, next to the defense of the nation, the development of beneficent economic policies has been the chief concern of the United States government.

During the earlier period of the nation's growth, rather free reign was given to the English classical theories of Adam Smith, as reconstructed by John Stuart Mill and expanded by others of the Manchester School. Conditions in the new lands of America — rich in natural resources, sparsely populated, scarce of capital, and far removed from sharp competition in production — afforded

ideal environment for the operation of the so-called *laissez faire* doctrine. Here, the advantages of private initiative, unrestrained competition, and that voluntary co-operation which is an essential part of pioneer life were obvious. Furthermore, both direct and indirect aid by the government could be and was very effectively applied in the promotion and development of industry and trade. But in this very manifestation of public aid to private enterprise reside the seeds of government regulation and control in behalf of the general welfare.

When the nation approached economic maturity, as we shall see below, the federal government, without in fact minimizing its generosity, gradually shifted the emphasis of its relation to business from nourishment and protection to direction and control.

The protective tariff, since 1816, has been, in prevailing public opinion, a never failing support to every field of production. It is credited with having established a nationally self-sufficient system of industrial production and with the maintenance of a relatively high scale of wages and a notably advanced average standard of living.

The public land policy, which was in gradual development from colonial days to the enactment of the Homestead Law in 1862, culminated in a free-land system of dispensing the public domain. There is no record in history of greater liberality by any government in direct support of private initiative in the exploitation of agriculture, mining, lumbering, and waterpower. But the Homestead Act, although supporting and subsidizing freedom of movement and choice of industrial opportunity, definitely limited the activities of the "cattle and lumber barons" [1] and confined the plantation system of agriculture to the pre-war South. Between 1870 and 1900, 3,077,000 new farms were given away under the terms of this act. The land titles thus conveyed to individuals included all surface, timber, mineral, and water-rights within an area of 160 acres.

The railroad and highway policies. — More important than the public land policy in the economic development of the nation and in the creation and maintenance of industrial opportunity, have been the "internal improvement" policies of the state and federal

[1] Unfortunately, violation and circumvention of the provisions of the Homestead Act, frequently with the collusion of local land offices and at times with the knowledge of officials of the Department of the Interior, at Washington, enabled private individuals and corporations to secure large areas of valuable timber, mineral, and grazing lands.

governments. In this particular field, private initiative and private resources were notably inadequate to function without government aid.

Beginning with the Cumberland Road, or "National Pike," a transcontinental government project, which was started during Jefferson's administration and continued for forty years until overtaken at Vandalia, Illinois by the railway, the federal, state, and local governments have always been active in both direct construction and financial aid to private construction and operation of transport facilities. Federal participation, in theory, has most often been based upon the constitutional power of Congress "to establish postoffices and post roads."

The federal land-grants of 129,000,000 acres to western railways, the direct contribution of millions of dollars to private corporations, the guarantee of $55,000,000 in bonds of the railway companies, the recent advance by the Reconstruction Finance Corporation to railway companies of $343,287,000,[1] and the payment of mail subsidies to rail, steamship, and aeronautic corporations indicate the nature and extent of the burden of the development and maintenance assumed by the federal government in support of private initiative in this field.

The agricultural policy. — With the possible exception of a few tariff protected industries, agriculture has received more favored treatment at the hand of government than any other great industry. This began with the tacit recognition of the settlement privileges of "squatter sovereignty" and continued, through a series of settlement acts intended to secure a small return to the government, in the alienation of public lands, to the Homestead Law mentioned above. In substance, almost the entire settlement program was a free-land policy.

Special concessions to agriculture are also incorporated in the technological land-grant colleges now generally known as State Colleges of Agriculture and the Mechanic Arts. Sixty-eight such schools, at least one in each state, make available, under liberal government and state support, scientific education at a nominal charge.

The United States Department of Agriculture, usually in cooperation with the State Colleges, has for many years conducted extensive research in every branch of science in any way related

[1] Net amount remaining unpaid September 30, 1934.

to agriculture, horticulture, or stock raising, and the marketing of their products. Experimentation in this field has been carried to the point of government organization and finance of seed production, stock breeding, and marketing of farm products — in some cases, to government control of production and prices.

Inasmuch as many years of experience have shown the usual methods of commercial and investment banking to be unfitted to the credit needs of the farmer, government experimentation in agricultural banking has been in progress for over twenty years. Special consideration for the handling of "farm paper" is conceded by the federal reserve banks, and a system of Federal Land Banks co-ordinated with the Federal Farm Mortgage Corporation, the Co-operative Farm Credit Association, and the United States Farm Loan Board was designed to supply agricultural credit under conditions somewhat more favorable than were available to the small-unit merchant or industrialist. There remains for further discussion (page 613) the relations of government and agriculture established under the Agricultural Adjustment Act of 1933.

The government in its commercial policy, even in recent years, has undoubtedly been more liberal than restrictive. As noted above, the tariff has, in general, favored industry and that benefit is, in a measure, extended to domestic commerce.

The Department of Commerce, particularly under the administration of Herbert C. Hoover, has afforded organized assistance to commerce somewhat analogous to the services of the Department of Agriculture to agriculture. Hoover's "Foreign Legion" of Commercial Attachés and Commissioners were dispatched to every U. S. Embassy, Ministry, and Consulate abroad, charged with the duty of locating foreign markets for our goods and discovering foreign goods economically desirable to be received in exchange for our exports. To further facilitate foreign trade, the Webb-Pomerene Export Act of 1918 temporarily removed the restrictions of the anti-trust laws from our industries and tradesmen in approaching the foreign markets. More recently, in order to provide special credit facilities for trade with Russia, Cuba, and other countries, two Export-Import Banks were set up in Washington under government auspices.[1]

[1] Although many corporations registered under the Webb-Pomerene Act, very little permanent business has been developed by its aid. The First Export-Import Bank was liquidated, in 1935, after the breakdown of Russo-American trade negotiations.

Early banking experience. — In the banking business, the federal government and the several states have persisted, from the beginning, in a series of hit-and-miss experiments and repetitions based upon alternating good intentions and corrupt politics in Congress and the state legislatures. The direct subscription of capital funds by the government to the United States Bank chartered in 1791, and successfully operated until overthrown by partisan politics in 1811, and a similar experience with the second Bank of the United States from 1816 to 1836, demonstrated the sound and sustaining financial policy of the government toward business during these early periods.

However, the vociferous demand of the speculative interests, which were indigenous to the new settlements of the West, in behalf of the exercise of "states rights" within the field of banking, effectively blocked the conservative efforts of the federal government to maintain a sound basis of credit. With the advent of Andrew Jackson's presidency, the vagaries of state controlled banking for a second time swept away the foundations of a secure system of currency and credit which had been laid by Alexander Hamilton and his followers. An exaggerated *laissez-faire* policy of banking prevailed throughout the nation, with the exception of a few more experienced and conservative seaboard and central states, until the inauguration of the National Banking System, in 1862.

During this period, the several states exercised nominal or actual regulation of banking within their respective borders, in such manner as seemed most "practically" suited to the needs of the situation. It was contended only that circulating notes should be sustained in value to somewhere near *par* and that customers' deposits should be reasonably safeguarded. Massachusetts, by the notable experiment of the Suffolk Bank, in 1824, demonstrated the possibility of maintaining the stability of bank notes within the state by a system of specie reserves and current redemption of notes on demand in Boston. This principle was made permanent in the provisions of the National Banking System. New York unsuccessfully undertook, in 1829, to maintain a statewide system of guaranteed circulating notes and deposits — the Safety Fund System. State guarantee of deposits failed repeatedly in several states, always for lack of a sufficient safety fund in time of crisis and widespread bank failure. Finally, the

principle of government guarantee of deposits was written into the revision of the Federal Reserve Act, in 1933, and is now effective.

At various times, prior to the Civil War, twelve different states exercised their sovereign powers in the establishment of state banks of issue and dominated both their ownership and their management. Inadequate capital, misdirected credit policy, and partisan political strife led to failure in all cases save two — Indiana and Missouri.

During the early period of banking, excepting the forty years dominated by the two Banks of the United States, the federal government aided the independent banks by the deposit of government funds. These funds were often unwisely used by the depository banks in non-liquidating transactions and, for the most part, were lost to the government in the crash of 1837. In recognition of the generally unsound practices of the state banks, which were beyond government control, the Independent Treasury was created in 1840, the public funds were removed from custody of the banks and, until the inauguration of the National Banks, were locked up in the several sub-treasury buildings under military guard. The wastefulness of this practice of "sterilizing" a large portion of the country's money was generally admitted, but, in the language of Henry Clay, "it had become necessary to remove the public funds from the insecure custody of the banks and place them under the control of the government." The Independent Treasury Law was the first act on the part of the federal government definitely to infringe upon the prevailing policy of state responsibility in the field of banking, except, as above indicated, during the short regime of the two central banks following 1791 and 1816.

The liberal policy of the states. — In general, it may be fairly stated that, up to about 1875, the states found little cause to restrict private initiative and free competition in business except in the field of banking. Even, as respects banking, every possible encouragement was given to "shoe-string" industrial organization and expansion and, with few exceptions, very little attention was given to the essentials of liquidity and the safeguards of solvency.

Direct and indirect state aid was extended to roads, canals, railways, and banks. Liberal corporation policies prevailed in

such matters as prescribed initial capital, scope of activities, incorporation fees and taxes, and the character of incorporators. Corporation charters were replete in concessions and privileges to business projects and were quite negligent of reciprocal duties and responsibilities to the public. This was particularly the case of railway companies, and, later on, in respect of public utility franchises. The states also urged the counties and municipalities to make financial contributions and other favorable grants and concessions for "internal improvements." In consideration of lack of local funds, many states chose their senators and congressional representatives with a view to securing national assistance for such enterprises. Furthermore, when federal aid for highways, waterways, railways, and settlement was being requested by interested states, federal control of banking and the laying of federal excise taxes on tobacco and liquor often were vigorously opposed by the same states.

Long before the Civil War, the states, one by one, came to realize that the rainbow of rapid growth of population, immediate prosperity, and certain accumulation of wealth was not so quickly approached by publicly financed means of transport and marketing as they had been led to believe. The public debts thus assumed became due long before the calculated benefits of their incurrence were realized. Consequently, the taxable ability of states and local units, in many cases, was quite overtopped by the bonds and guarantees which they had assumed in support of canal and railway projects. The inevitable result was a repudiation of debts by several states, and a long bitter struggle for other states and scores of counties and municipalities to clear off the burden of public indebtedness so recklessly and enthusiastically assumed.[1]

A notable sequel to this regrettable experience of state and local aid and promotion of private enterprise was the well-nigh universal limitation of future state debt by constitutional amendments and statutory limitation of indebtedness of counties and municipalities.[2] Thus we observe the beginnings of the counsel of prudence, the impositions of regulations, and the exercise of

[1] Such forms of indebtedness were repudiated by several states, in sums amounting to over $75,000,000.

[2] Many states adopted constitutional amendments strictly limiting the incurrency of state debt for any purpose. In several cases, these constitutional limitations of generations past have, in recent years, seriously interfered with the legitimate use of state credit for modern highway construction.

administrative control in the relation of government to business — the swing from the aid and promotion policy of economic childhood and adolescence toward the policy of policed order and direction of industrial maturity, rivalry, and competition.

Predominating state sovereignty and unrestrained competition.

The period of transport development, spreading settlement and speeding exploitation of natural resources, which preceded the Civil War by a generation and followed it for another, witnesses the peak of the rule of states rights, private initiative, speculation, and unrestrained competition. The prospects of developmental projects of all kinds were greatly over-estimated as to value, and equally under-estimated as to futurity of their realization. This spirit of optimism and the consequent errors of financial calculation were directly reflected in unsound banking practice under state authority. This was to be expected under the circumstances, and it has been history repeated in more recent years. In absence of adequate restraint, the banks became infected with the fever of speculation and were deeply involved in the inevitable personal and political intrigue, collusion, conspiracy, and fraud, which brought down upon both industry and the banks, and the credit and currency of the country, the financial collapse and business paralysis associated with the events of 1837 and 1857.

The fact is not to be overlooked that theoretical powers of regulation and control of bank-credit and methods of industrial finance were vested in the reserve powers of the states. The banks were under state charter and court control as regards their functions and responsibilities, including the safety of depositors, noteholders, and the stability of credit.

The common-law doctrine of "conspiracy" was clearly incorporated in the judicial decisions as well as in the statutes of every state — a conspiracy or agreement on the part of two or more persons resulting in the injury of the person, or the property, or the business of another person was and still is a felony in the eyes of the law and the courts. Also, the "police powers" of the state constitutions, as respects the general welfare in all intrastate matters, were supreme. The courts were open to all who were injured by unfair and ill-considered business practices. That is to say, they were accessible, in theory, for relief after

injury under the common-law doctrine and practice, but the intricacies, time, and expense of seeking such legal remedies effectively debarred the complaints of injured parties, and afforded no real protection.

The decline of state banking control. — With the coming of the Civil War there came also a noteworthy change in the character of business organization and in the relations of certain types of business to the public which they served. Inasmuch as the progress of the war required a concentrated economic effort in support of the nation, the obligations of business, especially such units as were occupied in the production of military essentials, assumed a public character which, although known to the common law, had not been recognized before in the policy of the United States. However, the customary sovereignty of the states within the field of business and the benevolent and non-interference policies which had so long prevailed continued to operate until the necessities of national emergency called into action the latent powers of Congress incorporated in the Constitution and unveiled the economic and legal concept of a "business burdened with a public interest."

The collapse of the state banks, the inadequacy of the bank-note currency, and the failure of the public credit, for the lack of a serviceable government fiscal agency, necessitated the first significant positive and permanent invasion by federal authority into the field of business. That was the National Banking Act of 1863. It practically swept irresponsible state banking control and the contemporary "wild cat" banks and their "red dog" currency into the discard. The new National Banking System was composed of responsible privately owned banks, reorganized under strict federal charters and subject to government supervision. It created through these banks a substantial market for government securities, necessary in raising funds with which to carry on the war; it established a uniform national bank currency which immediately displaced the almost useless notes of the state banks, and it forbade to commercial banks operating under the National Banking Act the dangerous practice of lending short-time funds on real estate. Furthermore, the National Banks, by the excellence of their service and the confidence which they soon commanded, as a result of their supervision and control by the Treasury Department at Washington, virtually obliged the

surviving state banks to maintain approximately equivalent standards of banking practice.

The several states have continued to charter and direct savings and investment institutions, and such commercial banks as have desired to operate under state law. In so far as savings and investment institutions are concerned, the federal government has not, until recently, interfered,[1] but since the passage of the National Banking Act, reinforced by the Federal Reserve Acts and related legislation, commercial banks operating under state charters have gradually been drawn toward the policies and practices of the federal system. With the probable perfection of the experimental program for the federal guarantee of deposits, inaugurated in 1933, and the consequent uniformity of policies and practices of participating banks, it seems that the coalescence of the state and national banks will soon be essentially complete.

The appearance of railway and public utility monopolies.

It is a general observation of history that wars accentuate economic trends. In this respect, the Civil War is remarkably characterized by the course of following events which rapidly brought to maturity economic forces and tendencies which had been in the making for a century.

The growth of the business corporation, necessitated by the industrial revolution and amplified by the diverse financial and construction projects of the railways prior to the Civil War, was greatly stimulated by essential industrial developments during the war. The hurried construction of the railway net east of the Mississippi for the purpose of strategic shifting of man power and distribution of military supplies introduced a new phase of corporation economics in the field of railway building and operation. The consolidation or co-operation of hitherto independent and competing business firms into operating units of sufficient size and financial ability to handle large army contracts was a notable metamorphosis of the industrial corporation. In this phenomenon we may observe the accelerating trend toward large-scale production, technological improvement, and integrated control. Within this category of industries may be mentioned, among others, steel, textiles, shoes, meat packing, sugar, tobacco, oil, and arms. There were auxiliary industries, affected in like

[1] See reference to Securities and Exchange Acts of 1933–34, pp. 562–565.

manner, including farm implements, locomotives, mining and manufacturing machinery, and coal. The frenzied extension of the Union Pacific Railroad, a project considered politically, as well as economically, essential to bind the East and the West against a spreading of the effort of secession, added tremendously to the progressive impact of the war.

In all of these manifestations of war psychology and war economics there was exemplified an acceleration of the inevitable shift from the broad and tranquil highway of freedom of opportunity, private initiative, benevolent government, small unit production, innocuous competition, and the pursuit of a comfortable living to an apparent maelstrom of large-scale industry, power, technology, intensive competition, and corporate regimentation of business. Because we function under a capitalistic system, the operation of the business corporation responds primarily to the profit motive. We may say, then, that in so far as the business of production, merchandising, transport, and finance has passed into the hands of great corporations, the economic motive of management is primarily the *making of profits.*

The profit motive has been called "a base element in human character," it has been called "predatory," the "spirit of conquest," and the "exploitation by man of his fellowmen." Whatever truth may be read into these characterizations, the fact remains, that the profit mechanism incorporated in the modern business corporation is the most potent agency in the production of physical goods and material human satisfactions ever devised. Unfortunately, during the Civil War and in the years immediately following, the potentialities of the corporate form of business organization to make profits for its managers without rendering a proportionate output of goods and services for public consumption were discovered.

Certain railway companies became aware of their strategic situation by which all industries in "their territory" could reach the markets only over their respective lines, at their rates, and with such service as they chose to supply. This was conveniently called a "natural monopoly" and the rates charged were determined by "what the traffic would bear," that is, a charge which will produce the greatest net profit without destroying the revenue-producing traffic. Other railways, finding themselves less favorably situated and faced with an unfriendly rival in the same terri-

tory, undertook to drive him out by a rate war, or some other device of "cut-throat competition." The usual result was the threatened or actual insolvency of one or both lines and the final establishment of a monopoly by the elimination of the weaker or an agreement of co-operation between the two. Again, two or more foresighted railway managers, maneuvering to avoid the potential losses of destructive competition, frequently arranged a co-operative agreement which resulted in the harmonious and mutually profitable joint-management of two or more normally competitive lines. Such "co-operative arrangements" tended, ultimately, to evolve into permanent centralized control by the organization of pools, mergers, holding companies, or interlocking boards of directors.

The three typical situations sketched in the preceding paragraph were, in the early years of the railways, thought to be peculiar to the railway business. They presented certain features which were not consonant with previously accepted beneficent principles of individual initiative and unrestrained competition. Such competition, among railways, if unrestrained, undoubtedly headed directly toward one or more of several economically dangerous results. In the first place, a monopoly thus established meant excessive and discriminatory charges, placing all industry within the monopolized territory under tribute to the corporation. If a competing line were tempted to build into the profitable territory of a monopolistic neighbor, necessary transport facilities and costs would be duplicated. Because of insufficient traffic for both, probably neither line would prosper and shippers might be obliged to pay even higher rates to maintain service. In the case of a rate war between competing lines, either the competitive losses were made up later by higher rate charges, or the *bona fide* investors were scuttled by reorganization schemes arranged by the managing officials over whom they had little control or of whose actions they were unaware until too late.

The development of the railway system clearly revealed a field of business in which the theory of free competition did not work out in practice, either in the production of superior service at low costs or to the mutual benefit of producer and consumer. On the contrary, unrestricted private initiative invariably resulted in the possession of a monopoly by a single line without a competitor in a given territory, or in the construction of a second line

followed by a period of cut-throat competition later to result in the combination of the lines to form a monopoly. These conditions, which were naturally inherent in the railway business, were accurately characterized as natural monopoly. They were equally disastrous to the farmer and industrial producer, to the consumer and, in the final analysis, to the railway investor himself — all of these, taken together, fairly well represent the general public. The obvious conclusion is that unrestrained private initiative within the field of natural monopoly endangers the welfare of the general public.

Coincident with the development of railways and the realization of the monopolistic nature of the business, the growing magnitude and importance of certain privately owned municipal services became noteworthy. Water supply, street railways, and gas services, operating under liberal municipal franchises, it was revealed, were subject to the same disabilities when permitted to operate upon the theory of free competition as were the railways. Thus the field of natural monopoly, and consequent public necessity of government interference, was widened to include these so-called public service utilities.

The monopolization of industries of certain types, by virtue of their financial or other business relations with railways and public service corporations, followed them in a logical sequence of non-competitive or monopolistic character. Industries located within competitive railway territory and offering large freight tonnage were able to secure from the railways preferential rates or rebates. Thus, favored operators in many normally competitive industries came to enjoy a differential advantage in transport costs, and consequently, were able to establish a monopoly position by destroying or absorbing their competitors. At one time, industries and industrial regions could be clearly divided into two classes — one openly or secretly favored by discriminatory rates, and the other burdened by unfair railway charges. The growth of monopoly in oil, steel, coal, dressed meats, and lumber was rooted in the Civil War, and was nourished and matured during the following twenty years by discriminatory railway rates. Having once granted preferential rates, the railways found themselves helpless to re-establish equality or, indeed, in many cases, to deny further concessions. Similarly, many railway companies fell under the dictatorial influence of the banks upon which they

were financially dependent and were forced to grant favored rates and preferential services to the industrial friends and protégés of the banks. At this point in the industrial evolution of the United States, the plain duty of the government became clear. Either private management must be curbed by legislative and administrative measures adequate to protect the respective and mutual interests of the shipper, the railway investor, and the public; or the construction, ownership, and operation of the railways must be made a function of government itself.

The progress of government regulation.

The fruitless attempts to control banking, which are discussed on page 587, were not without an oasis of success in some states.

The Suffolk Bank, acting upon the acumen and integrity of its own officers, placed Boston and its environs in possession of a sound bank note currency and forced belligerent banks to comply. The old Safety Fund plan of New York for the guarantee of deposits has been revived time and time again, usually during lean years, when only fat years could be expected to contribute the funds necessary to insure its success. A few years ago the state of North Dakota resurrected the central state bank idea and South Dakota incorporated the safety fund system. A succession of lean years affords sufficient explanation for the failure. The central state banks of Indiana and Missouri survived the crash of 1857 and the war panic of 1861. State banking was also successful in Ohio and Iowa and, for a time, in Louisiana.

State railway and utility legislation began in Rhode Island in 1836 by the creation of a railroad commission "authorized . . . to secure to all citizens and inhabitants . . . the same full and equal privileges of the transportation of passengers and property at all times." In 1845, New Hampshire created a commission of inquiry and railway statistics. Before the Civil War, Maine, Vermont, Connecticut, and New York had state railway commissions. In 1869, Massachusetts took the lead in state railway legislation and created a commission which continues today as a successful example of *the advisory type* of regulative body.

In the West, the railways, so popular in the beginning, soon incurred universal criticism because of their deceitful and arrogant tactics. The scandalous Crédit Mobilier of the Union Pacific was an example. The speculations of such men as Jay Gould, Jim

Fisk, and Alexander Drew were carried on at the expense of both the railways and the public. Commodore Vanderbilt's reputed observation — "The public be damned!" — in reference to the making of railway policies was generally accepted as symptomatic of the motives of the eastern capitalists in the construction and operation of western railways.

With Illinois and Minnesota in the lead, *mandatory* legislative control of railway rates and services was begun in 1871. The law set up schedules and maximum rates and prohibited discriminatory charges. Commissions were created to administer the law. In 1874, Wisconsin enacted the Potter law, which fixed maximum charges for both freight and passenger services and established a mandatory commission. Iowa followed the same year with a mandatory law designed to adjust the rates to uniform gross railway earnings per mile. Other western states responded to the wave of popular protest against the railway builders and their policies with similar mandatory legislation.

The battle for state control of the railways was soon transferred from the legislative halls to the courts. The railways defended themselves against state control upon three premises. They insisted that their business was private, had been so considered from the beginning, and was not properly to be regarded as "burdened with a public interest." It was contended, upon the theory of the famous Dartmouth College case, that railway charters were irrevocable and that rights vested thereby in directors and officers to determine freight rates and passenger fares were immune to legislative interference. The railways also pointed to the interstate nature of their business and sought shelter behind the superior Constitutional power of Congress to "regulate commerce among the several states."

The legal questions involved reached the Supreme Court in 1877 in the historic Granger Cases, and the regulatory powers of the states were upheld in every particular. The court approved the common-law principle that "when private property is devoted to public use, it is subject to public regulation." It accepted without question the theory that the property of a common carrier is burdened with a public interest and subject to government control. It declared that a "power of government which actually exists is not lost by non-use." [1] The court

[1] *Munn* v. *Illinois*, 94 U. S. 113.

further decided that general charter provisions recognizing the right of a corporation to fix a scale of charges for public services do not constitute an exemption from public regulation.[1] It also held that a franchise privilege to charge whatever rates a railway corporation may deem proper may be taken away under the reserve powers of certain states to amend a franchise at will by legislation.[2]

The court, in each of the three cases in which the above principles were established, declared that the public business in question was employed in state as well as in interstate commerce and, "until Congress acts, the state must be permitted to adopt such regulation as may be necessary for the promotion of the general welfare of the people within its own jurisdiction." One decision went so far as to approve limited state regulation of interstate commerce until such time as Congress had acted. The Granger decisions clearly affirmed the regulative power of the state over businesses affected with a public interest such as transport, public utilities, grain elevators, and warehouses.

The regulatory efforts of the states to apply the powers confirmed to them by the Granger decisions were disappointing in their results. Their failure was due to a combination of several causes. These causes practically nullified for a period of 30 years the efforts of both state and federal governments to bring great corporations of any kind under effective control in behalf of the public interest. They remain potent today in obstructing every penetration of public authority into the field of private enterprise, except indeed when government intervenes as a benefactor in times of business disaster.

In the first place, laws were not drawn with sufficient skill to accomplish the purposes which impelled their enactment, and few of them made adequate provisions for enforcement. This difficulty was remedied in the more progressive states by the enactment of a statute expressing, in general terms, the requirement that service rendered to the public shall be adequate and continuous, that charges shall be made reasonable in amount and not unduly discriminatory, and that an administrative commission shall be appointed and authorized to carry out the will of the legislature as expressed in the intent of the law. The com-

[1] *Chicago, Burlington and Quincy Railroad Company* v. *Cutts*, 94 U. S. 155.
[2] *Peik* v. *Chicago and North Western Railway Company*, 94 U. S. 164.

mission thus constituted became a composite scientific, deliberative enforcement agency. It required only the validation of its findings by the courts as respects their compatibility with the general intent of the statute.

A second persistent force with which few states were able to cope was the carefully organized and skillfully executed plans of the "predatory corporations" to subsidize the press, dictate nominations, and tamper with ballot boxes, and thus control legislation and judicial procedure, executive appointments, as means of escape from effective regulation. The corporations excused their political activity and subornation of state legislators and officials on the plea that their business must be operated as a unit, that its functions transcended the boundaries and interests of any state, and that they could not operate under the diverse and sometimes contradictory regulations and controls of several states. The situation, as thus developed, left open only a single course of logical and lawful procedure. That course was the intervention of Congress and the establishment of federal control of railways under the "interstate commerce clause of the Constitution." This forced the retirement of the states in their regulative activities to the field of intrastate affairs.

The above course of action was facilitated by a decision of the United States Supreme Court in 1886.[1] By that decision, the states were denied all regulative powers over interstate traffic. The majority of transport activities which the Granger decisions had placed under state jurisdiction were really *interstate* in character. Consequently, the effect of the later Wabash decision was to nullify much of the regulatory power of the states and temporarily to release the railways from all public authority in the fixing of standards of rates and services.

However, many transport matters remained under state authority. All railway traffic confined in its origin and movement within the boundaries of a state, also local vehicular common carriers, are within state jurisdiction. Likewise, most public utilities are intrastate, and all business the conduct of which is in any way related to questions of public health, morals, or safety or to the general welfare within the states remains within the police power of the states.

[1] *Wabash, St. Louis and Pacific Railway Company* v. *Illinois*, 118 U. S. 557.

The development of federal regulation.

In response to increasing criticism of the railways in the West, a Senate Committee under the chairmanship of Senator Windom of Minnesota had been appointed in 1874 to study the railway problem. The Windom Committee reported that the transport business was monopolistic in character and, consequently, rates and fares tended to be unreasonably high without hope of adjustment by the natural forces of competition. The committee recommended that the government build and operate a transcontinental line, paralleling the privately owned and operated Pacific lines, and thus artificially restore the benefits of competition in the determination of normal rates and adequate service. It was argued that, in this way, the private lines would be obliged to comply with the standards of services and charges established and maintained by the government. This theory has since been tried with indifferent success in Italy and Canada. Congress did not respond to the recommendations of the Windom Committee because, for a few years following the report, over-keen competition among the railways forced rates to a very low level and public complaint temporarily ceased. However, as a result of cut-throat competition, the problem of excessive rates was soon followed by the greater evil of personal, regional, and industrial discrimination in both services and rates.

A second Congressional committee, with Senator Cullom of Illinois as chairman, reported in 1886 that the evil of discrimination had become a universal practice of competing railways and should be curbed by government regulation upon the principle that all persons, all places, and all types of traffic should receive equal treatment. The Wabash decision, in the same year, released the railways from all state control, except in respect of their purely intrastate activities, leaving no practical line of regulative procedure other than to follow the frank suggestion of the Supreme Court in the Granger cases and put into effect the interstate commerce powers of the federal government.

The Interstate Commerce Act.

Congress was so deeply impressed by the report of the Cullom Committee and the decision of the Supreme Court in the Wabash case that the Interstate Commerce Act was passed in 1887. It established government jurisdiction over all interstate move-

ments of passengers and freight by railway and over continuous rail-and-water routes. It affirmed the principle that all charges should be "just and reasonable"; it prohibited personal, place, and commodity discrimination and contained the famous "long-and-short-haul clause" which prohibited a greater charge for a shorter than for a longer haul over the same line, in the same direction, and under substantially similar circumstances and conditions; it forbade pooling, required that schedules of rates and fares should be printed and posted, and that no increase in scheduled rates might be made without ten days' notice. The Interstate Commerce Commission was created with power to receive complaints, to investigate, to require reports from the railways, to compel testimony, to issue orders of compliance with the intent of the law as construed by itself, and to enlist the aid of the federal courts in enforcing its orders.

Economically and ethically considered, the Interstate Commerce Act seemed to constitute a close approach to ideal legislation and exercise of administrative authority in behalf of the general welfare and in restriction of the persistent and growing powers of the unsocial pecuniary interests of "predatory business" allied with the railways. The railway service appeared to be the keystone of the arch which was to support the future economic structure of the nation. The means of modern transport would unite and bind the supporting elements of national resources and industry on the one hand, and commerce and finance on the other. It was reasonable to believe that a sound regulative policy brought to focus upon interstate commerce would bring the railways and other related elements of business under effective federal control. Like many good economic and social projects, the application of the Interstate Commerce Act was for a long time obstructed by political and legal delays and lack of co-operation of the courts. After a short period of preliminary progress by the commission, the combined powers of railway and industrial opposition to governmental administrative control, supported by the reactionary spirit of the courts, which saw their traditional juristic functions being delegated by the Congress to an administrative body, were directed against the authority of the commission.

In the beginning, the power of the commission to secure testimony under oath was challenged by the railways and denied to the commission by the Supreme Court on the theory of constitutional

immunity. Likewise the principle of judicial review, which very properly required the orders of the commission to receive judicial approval, was subverted in the courts by their refusal to accept any finding of fact by the commission and insistence upon reviewing all the evidence, including new evidence not previously revealed to the commission. By this strategy the courts retained their ancient prerogative under the common law and, by the consequent delay of repeals and postponements, paralyzed the arm of administrative control. The Supreme Court recognized and corrected this unreasoned judicial attitude in 1896.[1] In the following year, however, the Supreme Court rendered another decision [2] which, in effect, removed all rate-making powers of the commission based upon its determination of "reasonableness," by limiting its authority to the determination of maximum rates, below which every form and degree of discrimination might freely be exercised. Thus, in 1897, the federal regulation came to almost complete defeat before the court, at the end of a ten-year battle with the railway corporations and their business allies which practically stripped the law and the Interstate Commerce Commission of all positive authority in rate control involving discrimination.

Up to this time, the Interstate Commerce Commission and the regulative statute under which it operated constituted the main force of the national legislative and administrative effort to protect the public from exploitation and abuse by a type of business policy exemplified chiefly by the railway corporations. Public opinion, in the matter of privileges and responsibilities of public service corporations, had been definitely determined by the voters, and the public policy had been clearly formulated by Congressional legislation. But the courts, standing firmly upon the principle of "immemorial rights" of private property and contract and a strict construction of the Constitution (and not unmindful of their own traditional role in the arbitrament of sovereignty), had blocked every progressive step of the commission and rendered futile the progressive efforts of government regulation over ten years. It is to be observed, however, that the courts at no time denounced the *motive* of regulatory legislation or the *principle* of its application in the field of business burdened with a public interest as defined in the Granger cases.

[1] *Brown* v. *Walker*, 161 U. S. 591. "The Social Circle Case," 162 U. S. 184.
[2] "The Maximum Freight Rate Case," 167 U. S. 479.

The net result of the first decade of federal regulation of business by means of positive control by administrative commission was failure in practice, because of disapproval by the courts of the quasi-judicial power of the Interstate Commerce Commission and the lack of precision in the language of the law. The commission having been reduced to an innocuous statistical and research agency, the problem of effective regulative procedure was returned to a perturbed and disconcerted Congress. The commission marked time and Congressional committees deliberated with little result until the leadership of Theodore Roosevelt renewed government activity toward achieving the aims expressed in the law of 1887. In the meantime, the secret rebates, night tariffs, and preferential services granted by the carriers to favored shippers had provided a differential competitive advantage upon which was built such monopolistic or semi-monopolistic industrial integrations as the Standard Oil Company, the International Harvester Company, the "Beef Trust" and the "Sugar Trust."

The Elkins Act was passed in 1903 with the avowed purpose of "putting teeth" into the old Interstate Commerce Act. The published tariff was made the inviolable basis of regulation. Any variation therefrom was made punishable by fines to be levied upon the railway company, the responsible agent of the company, and the beneficiary of any rebate or preferential rate. Some heavy fines were collected. The Chicago packers contributed $600,000 in the course of 18 months and the Sugar Trust half as much. In final analysis, this act was only a treatment of superficial symptoms and not a remedy, and served to stimulate the railways and their associates to undertake a heavily subsidized and malicious political campaign against all forms and means of government regulation.

In 1904, President Roosevelt included in his message to Congress a demand for railway legislation adequate to meet the "paramount issue" of the time. The Hepburn Bill was so formulated as specifically to reconfirm and extend the powers of the Interstate Commerce Commission which had been denied to it by the Supreme Court. The regulative authority of the commission was enlarged to include sleeping car service, express service, private car lines, and pipe lines. The commission was authorized to establish and enforce a uniform system of accounting. Most important, the principle of judicial review was confined to ques-

tions of law, and the courts were obliged to accept the finding of facts as determined by the commission. With the passage of the Hepburn Act in 1906, and the contemporary successful application of the Sherman Anti-Trust Act which is discussed below (p. 636), the effective federal regulation of transport and related industries was definitely established.

The Mann-Elkins Act of 1910 further rejuvenated the Interstate Commerce Commission by rewriting the long-and-short-haul clause and partially establishing its original purpose. Rate increases were subject to suspension by the commission, pending investigation, for a period of four to six months. The strategic defense position which the railway companies had occupied before the courts in resting the burden of proof upon the commission and withholding evidence under the protection of the constitutional immunity of witnesses was reversed and the burden of proof as to the justness and reasonableness of the rates in question was placed upon the companies.

The determination of reasonable rates.

In the earlier part of this chapter two problems concerning the regulation of railway rates have been referred to, *i.e.*, the reasonableness of *the amount of the rates* from the point of view of the shipper (the rate should not be excessive), and *the problem of discrimination* (rates should be fair and equal as among shippers who are similarly circumstanced). As the technique of rate regulation advanced, a third problem in rate fixing became paramount to the two mentioned above. Arising out of the principle of constitutional protection of private property and also from consideration of encouraging the voluntary investment of required capital in the transport business, the necessity of fixing a *reasonable return* upon invested capital, and determining the amount of capital invested upon which this rate of return should be calculated, was continually arising to plague the commission and the courts.

Several theories were advanced as to just and practical methods of calculating these factors in rate-making procedure.[1] Inasmuch

[1] The physical valuation of the railroads by the Interstate Commerce Commission has had little consideration in adjusting rates. The Hoch-Smith Congressional Resolution in 1924 upset the planned policy of the commission, coming soon after the valuation was completed and insisting that agricultural products be granted preferential rates. In 1929, the Supreme Court in the O'Fallon Case, 279 U. S. 461, interfered with the policy of the commission and insisted upon consideration of intangible values not included by the commission. Since 1927, expediency alone has ruled readjustments of the rate structure.

as the State of Wisconsin with apparent success had made a "physical valuation" of railway properties within its boundaries, the results of which were used for both the testing of intrastate rates and the calculation of railway taxes, Senator Robert M. LaFollette introduced a bill, which became federal law in 1913, directing the Interstate Commerce Commission to undertake a valuation of the properties of the railways of the nation.[1] After eight years of intensive work by the Bureau of Valuation, the commission produced an estimate of the value of all railway properties, as of December 31, 1919, which amounted to $18,900,000,000. In 1931, the final calculation of the value of the railway system of the United States was placed at $22,250,000,000. This figure was more than $3,000,000,000 above the net capitalization shown by the books of the railway companies at that time.[2]

Because of changed economic conditions which recently have been rapidly dispelling the monopolistic advantages previously enjoyed by the railways, the benefits of the tremendous task of valuation are of doubtful significance. Furthermore, neither statesmen, jurists, nor economists are agreed upon methods of valuation. The acceptance of the estimates of the commission, either as a possible basis of future rate making or of compensating private interests in case of nationalization of the railways, still rests upon the lap of the Supreme Court.[3]

Changing policy in regulation. — Changes and additions to the regulative statutes have been made from time to time so as greatly to expand the jurisdiction of the Interstate Commerce Commission and to implement its powers. Since 1920, it has become necessary to create a number of supplementary administrative agencies to ease the burden of the commission and to exercise similar powers in new and related fields of government regulation. It will also be noted as we proceed with this study that, since about 1920, the mandatory authority of regulative bodies, having been definitely established and a co-operative spirit on the part of the

[1] By the Valuation Act the commission was required "to ascertain for each piece of property the original cost to date, the cost of reproduction new and less depreciation, together with other values and elements of value, if any; to determine the original cost and present value of all lands devoted to public service, to investigate the history of each property, reporting particularly concerning security issues and financial results of operation; and to ascertain the amounts and value of all grants and donations received by the carriers from all sources and the sums derived from the sale of all land grants from governmental units. S. L. Miller, *Inland Transportation*, McGraw-Hill Book Co., New York, 1933, p. 146.

[2] *Ibid.*, p. 147.

[3] See Chap. XXXI.

corporations having become manifest, the trend has turned toward more conciliatory methods of control. Within the field of railway regulation (and the same is true of government and business relations in other zones as well), the flexible "rule of reason" [1] seems definitely to have displaced the more arbitrary and mandatory processes which were necessary in the beginning to break down the stubborn resistance of corporate individualism.

The above review of the development of railway regulation is presented in what may seem unnecessary detail in a portrayal of the present status of government in its relation to business. It is thought worth while, however, upon two considerations. First, in the consideration of any economic phenomenon which is characteristically dynamic, an adequate understanding of the present status necessitates a knowledge of the preceding factors of causation and path of development. Any intelligent estimate of the future depends upon the ability to evaluate with equal facility the past, the actual, and the potential factors of change. Second, in the inception and development of railway regulation, we have an epitome of the significant economic, legal, and social attributes of the entire experience of the state and federal governments in the regulation of business.

Government regulation of industry and trade.

When describing in the earlier part of this chapter the relations of government to business, we referred in general terms to public policies of "aid and promotion" and "supervision and regulation" of private enterprise. We also referred to "direct" and "indirect" methods of control and to "mandatory" and "advisory" powers of regulative bodies. The growing variety and complexity of governmental authority in business affairs is gradually developing a more extensive and precise classification of the numerous methods and types of government participation in business.

The student of economics is primarily concerned with the functional aspects of government in business organization and management. The following types of governmental control are derived from analysis of the functions of government in its exercise of managerial powers in business.

1. *Fact-finding* constitutes a necessary preliminary step in any substantial form of regulative procedure. Every governmental

[1] See p. 551.

action — legislative, administrative, or judicial — must rest upon evidence of fact. Legislatures resort to the fact-finding methods of investigation and committee hearings, courts to witnesses and testimony, and administrative commissions to records of continuous observation, statistical analysis, and intensive research. Information thus secured is used in arriving at official opinions, decisions, and regulative orders and in preparing reports. In some instances, public knowledge of significant facts and resulting pressure of public opinion are sufficient to achieve the desired regulatory results, and *publicity* of carefully ascertained and analyzed facts becomes an adequate agency of control.

2. *Official restrictions upon entering into a business.* — Prior to the period of administrative commissions, government control over business was chiefly exercised through prescribed terms imposed upon enterprisers as conditions of entering into a business. Such conditions of entry into business and legally continuing therein have customarily been written into *licenses* and *franchises*, the terms of which are enforceable through legal procedure after the manner of contracts. Inasmuch as business corporations secure and retain their legal existence by virtue of charters or franchises from the state or nation, the imposition of franchise restrictions, in political theory, is a powerful arm of control and has, at times, been a useful regulative agency. However, the difficulty of foreseeing future regulative needs at the time when franchises are being formulated, and the ineffective means of enforcing franchise provisions when needed, make them, at best, a regulative device of uncertain utility.

The legal entity or personality of a corporation is established by its franchise, and its character and rights are thereby defined and restricted. The franchise rights of a corporation may be classified as (*a*) rights *to be*, (*b*) rights *to have*, and (*c*) rights *to do*. Its obligations are specified or implied as to what it *shall* or *shall not be*, or *have*, or *do*.

Since the establishment of administrative commissions, the *certificate of public convenience and necessity* has become a popular method of restricting the expansion of certain businesses, either by creation of new units or the enlargement of existing plants. A certificate of convenience and necessity may also be required as a condition of the issue of new securities, or the refunding of matured bonds, or even abandonment of service properties by industries of

a quasi-public nature.[1] The use of the certificate was until very recently confined to the control of railways and municipal utilities, but there is a strong tendency to extend its use. A certificate is now required as a condition of establishing a radio broadcasting installation. The Comptroller of the Currency applies the principle, without actually using the certificate, in the location of new banks. Oklahoma unsuccessfully attempted to require a showing of public convenience and necessity as a justification of incorporating a new ice company in a village already adequately served by two companies.

3. *The control of prices and rates.* — In general, it is properly assumed that the free play of competition in production and marketing works as an automatic regulator of prices. In practice, however, there always have been circumstances which interfere with the free play of competition and consequent equilibrium of demand and supply at normal prices. The existence of monopoly, for example, usually restricts production and establishes high prices, or preferential prices which are often unfair. There are also numerous methods of "rigging the market" and thus exacting high or otherwise unreasonable or unfair prices.

Railway and public utility corporations have produced and sold their services under conditions which were essentially monopolistic. Both state and federal governments have recognized the necessity of regulating prices and service rates for the protection of the public against abuses by industries which enjoy a monopoly. It has also been necessary to prohibit pools and other conspiracies and agreements in restraint of trade in order to prevent unreasonable and unfair prices and rates. Railways and municipal utilities were first to fall under the ban of official rate regulation. Certain other monopolistic industries are also subject to control upon consideration of their price-fixing agreements in restraint of trade. Recently, efforts have been directed toward the control of price-rigging in the securities market.

There is described on a previous page of this chapter, the operations of the Interstate Commerce Commission in the determination of reasonable prices of railway services and in the exercise of its authority to regulate freight rates and passenger fares.

[1] A *certificate of convenience and necessity* is usually issued by a public service commission. It authorizes an extension or other modification of services upon convincing evidence of their actual need as a public convenience or necessity.

The work of this commission was co-extensive in its development with the operation of the Sherman Anti-Trust Law, enacted in 1890. The Sherman Law declares all contracts and combinations in restraint of trade to be unlawful. The law was designed to curb the monopolistic activities of the Standard Oil Company, the so-called Harvester Trust, the American Tobacco Company, and the meat packers. The principal legal test of restraint of trade is price manipulation. The presentation of such evidence to the courts, after the usual delay of the 15 to 20 years which seems to be necessary to adjust judicial opinion to legislative recognition of economic needs, achieved notable results in the direct control of certain malicious corporate activities in railway transport, oil, tobacco, farm implements, and meat packing. Also, indirect control resulting from these conspicuous examples was clearly evidenced in almost every field of business dominated by great corporations.

4. *The control of services and the quality of goods.* — The police powers of the states and the general welfare provisions of the federal Constitution confirm by implication, rather than by specification, the means of control of the nature and quality of goods and services dispensed to the public. Education, health, morals, security, and public convenience are the usual considerations of governmental interferences with private initiative in matters of quality of service and goods.

The first line of such controls is composed of numerous state and municipal administrative departments operating under state and city laws. Their powers may be supervisory, advisory, or mandatory. The federal government has its pure food and drug laws, its interstate commerce and postal regulations, and its corresponding administrative bodies to operate within each field.

5. *Prevention of discrimination.* — Business discrimination may apply to prices, persons, places, or nature of the service. The public utility commissions of the states, the public service departments of the cities, the Federal Trade Commission, Interstate Commerce Commission, and the Securities Exchange Commission are the principal seats of authority for the prevention of discrimination.

6. *Prevention of monopoly and restraint of trade.* — The Sherman Anti-Trust Law and the Clayton Act are the outstanding manifestations of the powers of Congress to prevent monopoly

in interstate commerce. The courts and the Federal Trade Commission are the agencies of determination of violation of the law and its application. Most of the states have vigorous statutes and administrative agencies which function to prevent monopoly in intrastate business.

Recently, under the "rule of reason" decision of the Supreme Court (1911), the Webb-Pomerene Export Law (1918), and the partial suspension of the operation of the anti-trust laws by the emergency legislation of 1933–1934, the restrictions which were laid upon "monopoly and restraint of trade" since 1890 were materially relaxed.

7. *Elimination of unfair competition.* — The nature and evil results of unfair competition, although long recognized and subject to regulative efforts, especially by the states, were not definitely segregated from the legal concept of monopoly and discrimination until about 1910. The reasoning and decisions of the Supreme Court in the Standard Oil and American Tobacco cases developed the significance of "fair" and "unfair" competition and "due" and "undue" restraint of trade. The action of the court led to the passage of the Clayton Law and the creation of the Federal Trade Commission in 1914. This law, as subsequently amended, and the authority of the commission constitute the legal and administrative forces making for the definition and elimination of unfair competition.

The efforts of the Federal Trade Commission have thus far been rather unproductive of tangible results. Here again, as in the early experience of the Interstate Commerce Commission, the refusal of the courts to support the findings and recommendations of the commission have been disappointing to the partisans of commission control of unfair competition.

8. *Government ownership and operation.* — Beginning with the federal postal service and arsenals, and a few instances of municipal ownership of water supply and sewage systems, government ownership and operation has gradually increased with the development of social requirements and public interests. Private corporations, operating under liberal municipal charters, for many years enjoyed large and profitable autonomy in the business of serving the rapidly accelerating requirements of American cities. Due, in the main, to the public nature of their service (considerations of health, sanitation, security, adequacy, and continuity),

but also to the arrogant and short-sighted exercise of monopolistic privileges by corporations entrenched behind legal barriers, the cities have waged a long and costly defense against exploitation and indifference on the part of public service corporations. Where regulation has failed, public ownership and operation have frequently been resorted to. Urban and suburban transport, water, gas, ice, electricity, heat, and produce markets have fallen under municipal ownership. However, problems arising out of economic, political, and legal considerations almost invariably act to limit the extent of municipalization which can be achieved in any city.

The states, never prominent in the ownership and operation of business enterprise, despite experiments in banking, transport, insurance, warehousing, and merchandising, now confine their activities to the operation of a few bridges and canals, and the maintenance of roads, forests, fisheries, and state parks.

The federal government, at the present time, is in business in rather a large way. Arsenals and other army and navy supply establishments, the Panama Canal, shipbuilding, ocean shipping, inland water transport, hydro-electric power in the Tennessee Valley and the Grand Canyon of the Colorado, and the mining of uranium and manufacture of helium gas in Texas are representative of federal business activities which definitely restrict in one way or another the field of private enterprise.[1]

9. *Exercise of police powers.* — The elemental purposes of government are comprehended in the provision for the national defense, the protection of life and property, and the promotion of the general welfare. In addition to the features of government control indicated in the eight classifications, there remain certain things within the functions of government which may not be definitely determined or defined. The exercise of sovereignty by either the states or the United States may be made effective at any time in behalf of defense, life and property, or the general welfare. Rioting, public nuisances, interference with traffic, interruption of peaceful occupation, infectious and contagious diseases, moral hazards, seditious behavior, and numerous other offenses to the social order known to exist, or which may arise, are subject to control by the several agencies of the police power, including ultimate adjudication by judicial review. The multi-

[1] Mention may also be made of numerous activities undertaken under the "recovery" program of 1933 and 1936 and subject to indefinite continuation.

tude of ways in which business may become involved in, or affected by, elements which feature the scope of the police power constitute an important and troublesome field of necessary governmental control.

10. *Co-operative regulation.* — Before the World War, the state and national governments had made some progress in establishing co-operative arrangements tending to stabilization of business. Boards of arbitration and conciliation had occasional success in the settlement of labor controversies. A number of railway problems and practices had been satisfactorily handled by co-operative procedure and there were other isolated instances.

During the war, managers of private corporations were often faced with the choice of co-operation with public officials or yielding to mandatory government controls. Some, responding to the urge of loyalty, took the initiative in proposals of co-operative endeavor and are properly accredited with a large share in the successful effort of 1917–1919.

Much was learned during the war about motives, methods, and results of co-operation between government and private business, the net result of which was a definite aversion to any policy of enlarged nationalization of industry. On the other hand, certain benefits of permanent co-operation were conceded. Business leaders and government officials acquired a working acquaintanceship and a mutual understanding which gave promise of more ready and successful co-operation in economic planning and business administration in case of possible future emergency.

The anticipated possible emergency materialized in the autumn of 1929. The three years which immediately followed were rich in experimental efforts at co-operative control of industry and trade. Receding business and disturbed social conditions brought the economic life of the country to a deplorable state, although probably no worse than in three earlier periods of our economic history. The retirement of the Republican Administration in 1932, by an overwhelming majority, was a frank bid of the voters for a change of party government in the simple belief that a new policy in Washington could not make things much worse and might make them better. With the appearance of President Franklin D. Roosevelt in the White House and a strong supporting Democratic majority in both houses of Congress, the stage was set for a new government policy — "The New Deal."

We shall undertake to treat very briefly five elements of the Roosevelt recovery program, with regard only to certain essential features of co-operative regulations of business, some of which may become more or less permanent in the economic system.

The National Industrial Recovery Act (1933).

The operation of the Anti-Trust Laws, as respects agreements in restraint of trade, was temporarily and conditionally suspended.

Codes of fair competition for each industry were formulated by co-operative agreement by the industry in accord with basic principles proposed by the government. Codes were approved by the government and administered by joint authority of industry and government. If an industry did not agree upon a code acceptable to the government, a code could be imposed by the President.

Organized labor was admitted to the co-operative arrangement by the terms of Section 7A of the act, which provided that employees should have the right to organize and bargain collectively through representatives of their own choosing.

The Agricultural Adjustment Act (1933).

This law provided for co-operative action among farmers and administrative agencies within the U. S. Department of Agriculture with the object of raising farm prices by the reduction of agricultural production. The co-operating farmers were expected to profit by higher prices induced by the decreased output and also by the distribution to them of a cash premium in consideration of their co-operation with the government in the successful application of the law.[1]

The premium money to be paid to the farmers was raised by imposing a processing tax upon the manufacturing of farm products. The amounts paid were made proportionate to the decrease in acreage planted to crops and reduction in size of herds.

Non-co-operating farmers received no share of these funds and were otherwise penalized for not complying with planting and breeding restrictions placed upon them by the Department of Agriculture. The administration of this law was vested in the President and by him delegated to the Secretary of Agriculture and his assistants.

[1] The amount involved in the payment of these premiums during the first year of the operation of the law approximated $5,000,000,000.

A further provision of the Agricultural Adjustment Act (the Thomas Inflation Amendment) authorized the devaluation of the dollar to the equivalent of half of its former gold content and further inflation of the currency by the issue of 3 billions of dollars of circulating notes with the obvious purpose of advancing prices and reducing the burden of indebtedness.

Unconstitutionality of the N. I. R. A. and the A. A. A.

After an experimental period of nearly two years, the essential features of both the National Industrial Recovery Act and the Agricultural Adjustment Act (with the exception of the inflation amendment) were held by the Supreme Court to be unconstitutional. The decision of the court was based upon the opinion that the federal powers exercised under these laws exceeded the powers of Congress to "regulate *commerce* among the several states." The laws in effect were found to control *production* within the states; a sovereign power reserved under the Constitution to the respective states. They were also found to *delegate legislative powers* to the President and through him to the administrative departments of the government — a practice which violates fundamental principles of the constitutional structure of the United States.

The principle of the processing tax, levied indirectly upon consumers, the proceeds of which were distributed among selected groups of producers, was also found to be in violation of the Constitution[1] because it was an attempt by Congress to attain ends indirectly which it did not have the power to seek directly.

The Reconstruction Finance Corporation (1932).

This government-owned corporation was created under the Hoover administration with the object of bringing the government to the financial support of the distressed banks and railway companies with the hope that loans of public funds would save these victims of the depression from insolvency and enable them, in turn, to aid in the rehabilitation of industry. Having failed in its original purpose, the R. F. C. was converted by the Roosevelt administration into a money-lending agency through which the resources of the United States Treasury were made available in direct aid to agriculture, industry, foreign merchandising, state and municipal public works, and for several other projects of the

[1] *Supreme Court of the United States*, No. 854 and No. 864, October Term 1934.

"recovery" program. The function of the R. F. C. was to receive funds appropriated by authority of Congress from the Treasury and then, as a "private" corporation, dispose of them at its discretion (as no administrative official or department may lawfully do) in supplying capital funds for the purposes indicated.

The Railway Act of 1933.

The financial organization of the railways, despite the large loans received from the R. F. C., was notably ill-fitted to withstand the continuing depression period of reduced earnings. The high ratio of bonds to stocks (about 60 per cent) established a burden of fixed charges sufficient to create an insolvent condition of the entire system, if capital earnings on the combined issues of stocks and bonds should fall below 3 per cent.

Railway stock issues had been under Interstate Commerce Commission control since 1920. The roads were left to the owners in sound financial condition after being released from government operation at the close of the war, and they had prospered thereafter under the liberal government co-operative policy of the Transportation Act of 1920 until 1929. In the course of four years thereafter, railway operating revenues declined to a point which permitted only a few of the strongest roads to maintain dividend payments, and deferred interest on funded debt became chronic with the weaker companies. The R. F. C. loans during the Hoover administration, instead of serving the railways to retain labor on improvement projects, as promised, were used to pay overdue obligations to the banks.

The railway companies excused their financial situation by pleading unfair competition by motor busses and trucks. Busses and trucks were able to underbid short-haul railway rates and fares because the use of the public-built highways was available to them at lower costs than the right-of-way costs sustained by the railways. There were other heavy overhead and operating railway expenses, including the extravagant salary lists of over 700 separate corporations, duplicate services, competitive advertising, and maintenance of obsolete equipment.

The Railway Act of 1933, in striking contrast with previous federal legislation from 1887 to 1920, conceded the financial and managerial collapse of the railway system as a whole and undertook to place future railway policies squarely upon a basis of

co-operation between the government and the private management in the interest of both the security holders and the public service.

Considerations looking to the financial and physical rehabilitation of the railways provided for the temporary appointment of a Federal Co-ordinator of Railways whose duties were (*a*) to recommend and, if necessary, impose immediate measures of efficiency and economy upon the railway corporations and (*b*) to devise a plan, in co-operation with railway officials and the Interstate Commerce Commission, for the complete reorganization of the railway systems and the transport services of the nation.[1]

Securities and stock exchange control.

For many years, there has been a popular demand for official control of the issue and marketing of corporation securities. At least four substantial reasons are advanced in support of this class of business regulation. (1) On behalf of the investing public, it is desirable that purchasers of corporation stocks and bonds shall have a reliable source of knowledge concerning the *bona fide* nature of the enterprise, its financial record, and its present financial and industrial position, and that prospective investors should be protected from misrepresentation and bad faith on the part of securities marketing agencies. (2) It is also desirable that certain technical features of the securities markets, including a variety of practices known as "marginal trading," "short selling," "market rigging," and "brokers' loans," should be so supervised as to prevent speculative features of the securities markets from destroying or distorting the primary function of the exchanges as *investment institutions*. (3) In the interest of the proper development of specific industries and the consequent safety of invested capital, it is wise to curb any tendency to over-expansion of plant which will prevent reasonable profit in both old and new establishments and possibly depress the entire industry. (4) In the field of public service corporations, the purposes for which securities are issued, their issuing prices, the ratio of bonds to stocks, arrange-

[1] Mr. Joseph Eastman, during 1935–1936, as Federal Co-ordinator of Railways accomplished some economies of operation, including reduction of official salaries. He induced some progress in offsetting the advancing competition of bus and motor-truck traffic. Mr. Eastman recommended that if co-operative arrangements for a consolidated national railway system cannot be agreed upon, the entire railway system should be nationalized by government purchase, payment to be made by an exchange of government bonds for outstanding corporation securities. The Eastman plan contemplates the creation of a Federal Railway Corporation which shall function under permanent government officials with a minimum of interference from partisan political influence.

ment of bond maturities, priority and amortization, and the refunding and interchange of securities are important in the determination of rates and other matters of the public interest and may profitably be subject to official control.

Proposals for financial regulation always have been most vigorously resisted by both public service corporations and more purely private business corporations. Banks also have resisted interference with the exercise of their customary prerogatives in matters of investment. The Interstate Commerce Commission, as we have seen, was for a long time greatly handicapped in its service to the public and to the railways themselves for lack of any control over financial practices of carrier corporations. This situation was partially corrected, in 1910, by the establishment of Interstate Commerce Commission control of railway accounts and, in 1920, the commission was given control over matters of railway security issues and refunding operations.

The "blue-sky laws," which became popular a few years ago among the more socially-conscious states, were partially successful in outlawing the distribution of over-speculative and unsound securities within their borders.[1] They served better, however, in demonstrating the need for federal control over the issuing and marketing of the stocks and bonds of corporations doing an interstate business or distributing their securities beyond state borders.

The stock market crash of 1929 and the following train of financial and industrial distress was, in considerable measure, convincingly explained in terms of financial mismanagement, not entirely free from evidence of fraudulent practice in the marketing of securities. A surge of public opinion demanded Congressional action which would prevent a repetition of such loose financial practices. Congress responded by enacting the Securities Law of 1933, which required interstate corporations desiring to issue securities to secure permission from the Federal Trade Commission. Such permission was conditioned upon the filing of a detailed financial statement of the corporation and a declaration of the purposes, form, basic values, issuing prices, and, in case of bonds, provisions for payment of all new securities. This information

[1] The blue-sky laws required official approval of security issues within the state, and permitted sale within the state of securities of non-resident corporations only after approval and the granting of a license or permit.

was to be made accessible to the public. No advertisement, sales prospectus, or sales representation, at variance with the facts included in the sworn statement filed with the commission, was permitted in the marketing of any corporate stock or bond.

The onerous and indefinite requirements and penalties of the first Securities Act were eased and clarified by amendatory legislation enacted in 1934. The new law transferred the duties of administration to the Securities and Exchange Commission, which was created for that purpose. In general, the securities and stock market controls were modified to conform quite closely to the terms of the English Companies Act. By the terms of this law, stock and bond markets become registered National Security Exchanges by making application to the commission in which they agree to co-operate with the commission by giving full information concerning their organization and operation and to comply with the specific provisions of the law. Unregistered exchanges are denied the use of the mails, except small exchanges provided their rules are considered adequate to protect investors. Only registered securities may be dealt in by the national exchanges, save certain exceptions of public bonds which may be specified by the commission.

Among the broad powers of the Securities and Exchange Commission are the following:

1. Marginal requirements may be fixed at any time, at the discretion of the Board of Governors of the Federal Reserve System, but the law prescribes that credit may be granted for not more than 55 per cent of the current market price of the securities purchased, or 100 per cent of the lowest price within three years, provided it is not more than 75 per cent of the current market price. Of these two calculations, the higher should not be exceeded, and the difference between this figure and the current market price indicates the minimum cash margin to be required.

2. All borrowing by members of the national exchanges must be from member banks of the federal reserve system or other banks which comply with the rules of the Board of Governors in respect of this act. Brokers may not borrow more than twenty times their liquid capital.

3. All purely speculative devices and deceptive information are unlawful. Short sales and stop-loss orders may be used only under rules fixed by the commission.

4. The commission may exercise almost complete control over transactions and the various types of trading on the floor of the

exchanges, can control the dissemination of information among traders and the relations between brokers and their clients. It may prescribe the accounts and records to be kept and reports to be made by brokers and the exchanges and may make such examinations as it deems necessary.

5. Periodic and special reports may be required of all issuers of registered securities upon matters which concern the financial status of the issuing corporations or the possible value of the securities. In these matters the powers of the commission over the financial affairs of security-issuing corporations are analogous to the powers of the Interstate Commerce Commission over financial affairs of railway corporations, including the approval of proposed issues of new securities.

6. The commission has adequate powers of investigation, of compelling evidence, of injunction, and of prosecution offenses. The usual right of judicial review of commission rulings is vested in the Circuit Court of Appeals subject to appeal to the Supreme Court.

Miscellaneous government business agencies.

In addition to the outstanding federal regulative bodies named and discussed above, several important permanent agencies which exercise the power of government in the direction and supervision of economic affairs are listed below. Their titles are significant of their functions and the broad scope of their authority.

Board of Governors of the Federal Reserve Banks.
United States Tariff Commission.
Federal Communications Commission.
Federal Aviation Commission.
Federal Power Commission.
Federal Alcohol Control Board.
Tennessee Valley Authority.
Foreign Trade Zone Board.
Farm Credit Administration.
Federal Deposit Insurance Corporation.
Natural Resources Board.
National Labor Relations Board.
Bureau of Agricultural Economics.
Bureau of Public Roads.
The National Reclamation Service.

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CHAPTER XXVIII

MONOPOLY AND TRUSTS

The idea of monopoly.

In a competitive market there are rival sellers and buyers, and prices are determined, on the one hand, by the efforts of sellers, acting independently of one another, to dispose of commodities and services, and on the other hand, by the efforts of purchasers, acting independently of one another, to secure commodities and services. Competitive prices, as we have seen, are beyond the control of any one buyer or seller.

Monopoly, as contrasted with competition, denotes combination or some other form of *unified action*. It implies restraint on the free offering of commodities and services by rival sellers and on the free purchase of these commodities and services by rivals who desire to secure them. The word "monopoly" itself, more narrowly interpreted, means a condition in which there is a single seller or a single purchaser. More widely, it signifies unity in the management of some kind of business in some essential particular.[1]

The particular in which unity is secured in the case of monopoly may be in production, it may be in sales, it may be in purchases; or it may be in any two or all three of these particulars. This use of the term "monopoly" gives us a clear and workable concept. We may formulate it more precisely as follows: *Monopoly means that substantial unity of action on the part of one or more persons engaged in some kind of business which gives exclusive control, more particularly, although not solely, with respect to price.*

[1] Lord Coke, in the seventeenth century, said that monopoly consisted of power granted "to any person or persons, bodies politic or corporate, for the *sole* buying, selling, making, working, or using of anything, whereby any person or persons, bodies politic or corporate, are sought to be restrained of any freedom or liberty that they had before, or hindered in their lawful trade" (3 *Institutes*, 181). Blackstone, in his *Commentaries on the Laws of England*, gave almost precisely the same definition in the following century. The Supreme Court of the United States (*National Cotton Oil Co.* v. *Texas*, 197 U. S. 129) has adopted the definition of monopoly given in the text, above.

Monopoly and industrial evolution.

The meanings of economic categories change with industrial evolution. Even such terms as "freedom" and "liberty" have to be newly interpreted with every new stage and even with every marked phase in a stage of economic life. Naturally, with the passage of time, monopoly has acquired a new significance, requiring new interpretations. The earlier legal definitions made monopoly proceed from an express grant of public authority. Lord Coke said: "A monopoly is an institution or allowance by the king, by his grant, commission, or otherwise"; and Blackstone used similar language in defining monopoly "as a license or privilege allowed by the king."

Historically, this source of monopoly power is of paramount importance. From early times, English sovereigns granted monopolies either for public or private reasons and they became a grievous burden. Queen Elizabeth, in particular, sinned in this respect, regarding the right to grant monopolies as "one of the fairest flowers" in her prerogative. Soon the industries and trade of the realm were restrained and shut in on every side by a privileged class of "Elizabethan monopolists." In 1603, it was decided, in a famous case, with respect to one of the Queen's grants: "That it is a monopoly and against the common law. All trades as well mechanical as others which prevent idleness (the bane of the Commonwealth) and exercise men and youth in labor for the maintenance of themselves and their families, and for the increase of their substance to serve the Queen when occasion shall require are profitable for the Commonwealth, and therefore the grant to have the sole making of them is against the common law and the benefit and liberty of the subject." Parliament, in 1624, passed a statute declaring that "all monopolies are altogether contrary to the laws of this realm and are and shall be void and of no effect." Exceptions to this rule were sometimes made upon one ground or another. Patents and copyrights, for example, were excepted. But the general principle of the illegality of special grants of monopoly became thoroughly established in English law.

Our forefathers, bringing with them the English spirit of hostility to monopoly, frequently inserted severe denunciations of monopolies in the early constitutions of our commonwealths, and prohibited them unqualifiedly. These declarations and

prohibitions still remain in several states. The constitution of Texas declares that "monopolies are contrary to the genius of a free government, and shall never be allowed," and there are closely similar declarations in the constitutions of other states.

While the spirit of monopoly is as old as man, there was, until this century, comparatively little opportunity for monopoly on any large scale save as it proceeded from express grants of public authority. Sometimes these grants were made for public purposes, and sometimes they proceeded from mere abuse of monarchical power, and were given to favorites of royalty. At the present time, however, monopolies proceed from the nature of industrial society, and are of far greater significance in our economic and political life than ever before. The really serious monopolies of our day are far more subtle, and have for the most part grown up outside of the law, and even in spite of the law. Framed with a view to only one kind of monopoly, our law was at first wholly inadequate to cope with these new and varied manifestations of monopoly.[1]

Things sometimes confused with monopoly.

One thing which does *not* yield monopoly is mere limitation of supply. It is strange that even an economist of the ability of John Stuart Mill should have found the essential feature of monopoly in this limitation; for this at once makes monopoly cover the entire field of economic activity. Only things limited in proportion to human desires command a price in the market.

The economists who accepted Ricardo's theory of rent held that land was a monopoly, "though a natural one." We have shown (Chap. XXII) that this idea is no longer accepted. Nowhere does one find monopoly either in the ownership or in the cultivation of land, but everywhere competition — competition among unequals, to be sure, but still competition. We must distinguish between the broad concept of *differential gains* enjoyed by those in competitive pursuits, and the monopolistic gains which are based on the absence of competition.

[1] Modern industrial monopolies are often quite as much akin to the offense known in the old English law as "engrossing" as they are to the old notion of a monopoly granted as a special privilege. The engrosser was one who bought large stocks of goods in a market or on their way to a market with the purpose of selling them later at a higher price. The opposition to engrossing seems to have been based partly on hostility to unnecessary middlemen and partly on the fear of temporary monopolies, created by "cornering the market." Later, the terms "engrossing" and "monopolizing" came to be generally used as synonymous in court decisions.

Just as sharply must we distinguish between competitive businesses of large magnitude and monopolies. Department stores in no city in the world enjoy monopolies, but are subjected to the steady, permanent pressure of competition. There are those who call every business operating on a vast scale monopoly, and would put in the same economic category a gas works without a competitor and a huge retail dry-goods establishment with rivals at every hand, ready to seize every opportunity for an advantage over it, and certain to ruin it if its managers relax their intense activity and watchfulness.

Classification and causes of monopolies.

In the first place, there are (1) *public* monopolies, owned and operated by some political unit, for the benefit of the community, and (2) *private* monopolies, owned by private persons, firms, or corporations, and operated primarily for their own benefit.

In the second place, monopolies may be (1) *local*, (2) *national*, or (3) *international*. This classification is more or less arbitrary, but it suggests that the *area* of the operation of a monopoly is a matter of much importance. There may be only one seller of shoes on a particular street or in a particular building. We do not call him a monopolist, because the area in which this shoe dealer is without competitors is much smaller than the area in which the forces which fix the retail price of shoes operate. It is not sufficient that one should be the only seller or buyer in a certain definite area. For monopoly to exist it is necessary that the unified control of the buying or selling of a particular commodity or service should extend *throughout the area of the market*, whatever that area may happen to be. The supply of gas, or of electric current, is in most cities a real monopoly, because the market itself is in such cases merely local. Two young men in Chicago some years ago cornered the market on eggs. The weather was so cold that eggs could not be shipped to the city, and thus the speculators had a temporary local monopoly. A protective tariff or other impediments to international trade may sometimes enable a monopoly to exist in one country when the same article or service is not monopolized in another country. Various attempts have been made to establish international monopolies, but none of these has been entirely successful. Agreements restricting competition between the producers of different

nations are known to have been effected in the steel, copper, chemical, petroleum, and other industries, and in the petroleum trade.

We pass now to a third classification of monopolies, according to the *source of monopoly power*. This classification is especially important, because we shall not know how to deal effectively with monopolies until we understand just why and how the different kinds of monopolies have come into being.

A. Social monopolies.
   I. General welfare monopolies.
      1. Patents.
      2. Copyrights.
      3. Public consumption monopolies.
      4. Fiscal monopolies.
   II. Special privilege monopolies.
      1. Those based on public favoritism.
      2. Those based on private favoritism.
B. Natural monopolies.
   I. Those arising from some special limitation of the supply of raw material.
   II. Those arising from secrecy.
   III. Those arising from peculiar properties inherent in the business.

Social monopolies. — Businesses are social monopolies *when they are made monopolies not by their own inherent properties, but either by legislative enactment or by special advantages or privileges granted to them by other monopolies.*

Social monopolies cannot exist without the acquiescence of society. They are artificial creations. There is no reason, therefore, why social monopolies should be permitted, except in so far as particular social monopolies are deemed to be advantageous means of achieving socially desirable ends.

Exclusive privileges are conferred (for limited periods) by *patent* and *copyright* laws because of the stimulus they give to invention and authorship. Patents lead to several different kinds of monopolies. (1) In some instances the monopoly is limited to the control of the supply of the patented article itself. (2) In other cases the use of a patented machine or process in the manufacture of some other product may give advantages important enough to create a monopoly in the supply of that product. (3) Sometimes the owner of a patent endeavors to extend the

scope of his monopoly by refusing to sell his patented products except on the condition that other commodities, used in connection with the patented product, be purchased from him and not from his competitors. Such agreements have been employed in selling or leasing mimeographs and shoe machinery. These "tying contracts" were made illegal by the Clayton Anti-trust Act of 1914. (4) Again, the patent system sometimes operates so as to perpetuate a monopoly already established. New inventions often cannot be profitably utilized except in connection with machines or processes which have previously been patented. For this and other reasons it frequently happens that an existing monopoly affords the only market for the improved machines and processes adapted to some particular industry. This has been an important factor in the telegraph, telephone, and electrical industries.

Although our patent laws need careful revision, the policy of granting inventors a temporary monopoly continues to meet with general social approval. Copyrights stand upon even firmer ground. To do away with copyrights would lessen the incentives to authorship and would prevent the publication of many good books.

Trademarks, like patents, are monopolies in the strictly legal sense that no one else may use them. But, unlike patents, they do not lead to a monopoly in the economic sense of giving exclusive control of one sort of business. They are used largely in competitive business undertakings as a help in establishing and maintaining what is termed good will. The law also forbids the fraudulent imitation of established brands, firm names, and distinctive forms of packages. In so far as a successful business man in a competitive field is able to induce people to believe that it is better to purchase his particular brand of goods than to take the chance of getting a possibly inferior quality by purchasing his competitor's products, he may be able to lift himself a little above the "dead level" of competition. He may even find that he can increase his net profits by putting the price of his goods somewhat higher than that at which precisely similar goods are sold in the market. By thus successfully "grading" his product as something distinct from and possibly superior to his competitor's goods, he is able to obtain what might be termed a quasi-monopoly. But because his power to control the price of his product is in

general much more limited than that of the true monopolist, and because competition limits and conditions his activities in other ways, his business is more properly called competitive than monopolistic.

Public consumption monopolies and *fiscal monopolies* are to be distinguished the one from the other only by the object or purpose which the government has in view in establishing them. If a government manages for itself or grants to some firm a monopoly of the liquor traffic with the object of regulating the consumption of liquor, the monopoly is a public consumption monopoly. If, on the other hand, the chief object is not regulation, but revenue for the government, the monopoly is a fiscal one. Often the two objects are blended. The production of salt has at one time or another been a public fiscal monopoly in many different countries. The sale of tobacco is a fiscal monopoly in France. In recent years Japan has established a number of fiscal monopolies.

The old monopolies established by special grant of the sovereign were in some cases fiscal monopolies, a revenue being derived from the monopolist in the form of taxes or royalties. In other cases, however, they were based merely on *public favoritism*. A monopoly in one country protected by a high tariff from the competition of producers in other countries is rightly said to be based, so far as all or part of its monopoly power is concerned, on public favoritism. Monopolies based on *private favoritism* derived their monopoly power from special advantages granted them by other monopolies, especially natural monopolies. Railways rebates have been in the past a fruitful source of monopoly.

Natural monopolies. — These *depend for their existence on natural forces as distinguished from social arrangements.* They grow up independently of man's will and desire and sometimes even in direct opposition to it. The words we have used to designate the first two classes of natural monopolies are self-explanatory. Natural mineral waters and certain wines made from grapes grown only in certain small areas afford good examples of monopolies derived from *special limitations in the supply of raw materials.* The Kimberley mines, of South Africa, virtually controlling the amount of annual additions to the world's stock of diamonds, constitute a monopoly of this class. The limited area in which anthracite coal is produced in the United States is an important contributing cause of the monopolistic control

which has often prevailed in that industry. Monopolies based on *secrecy* are no longer of great importance, although the use of secret processes remains in some instances a source of monopoly.

By far the most important of all monopolies are natural monopolies of the third class, arising from peculiar *properties inherent in the business.* Among such monopolies in the past were roads and streets, canals, docks, bridges and ferries, waterways, harbors, lighthouses, railways, telegraphs, the post office, electric lighting, waterworks, gas works, and street railways of all kinds. What were the properties inherent in such businesses that made them naturally monopolistic? In some instances it was the *possession of peculiarly favorable spots or lines of land* having advantages important enough to create monopoly. This may be true, for example, of harbors, docks, street franchises, rights of way through mountain passes or along narrow river valleys, and railway terminals in large cities. Often these are things which cannot be duplicated at all or can be duplicated at a practically prohibitive expense. Monopolies created by the presence of such conditions are similar to natural monopolies of the first class.

Natural monopolies of this third class are, however, more often rooted in *conditions that make competition self-destructive.* These conditions are three in number, and the presence of all three is generally necessary to create monopoly: (1) The commodity or service rendered must be of such a nature that a small difference in price will lead buyers to purchase from one producer rather than from another. (2) The business must be of such a nature as to make the creation of a large number of competitive plants impossible. Either because the business is one in which special advantages attach to large-scale production or because there are actual physical difficulties in the way of the multiplication of competing plants, there must be fairly definite limits to the possible increase of the number of plants among which the business might be divided. (3) The proportion of fixed to variable expenses of production must be high. These conditions have been conspicuously present in the operation of railways and of the so-called local public utilities, as well as in other industries in which natural monopoly prevails.

The chief reason why competition cannot be maintained in this field is that under the conditions we have listed *competition fails to fix a normal price* remunerative enough to attract the recurrently

large. This, it is alleged, secures for it certain economies of production. There undoubtedly are some gains of this kind; how much in any case would be difficult to determine. A business based on competitive principles, large enough to secure the maximum of efficiency, sometimes gains in initiative and alertness, stimulated by rivalry, as much as might be gained by monopoly.

The second and principal source of gain in monopoly is found in the ability to get a high price. In popular opinion monopoly prices have generally been held to be high prices, and, rightly or wrongly, monopoly has been identified with extortion. In this case popular opinion is supported by the results of historical research. Where a government has monopolized the production or sale of salt, its high price has usually been a real popular grievance. It has often been necessary to inflict severe penalties to prevent consumers from securing salt at lower prices from non-authorized sources. Of even greater significance are the results of different investigations that have been made of the price policies of industrial combinations in the United States. These investigations make it fairly clear that just so far as industrial combinations have been able to achieve and retain monopoly power there has been a general tendency for them to increase the margin between the price of the finished products and the cost of raw materials.[1]

Wherever commissions have been formed with power to regulate monopoly price, and these commissions have been comprised of independent and strong men, there has been a marked tendency to reduce monopoly price; because unregulated monopoly price has very often been found to be excessive and unjust. The opinions of the Interstate Commerce Commission and of the railway and public utility commissions of the various states afford many illustrations. In some important cases, these commissions have authorized higher prices, notably at times when the expenses of operating railways and public utilities were rapidly increasing. But in the great mass of their decisions they have been forced to lower prices, although these price reductions have not often been drastic.

[1] See *Report of the U. S. Industrial Commission*, Government Printing Office, Washington, D. C., Vol. I, pp. 39–57; J. W. Jenks, *The Trust Problem*, Doubleday, Page and Co., Garden City, N. Y., 1917, Chap. VIII; Eliot Jones, *The Trust Problem in the United States*, Macmillan, 1921, Chap. XI.

Public policy with respect to monopolies.

Natural monopolies cannot all be abolished. Experience, and the analysis of the special characteristic industries like railways and public utilities, should be conclusive. We *must* have monopoly in these cases, and the only question we are concerned with is, "What kind of monopolies shall we have?"

We must admit that unregulated monopolies in private hands have always been odious and are opposed to the principles of the laws of civilized nations. They are opposed to that endeavor to secure equality of opportunity which is fundamental in modern democracy and which manifests itself as a red thread running through American history. Even George Washington, generally looked upon as calm and self-contained, denounced monopolizers and wished they might be "hunted down as pests of society" and "hanged on a gallows five times higher than the one prepared for Haman." [1]

It is not so much high price that disturbs the modern man as it is inequality of opportunity; and this general sentiment has been very clearly and forcibly expressed in court decisions. In the field in which monopoly is natural and inevitable, therefore, we cannot permit unregulated special privilege, and to this end we must choose between public monopoly — government ownership — and public control of monopolies privately owned and operated. This justifies a discussion that we cannot enter into here. It should be noted, however, that the considerations which must govern our choice differ for different types of natural monopolies. Municipal waterworks and the federal post office are in most respects efficiently and successfully managed. But in the case of many other natural monopolies the problems of management are more complex and difficult in many ways. For a generation the method of public *control* rather than of public ownership has been on trial.

Public control, to secure equality of opportunity, must so regulate monopolies and limit price that the gains will be no higher than those produced by equally wise investments and equally wise and prudent management in the field of competition. Sometimes it is stated that owners of railways and other monopolistic enterprises should have a competitive return upon all the money that they have invested. This would give them a

[1] C. J. Bullock, *Essays on the Monetary History of the United States*, Macmillan, 1900, p. 67.

position of special privilege, inasmuch as in the competitive field a great deal of money is lost. It is only wise investment and careful management in the field of competition that can secure returns equal or superior to the current rates of interest. Imprudently invested capital is lost in the field of competition; and when it is imprudently and unwisely invested in the field of monopoly, it cannot justly claim any return. But, on the other hand, we cannot admit that the prices monopolies are allowed to charge must always be so reduced that their gains yield no more than a competitive return on the actual value of their *physical plants*. Vested rights or interests have been created by society rather than by private individuals and faith must be kept. In the case of railways and telegraphs, for example, the federal and state governments for many years deliberately encouraged a wasteful policy of competition. It would not be right to place upon the holders of these securities all the burdens of a mistake of public policy in the past. What is needed is to declare the public policies of the future and to base future returns upon future actual investments. The rate of return, it is important to remember, must always cover the price at which capital and efficient management will be supplied. And in addition, there should remain the possibility of gaining some small further surplus by the exercise of unusual economy or of unusual initiative. Lacking such an incentive, the management of railways and public utilities might become a matter of unprogressive routine.

When we turn to the field of social monopolies we find that the problems of public control are simpler, but more diverse. These monopolies exist only by the approval or tolerance of society, and each particular one can be judged on its own merits. The problem of social monopolies, therefore, resolves itself into such problems as those of the economic effects of the patent system, and the most expedient means of raising public revenues. With respect to one class of social monopolies society has reached a very definite conclusion: There must be no needless extension of the field of monopoly through either public or private favoritism. The possibility of obtaining monopoly through special privilege is clearly inconsistent with the maintenance of equal opportunity in the industrial field.

The problem of the public control of monopoly is sometimes confused with the "trust problem" — the problem of the public

control of large industrial combinations. But the trust problem is only in part a problem of monopoly.

Anti-trust laws.

Most states have statutes and some have constitutional provisions against "combinations in restraint of trade." Aimed primarily against large combinations, if strictly construed, they make illegal the whole mass of price agreements and trade restrictions, general and local, which are a much more common and characteristic feature of modern business than is generally supposed. State anti-trust statutes have accomplished but little, partly because they have been used only sporadically, and partly because the state governments have been poorly equipped to enforce the law. The experience of the federal government has shown that if the prosecution of illegal combinations is to be conducted successfully, the details of their history must first be uncovered by thoroughgoing researches.

The *Sherman Anti-trust Act* of 1890 is a federal statute, based upon the federal power to control interstate commerce. It declares illegal "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." It also makes it a misdemeanor for any person to "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." The government can proceed under the statute in either or both of two ways: (1) by bringing criminal prosecutions against persons entering into unlawful combinations; (2) by instituting proceedings to prevent and restrain violations of the law. A number of criminal prosecutions have been brought, but most of these have been unsuccessful. It has been found difficult to get a jury to convict for an offense so abstract and general and, possibly, so common, as "restraint of trade." The more important results of the law have come from proceedings for the dissolution of unlawful combinations, and it is these only that we shall discuss.[1]

Restraint of trade under common law.

There has been much discussion of the precise meaning of the phrase "restraint of trade" as used in the Sherman Act. This

[1] *Infra*, p. 639.

phrase was taken from the common law, in which its usual application was to contracts by which a man agreed not to compete with certain others. When the restraint of trade involved in such agreements was merely incidental to some legitimate purpose, and necessary in order to carry out that purpose, the contracts have usually been deemed valid at common law. Thus, if two competitors form an ordinary partnership, or if one man sells his business to another, agreeing not to set up another business undertaking of the same kind (so as to protect the sale of the good will of his former business), the restraint of competition involved in such contracts does not necessarily render them illegal. But if the *direct purpose* of a contract is restraint of trade it is invalid and unenforceable.[1]

Labor unions and railway combinations under the Sherman Act.

Although the Sherman Act was intended to be primarily a weapon against great industrial combinations, it has been held by the courts to apply also to labor unions and railway combinations. It has never been held, however, that labor unions are illegal under the act because of any alleged restraint of competition in the supply of *labor*. But certain activities of labor unions, particularly strikes and boycotts, have been condemned by the federal courts because such activities "interfere with the free flow of *commerce* from state to state." [2] This, it will be noted, is a very different thing from restraint of trade in the old common-law sense.

In 1897 the Supreme Court held that railway rate agreements were in violation of the Sherman Act.[3] An important point in these decisions was that neither the fact that railway rates agreements had been defended by the Interstate Commerce Commission nor the claim that the rates agreed upon were reasonable was allowed to stand as a defense. If the direct purpose of such agreements, said the court, is restraint of competition, they are illegal, whether reasonable or not. Railway rates agreements still exist, but no more of them have been attacked by the government. An epoch-making decision in 1904 ordered the dissolu-

[1] *Infra*, p. 637.

[2] *United States* v. *Workingmen's Amalgamated Council*, 55 Fed. 605; the Railway Strike Cases, 64 Fed. 30,749, and 67 Fed. 705; *Loewe* v. *Lawlor* (the Danbury Hatters' Case), 208 U. S. 274.

[3] *United States* v. *Trans-Missouri Freight Association*, 166 U. S. 290; *United States* v. *Joint Traffic Association*, 171 U. S. 505 (1898).

tion of the Northern Securities Company, a holding company, organized to hold the stock of the Great Northern and Northern Pacific railways, two "parallel and [supposedly] competing" lines.[1] The importance of the decision was that for the first time the holding company, as an instrument for restraining competition, was shown to be vulnerable under federal law.

The application of the Sherman Act to railway combinations was in many ways unfortunate. Under the Interstate Commerce Act, until recently, we have since 1887 regulated railway rates on the assumption that railways are natural monopolies. This has proved a much more effective method of dealing with unfair rates than has the attempt to force competition into the railway field. The good accomplished by the dissolution of railway combinations lies in the inroads these dissolutions have made into the use of the holding company device, with its undue concentration of financial power and its opportunities for the unfair treatment of minority stockholders. But this is only an incidental result of these decisions, and lies quite outside the general purpose of the Sherman Act. Many large holding companies, in both the railway and the manufacturing fields, are wholly invulnerable to prosecution as "combinations in restraint of trade."

Industrial combinations under the Sherman Act.

For twenty years the Sherman Act was least effective in the very field to which it had been particularly designed to apply. A few industrial pools and price agreements were declared illegal by the federal courts, but in the only case involving a trust of the modern type that came before the Supreme Court the decision was for the defendant corporation.[2] The decision in this case, involving the American Sugar Refining Company, was to the effect that a monopoly in the *manufacture* of sugar could not be a monopoly in interstate *commerce*. For many years there were few prosecutions of industrial combinations. The government lacked properly equipped bureaus of research and investigation,

[1] *United States* v. *Northern Securities Co.*, 193 U. S. 197. A similar decision, in 1912, involving interests of even greater magnitude, dissolved the merger of the Union Pacific and Southern Pacific railroads (226 U. S. 61). In the St. Louis Terminal Railroad case (224 U. S. 283), also decided in 1912, a corporation owned by fifteen railways and possessing a monopoly of railway terminal facilities in St. Louis, was not dissolved, but was merely directed so to reconstruct its organization that new companies might participate in its ownership and be given the advantages of its services on equal terms with railways then in control of it.

[2] *United States* v. *E. C. Knight Co.*, 156 U. S.

and the government officials were apparently apathetic. But both of these conditions were changed during President Theodore Roosevelt's administration. Finally, in 1911, the government was successful in suits brought for the dissolution of two of the greatest of industrial combinations, the Standard Oil Company [1] and the American Tobacco Company.[2]

Possibly the most important thing in these decisions was the emphasis the Supreme Court placed on certain business practices of these companies as evidence of their monopolistic intent. Each company had achieved a dominating position in its field, and the Standard Oil Company, at least, had a virtual monopoly. Helped at first by railway rebates, it had consistently pursued a policy of monopolization, either absorbing its competitors or driving them out of business. The evidence showed that it had acquired from 85 to 97 per cent of the business of transporting, manufacturing, and selling petroleum and its products, and such competition as there was seems to have existed by its sufferance. It did not have a *natural* monopoly, for only about one-ninth of the total national production of crude oil came from its own wells. It had certain advantages over its competitors, especially in its control of pipe lines and in the low railway rates given to points at which its refineries were located. Yet it did not have a full measure of monopoly power. Active competition was always possible and was kept down only by the use of unfair competitive methods.

Unfair competition.

Unfair competition has come to play a very important part in the trust problem. It includes the use of such devices as (1) cutting prices below cost in a locality in which competition appears and selling at higher prices elsewhere to make up losses; (2) discriminating in favor of merchants who agree to refuse to handle or to discriminate against competitors' products; (3) the use of threats and other forms of intimidation; (4) the employment of spies to ascertain the details of competitors' business transactions; (5) the marketing of special brands of goods at very low prices for the purpose of driving competitors' products out of the market; (6) the use of subsidiary companies as bogus independent concerns.

[1] 221 U. S. 1.
[2] 221 U. S. 181. See *infra*, p. 640.

Not all of these methods are in themselves illegal. Some of them, including price-cutting on one or more parts of an establishment's output, are common in ordinary competitive trade. But when used by large industrial combinations such methods have come to be called "unfair," because of the purposes prompting their use and because of their effects. *There is an important difference between an effort to gain as much business as one can under competitive conditions and an effort to destroy competitive conditions.* Methods that may be harmless when used by an enterprise of ordinary size become dangerously destructive weapons in the hands of great industrial combinations. The combination is able to wage a destructive competitive warfare because it can stand a loss at one point or on one part of its output large enough to send its smaller competitor into bankruptcy. The use of unfair methods of competition by the Standard Oil Company and the American Tobacco Company was deemed by the Supreme Court weighty evidence of the purpose of those combinations to monopolize "interstate trade and commerce" in their respective fields.

These decisions showed that the Sherman Act could be used as an efficient tool for the dissolution of great industrial combinations organized and conducted with *monopolistic intent.* It is clear that large combinations, controlling an important proportion of the output of a particular industry, and evidencing their monopolistic purposes by using aggressive and unfair methods of competition, are illegal under the Sherman Act. Beyond that point, however, the legal position of large combinations is not wholly certain. In 1914 the Circuit Court ordered the dissolution of the International Harvester Company.[1] That company controlled from 80 to 85 per cent of the business in its field. It was not charged by the government that it had used unfair methods or that it had tried in other ways to suppress competition; in short, it was admitted to be "a good trust." It was, however, a combination of five large companies which had previously been competitors. The company accepted the decision, so the case did not go to the Supreme Court. The question of the legality of a "peaceful combination" large enough to hold a dominating position in an industry remained, therefore, in doubt until the spring of 1928 when this same company became involved in a case before the

[1] 214 Fed. Rep. 987.

Supreme Court. In its opinion in this case, the Court declared that "the law, however, does not make the mere size of a corporation, however impressive, or the existence of unexercised power on its part, an offense when unaccompanied by unlawful conduct in the exercise of its power."

A somewhat different issue was presented in the government's suit for the dissolution of the United States Steel Corporation. The Corporation unquestionably held a dominating position in the industry and from time to time had made informal arrangements with other producers with respect to the prices of steel products. But it did not of itself possess a monopoly. It controlled about half of the production of iron and steel, but its share of the total output was a little smaller and its competitors' shares a little larger than at the time of its organization in 1901. Taken by itself, then, it was not a monopoly, although it was powerful enough to induce other producers to co-operate with it in such a way that something which closely approached a condition of monopoly obtained in some branches of the steel industry. The United States Supreme Court, in 1920, decided that the Corporation itself was *not* an illegal combination in restraint of trade.[1]

Reorganizing industrial combinations in such a way as to comply with the law often presents difficult problems. At first the courts merely directed that the securities owned by the holding company be distributed *pro rata* among its own stockbrokers. But where a majority of the stock of the holding company was closely held by a small group of men, and where the holding company held a substantial majority of the stock of its more important subsidiary companies, this method of dissolution was unlikely to result in the prompt restoration of competitive conditions. Later dissolution plans were more carefully worked out, so that no one group of stockholders would be left in control of the essential constituent parts of the former combination. In a number of cases industrial corporations have voluntarily reorganized themselves in accordance with plans approved by the government.

Anti-trust legislation after 1911.

In 1914 Congress enacted two new statutes, the Clayton Act and the Federal Trade Commission Act. The first of these acts

[1] 251 U. S. 417.

was, in effect an amendment of the Sherman Anti-trust Act so formulated as to comply with the interpretation placed upon that law by the Supreme Court in its decisions of 1911 and 1912 to which we have referred. The second act is a companion law which provides a technical commission to administer the Anti-trust Law in much the same manner as the Interstate Commerce Commission serves in administering regulative provisions of the Interstate Commerce Law.

Among the more important provisions of the Clayton Act are the following:

1. It purports to legalize those activities of labor unions which had been declared illegal under the Sherman Act. This topic is dicussed in Chapter XXXIV, page 795.
2. It prohibits the acquisition by one corporation of stock in another corporation when the effect may be "to substantially lessen competition" between such corporations, or "to tend to create a monopoly." It also contains provisions against "interlocking" directors and officers, which, like the provision against intercorporate stockholding, have a wholesome purpose and have accomplished some good in particular cases. Intercorporate stockholdings and intercorporate directorates are prohibited *when they may tend to lessen competition* between the particular corporations concerned, even though general competitive conditions may continue in the industry in which the corporations are engaged.
3. The Act prohibits certain trade practices, including (*a*) unjustifiable discrimination in the prices charged to different purchasers, (*b*) leases or sales of goods made with the understanding that the lessee shall not use or deal in the goods of a competitor of the lessor or seller, and special discounts or rebates made upon such conditions are also forbidden.

In cases under the Sherman Act, the courts had already counted unfair trade practices among the evidences of an illegal purpose to monopolize an industry; and injunctions against their further use were included in the decrees in some of these cases. Also, the provisions relating to interlocking directors and intercorporate stockholding repeated the Court's interpretation of the Sherman Act. It follows that in these particulars, also, the Act of 1914 added little to the substance of the Act of 1890.

The Federal Trade Commission, established in 1914, is composed of five members, appointed by the President. It succeeded the Bureau of Corporations, which was established in 1903 for the primary purpose of making special investigations of particular corporations and combinations and of the conditions existing

in particular industries. The commission not only has large powers of investigation, but it has the further power to require annual or special reports from interstate corporation in such form and relating to such matters as it may prescribe. At the request of the Attorney General it is required to investigate any corporation alleged to be violating the anti-trust laws, and to make recommendations for the readjustment of its business. In suits brought under the anti-trust acts the commission may be asked by the court to prepare an appropriate form of decree, which is, of course, subject to rejection or change by the court. The importance of this provision is in its bearing upon the outcome of dissolution proceedings under the Sherman Act. The drafting of a wise plan of reorganization for an offending combination is often an exceedingly difficult matter, requiring not only care and judgment, but also a large amount of technical information about the general condition of the industry affected. Furthermore, the commission is authorized to make investigations of the manner in which decrees in suits under the anti-trust acts are carried out.

The most important power of the Federal Trade Commission is undoubtedly that of issuing orders restraining the use of "unfair methods of competition in commerce." So far as such methods are used as part of a general attempt to monopolize an industry, this statute adds nothing to the Sherman Act except a prompt and efficient method of procedure. This power, wisely used, will in many cases put a stop to aggressive monopolizing in its early stages. The power committed to the commission has even wider aspects. The commission is authorized to establish and maintain higher standards for competitive business methods in general; to draw the lines beyond which a business should not go in the attempt to divert trade from its competitors.

Up to April 30, 1937, the commission had received approximately 35,000 different complaints respecting the use of unfair methods of competition. Among the methods condemned by the commission are such things as the misbranding of commodities, adulteration, bribing the agents of prospective customers, procuring the business secrets of competitors, false or misleading advertising, selling goods below cost in order to drive competitors out of business, and the like. Most of these methods are such as

were already illegal under the law.[1] Through the Federal Trade Commission a business man may secure relief from unfair practices more quickly, more certainly, and more economically than if he waited for the slower processes of the courts. Furthermore, the work of the commission in this field is leading to the adoption, on the part of business men themselves, of new and higher standards of competition. The commission's most effective work, it is probable, has been accomplished by securing the voluntary co-operation of various trade organizations in eliminating unfair trade practices.

The Webb-Pomerene Act. — This statute was enacted in 1918. It permits in *export trade* combinations of a type that would be illegal in domestic trade. Such combinations may not "restrain" the trade of possible *American* competitors. And they may not use unfair methods of competition as against other American exporters. This modification and loosening of the anti-trust laws was recommended not only by various organizations of business men but also by the Federal Trade Commission. The law was put on the statute books at a time when American exporters were gaining new markets at the expense of their European competitors, who had virtually been shut out of them by the war. It was argued that a considerable part of the export business of other countries (and at the time Germany was most commonly mentioned) had been in the hands of large national and international combinations, or cartels, and that independent American exporters or exporting companies were at a disadvantage in the world's markets.

There is no evidence as yet that the American export trade has gained in any large way by reason of the Webb-Pomerene Act nor is it likely that it will. Such small advantages as the permission to combine may have given to exporters in a small number of industries probably have been more than offset by the loss of good will in the world's markets and, possibly, by retaliatory action on the part of other countries.

In 1928, fifty-six export associations, embracing about a thousand producing plants and representing forty different industries distributed throughout the United States, were operating under the Act. The number has since been greatly reduced.

[1] For a more complete list, see *Annual Report of the Federal Trade Commission, 1928*, Government Printing Office, Washington, D. C., 1928, pp. 137–181.

Public policy towards industrial combinations.

Our anti-trust laws express what is undoubtedly the dominant public sentiment in the United States with respect to large industrial combinations formed with the purpose of obtaining a monopoly. Our policy has been one of repression, of compulsory dissolution, of monopolistic organizations. Undoubtedly we have made many blunders in the ways in which we have formulated and enforced this policy. We have, in some cases, attempted to force competition into the field of the natural monopolies; we have often attributed too large a significance to the mere fact of combination; we have in particular attempted to cure, by a sweeping prohibition of "restraint of trade" and "monopolizing," many evils that are, in their more important aspects, matters of corporation finance rooted in the laxity of our statutes with respect to the organization and management of corporations.

Because of a few ineffective experiments, it does not follow that our general policy has been fundamentally mistaken. Monopoly has yet to prove itself more efficient than competition. Moreover, it is not entirely a question of economic efficiency. There are differences between monopoly and competition in their effects upon the distribution of wealth, upon the equality of economic opportunity, and upon a host of economic and social relations; and in most of these particulars, it is generally believed, the advantage rests with competition. At any rate, we have been proceeding along sound lines in endeavoring to raise the level of competitive methods and to eliminate any advantages which large combinations may have in their power of destructive competition. This assures a fairer field for experimentation with respect to the forms of business organization really best fitted for survival.

There are some who believe that our general policy has been wholly wrong; that we should permit and even encourage the formation of large combinations; that we should place monopoly power in their hands, and that we should then subject their prices and their products to public control of the kind that now exists in the railway field. There is, in fact, no good reason why our notions of what constitutes a "public calling," or a "business affected with a public interest," properly subject to rigid public control, should not be extended so as to cover all natural monopolies. Recent legislation has shown a somewhat more ad-

vanced attitude in this field. The Transportation Act of 1920, for example, definitely encouraged consolidation and places in the hands of the Interstate Commerce Commission the power to endorse pooling arrangements where not contrary to public policy. The Railway Act of 1933 insisted upon the necessity of further physical combination of railways and integration of their management. An amendment of the Clayton Act, moreover, modified the clauses relating to interlocking directorates so that the Board of Governors of the Federal Reserve System may now permit interlocking directorates in the banking field when not incompatible with the public interest.

To regulate prices in any industrial field not naturally monopolistic presents an exceedingly complex and difficult undertaking. This has been recently demonstrated, in an experimental way, by the operations of the National Recovery Administration, 1933–1935, under authority of the National Industrial Recovery Act. Briefly outlined, the anti-trust features of the Sherman and Clayton Acts were suspended and both major and minor industries were respectively unified on a nation-wide scale. Each industry was "co-operatively" organized under a code of "fair practices" the authority of which extended to the determination of lawful prices and production quotas. If an industry could not formulate and agree upon a code for itself, incorporating the basic principles set forth by the administration and approved thereby, the President of the United States was empowered to formulate a code and impose it upon the industry. Thereafter, the administration of each code became a matter of joint action between the "code authority" representing the industry and officials of the government.

The life of the "N. R. A.," however, was too short to permit of a conclusive test of the theories upon which it was based. The Act was held by the Supreme Court to be an unwarranted and unconstitutional delegation of legislative power and, as administered by the Executive, a violation of rights reserved to the states in matters of intrastate commerce. Many believe that, if the legality of industrial codes can be established, they could be so operated as to prove economically advantageous.[1]

A second difficulty of great significance passing to a regime of non-competitive industry is the definition of terms upon which

[1] *Infra*, pp. 772–773.

new capital and new enterprise might come into the "regulated" industry. A seemingly modest but, nevertheless, epochal experiment in this direction was put in motion by the Securities and Exchange Acts of 1933 and 1934.[1] Judging from past experience in establishing the authority of administrative commissions and commanding the compliance of public opinion therewith, several years must pass before conclusive evidence of the economic and social gains expected from the commission control of security issues and the exchanges will appear.

Federal control of corporations.

The unfortunate effects of the lack of uniform state requirements in such matters as purpose of incorporation, corporate powers and responsibilities of promoters and directors, capitalization, and the like are gradually being removed by federal action. The Clayton Act touches incidentally upon this field. But provisions relating to incorporate stockholdings and interlocking directorates were framed with reference merely to the problem of the preservation of competitive conditions. Latterly, however, the Securities and Exchange Acts have made definite progress as respects financial arrangements and policies of corporations which seek to dispose of their securities through the national exchanges. The administration of the registration requirements of these acts by the Securities and Exchange Commission should serve as a useful explorative operation in the direction of general federal control of corporations. Many believe that a federal statute dealing thoroughly and systematically with the promotion, organization, and management of corporations engaged in interstate commerce is needed. Canal, railway, and bridge companies have in the past been chartered by the federal government, just as national banks are now. It would be legally possible and economically advisable to require at least a *federal license* for all corporations engaging in interstate commerce. Moderate and just requirements as to publicity, capitalization, and other things might very well be imposed as the price of a federal license. Aside from the present lack of uniformity in state laws, the mere size of modern business corporations and the interstate scope of their operations make it difficult for any individual state to control them efficiently.

[1] Cf. pp. 617–619.

Industrial combinations in other countries.

A movement toward combination in some form has manifested itself in practically every country which has large industries of the modern type. In England, however, the movement has made much less headway than in the United States. This may be attributed in part to the fact that England's "company laws" are not so lax as are the corporation laws of many of our states, in part, possibly, to the absence of a protective tariff (until recently), and in part to the highly specialized character of English industries. During the twenty or thirty years preceding the World War, however, a number of important combinations were formed in England, but only a few of these were successful. An English combination, it may be noted, secured an international monopoly of sewing cotton. England has no statute forbidding combinations, but the contracts by which "combinations in restraint of trade" are formed will not be enforced by the courts.

In Germany and in certain other countries of continental Europe the dominant form of combination has been the cartel. The cartel resembles a pool rather than the thoroughly centralized industrial combinations of the United States. The individual companies constituting its membership continue as independent producing establishments. It controls sales prices, output, and the distribution of orders and of profits.

The growth of cartels since the World War has been rapid and impressive. Industrial concerns, forced to co-operate by the military exigencies of the war, discovered, after peace was resumed, tremendous advantages in combination, not only in production but also in marketing. In contrast to the American policy toward combination, the state, in Europe, has either refrained from interference as in Great Britain, or, as in Germany, has actively given its support to the trusts. In Germany at present, such basic industries as steel, power, chemicals, textiles, glass, and aluminum are under the control of cartels in which the government itself often has a substantial interest. In France as in Germany, combination seems to have gone furthest in the chemical industry, iron and steel, textiles, aluminum, and other metal industries.

Before the war, opinion in Germany with respect to the success of the cartel was greatly divided. On the one hand it was claimed that cartels eliminated many of the wastes of competition and that they were especially active and successful in securing sales in

foreign markets. On the other hand it was said that they had discriminated against home consumers by selling abroad at lower prices than they charged at home, and that they even went so far as to sell at very different prices in different parts of Germany, utilizing, as far as possible, the principle of "charging what the traffic will bear." Since the war, tariff restrictions and threatened trade wars have created a favorable attitude towards international cartels of high grade designed to prevent excessive international competition; and such bodies as the International Chamber of Commerce and the Economic Conference of the League of Nations have approved their formation.

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CHAPTER XXIX

TRANSPORT ECONOMICS

The elementary processes of our economic system may be assembled under four titles — the extractive industries, transport, manufacturing, and merchandising. The basic material assets of mankind — the foundation of social prosperity — are, of course, the natural resources of the earth. However, very few of the natural products of the farm, the mine, and the forest can be made use of without first being carried to some form of processing plant and thence again to the market and to the consumer. Conversely, people living in villages or cities cannot satisfy their needs without means of bringing the products of distant resources to their home markets. It is only recently in the story of mankind that means of transport superior to the human carrier and the beast of burden were devised. Until then, the greater industrial resources of the earth were undeveloped and unused, and society, therefore, remained unable to advance far beyond a state of mere subsistence and savagery.

The primitive tribes that first learned to build rafts and to use beasts of burden formed the van of civilization in the early epoch of economic life. The invention of the canoe advanced the American wilderness-dwellers to the estate of migratory and trading tribesmen. Use of the camel and the burro enabled the cannibal races of the East to abandon their caves and jungle-huts for the pursuit of pastoral and agricultural occupations, and to develop commerce over the desert trade-routes. From such beginnings, economic progress has been closely correlated with the improvement and extended use of transport facilities. The growth of agriculture and the industrial arts, and the rise of nations great in population, wealth, power, and culture are the sequel of advancing means of transport. National superiority — industrial, commercial, military, and cultural — has always been conditioned upon ease, safety, and speed in the movement of goods and persons and in the transmission of information.

The development of transport and growth of civilization.

When written history began, Egyptian craftsmen were the builders of ships with sails. They knew the use of the roller and the wheel in facilitating heavy transport. The horse and the chariot were used in industry and war. Agriculture was well advanced; mines of gold, silver, copper, and tin were successfully worked; quarries, dams, reservoirs, and canals were in operation; and Egyptian commerce traversed the trade-routes of the known world. Nearly 4,000 years ago learning in law, art, mathematics, and the elements of science had achieved in Egypt a culture which in some respects have not since been excelled. The most obvious supporting factor of early Egyptian civilization was superior means of transport on both land and sea. Within a period of ten centuries, the Greeks, the Assyrians, the Phoenicians, and the Persians, each in turn, succeeded in surpassing Egyptian means of transport in commerce and conquest, and each gained ascendancy over Egypt in wealth and power.

As a result of the development of Italian shipping and the building of the Roman navy, about 250 B.C., Carthage, Greece, Egypt, and large areas of Persia and India fell under Roman control. The dominion of Rome was gradually extended to include all the coastal lands of the Mediterranean and its tributary waters and beyond to the British Isles in the west and northward to the Rhineland. Italy built larger ships and stronger chariots than her rivals and added paved roads to her transport facilities. When the first Rome, like Egypt and Greece before her, had overfattened upon the fruits of conquest, industry, and trade, Constantinople, situated at the crossing of the continental trade-routes, by both land and sea, surpassed the transport and trading centers of the Mediterranean and became the "world's first city."

Spain and Holland each won ascendancy in colonization, trade, wealth, and political power by superiority in ship building and navigation. The improved rudder, the compass, the astrolabe, and the full-rigged ship made possible the discovery and exploration of the Western Hemisphere. Transatlantic navigation and the use of cavalry by the Spanish accomplished the conquest of Mexico and the South and Central Americas. Finally, dominant English marine transport established a British colonial and commercial dominion extending to the five continents and

traversing every ocean. This dominion has been, in the most part, preserved for over a century and is perpetuated in the British Commonwealth of today by the world's merchant marine and most mobile navy.

The United States has led the world in a veritable romance of inland transport development and consequent economic and social growth. The Cumberland Road, the Mississippi and Ohio River steamboats, the Erie Canal, and the navigation of the Great Lakes opened the way to the interior resources of North America. The covered wagon, the stagecoach, the pony express, and the 20-mule freighter carried settlement and industry from the Mississippi to the Pacific and, in 1869, the steam railway linked the Atlantic and Pacific and assured the economic and the political solidarity of the East and the West.

Six transcontinental railway trunklines, expanded laterally by a network of 254,347 miles [1] of track, a steam-driven merchant marine of over 13,000,000 gross tons,[2] the Panama Canal, 3,000,000 miles of public roads, 88,000,000 miles of cable, telegraph, and telephone line wire, and 28,000 miles of commercial and mail air-routes indicate the nature and economic importance of the transport and communication installations of the United States today.

It is an interesting observation that no method of transport ever devised has been abandoned, and only to a relatively small extent have the more primitive methods been displaced by the modern. Despite the prevalence of steamships, the sailing vessel and paddle boat survive in myriad numbers on the waters of Europe and the Orient. In the world as a whole, there are probably almost as many animal-drawn vehicles as before the advent of the automobile. Only in the United States have the railways notably lost traffic to the automobile and the airplane, and the amount and importance of the loss are probably more apparent than real.

The canoe and the dog-sleigh continue to serve in the Northland; the camel, the llama, and the humble burro carry the burdens of trade and travel in the more difficult places of jungle, desert, and mountain; and man-drawn vehicles and the human

[1] Net figure for 1935. Maximum railway mileage reached 254,000 in 1916.

[2] The United States led the world in shipping prior to the advent of the iron ocean steamer which was first developed in England in the 1850's. Great Britain now holds first rank in shipping with 21,000,000 gross tons.

head-pack continue to predominate in the streets and byways of the far East. Thus we see that, in a practical way, every improvement or innovation in means of transport has been a net addition to the existing economic establishment and has stimulated industrial expansion, increased wealth, and advanced the standards of comfort and culture.

Transport defined.

Economically. — Transport is adequately defined as the *carriage of goods and persons.* Goods, for the purpose of this definition, are understood to include, in addition to merchandise, such intangible elements of value as electric energy, intelligence, advertising, news, and entertainment which may be transmitted by wire or radio. The interest of the economist is centered in the thing done — the *service and its value.*

Commercially. — Transport is defined as the organized *carriage of goods,* services, communications, and persons *for profit.* The interest of the business manager is focused upon expenses, rates, fares, and volume of traffic — *net earnings.*

Technologically. — Transport is the *mechanism by which goods, et cetera, are carried* from place to place and the manner of its construction and maintenance. The technician is interested in the route, the vehicle, and the power — *efficiency and safety.*

Juridically. — Transport is subject to classification and definition in terms of the *relations which the transfer of goods, passengers, services, et cetera, bear to matters of law, equity, and public policy.* Jurists are constantly resolving problems of private and public interests in transport rates and services, of interstate and intrastate features of commerce and communications, of foreign trade and travel and of transport corporation relations. Legally, transport has come to be recognized as a *quasi-public business.*

Development of transport in the United States.

The economic growth of the United States, and its social and political solidarity as well, has been intimately related to the technological development and rapid geographic expansion of transport and communication facilities. In no nation's history has there been within a single century an advance in population, industry, and wealth commensurate with that in this country within the cycle following the completion of the Erie Canal in 1825. There are very few, if any, countries which are comparable

with the United States in the measure of present material attainments which are clearly attributable to the services of mechanized transport. This situation results from the fact that the industrial and commercial exploitation of the continent remained an insuperable task until the power of the steam engine became available and its adaptation to the locomotive and the steamship was successfully worked out. It is also significant that in this country there were relatively few vested interests or legal obstacles to oppose the expansion of river-steamer and railway lines.

Transport before the Civil War. — For 200 years following successful English settlement and for nearly 300 years after the Spanish came, American transport was confined to wagon roads, coastal waters, and a few navigable streams flowing to the Atlantic and the Gulf of Mexico. The rich lands beyond the Allegheny Mountains were reached only by small boats by way of the Mississippi River and the Ohio to Pittsburgh, and to St. Louis on the Missouri. New Orleans was then the transport and trading-center of the continent, which position she held until after the Civil War. By 1825, the Cumberland Road, the Erie Canal, and the Pennsylvania Main Line Canal had tapped the resources of the Ohio Valley and the Great Lakes region from the Atlantic coast, thus providing means of competition between the Atlantic ports and New Orleans for the industrial and trade opportunities of the interior of the continent. This competition was later to become one of the principal causes of the Civil War. Railways passed the experimental stage at the height of the canal period, about 1835, and by 1860 they had penetrated to Chicago and the Mississippi and had definitely established their superiority over canal and long-distance highway transport. In 1869 the Union Pacific reached the west coast, soon to be followed by three other lines. In the meantime, eastern lines had spread their branches into the North and South.

Transport after the Civil War. — Soon after the Civil War a short period of sharp competition, which incidentally gave cause for early discussion of the question of "unfair" competition, became effective in driving most of the steamers from the Mississippi and the Ohio. The twenty years of railway history ending about 1880 developed several attributes, both physical and economic, of railway transport which we mention here as a prelude to a later discussion of railway problems. (1) Experimentation

in railway building and operation had established practical standards of track construction, locomotives, and cars. (2) Trunk-line roads from Atlantic coast points to Great Lake cities, Ohio River crossings, and the Mississippi had been created by a process of end-to-end consolidation of pioneer lines. The present property of the New York Central Railroad, operating between New York and Buffalo by way of Albany, is said to represent a consolidation of the original lines of at least twelve corporations. (3) Lines were completed from the Great Lakes and the Mississippi River to west, northwest, and southwest terminal seaports, thus creating the characteristic railway situation of competitive terminal traffic and monopolistic local traffic. (4) The monopolistic character of railways had become apparent and was being demonstrated in certain districts by the collection of excessive and discriminatory freight rates and passenger fares. (5) The inevitable deadly competition between parallel railway lines had, in many cases, reached the cut-throat stage resulting in rate wars, insolvency, reorganization, and consolidation. (6) Pools, voting trusts, and other forms of railway integration were being initiated and the great railway units were in process of incubation. (7) Spontaneous "co-operation" among transportation, banking, and large-scale industry was becoming effective. Intercorporate relations among nominally independent railway companies, in matters of management and finance, were then in the making. (8) The organized securities market, necessitated by the distribution of the great volume of railway securities, took definite form during this period and became centered in the New York Stock Exchange. (9) Public policy, as established by state legislation and tentatively confirmed by the federal courts, had designated the railway business as "of a public nature and burdened with a public interest," hence, subjecting the railways, in principle, to governmental control in behalf of the public. (10) The railway corporations, in the promotion and defense of their private interests, had become a potent political influence, both state and national.

Completion of the railway net. — By 1890, the railway net of the country was essentially completed. Subsequent construction was mainly confined to terminal facilities, double tracking, safety installations, and other technical improvements. These improvements, however, have probably increased the average per-mile

value of the railways by more than 75 per cent. The capacity and quality of equipment have likewise been advanced. Since 1890, the managerial and financial integration of hundreds of originally independent lines has resulted in the eight dominant railway groups of today. During this period, powerful government agencies have been created by Congress and authorized to intervene in railway policy and management for the purpose of preventing monopoly and to secure adequate railway service at reasonable rates to the shipper and to assure a fair return to private railway capital.[1]

Railway accounts and statistics.

The varied and complex nature of railway activities, the very close relations which railway service and finance bear to other factors of the nation's economic and social life, and the general public's interest in the railway business necessitate a complete and carefully standardized system of railway accounts and statistics. It was only after a long legal and political battle with the railway corporations and their banker friends in state legislatures, the national Congress, and the courts, that adequacy, uniformity, and publicity of railway records were secured.[2]

In 1906, the Interstate Commerce Commission was authorized to formulate a uniform system of accounts and to require its use by all railways operating under its jurisdiction. The commission was also given access to interstate carrier records and directed to require such periodic and special reports from railway corporations as it deemed necessary to enable it to perform its regulative functions. Prior to that time, the lack of uniformity of railway accounting and the purposeful confusion of accounting and statistical data supplied by the corporations to the public, to legislative and administrative regulatory bodies, and to the courts made it impossible to formulate even a reasonably accurate estimate of the operating or financial status of any group of railway corporations or to compare any one with another.

Having learned by experience that haste in the application of broad public controls is likely to result in evasion, the commission

[1] The preceding chapter contains a sketch of the development of the relations of the railways and the government, pp. 600-606.

[2] Credit for leadership in the campaign for this very essential condition to successful governmental supervision and regulation of railways, and other public utilities as well, is mainly due to President Theodore Roosevelt and Wisconsin's Governor (later United States Senator), Robert M. LaFollette, Sr.

with the aid of co-operating railway officials formulated its accounting standards very carefully and exercised its powers gradually and with patience. It was not until 1914 that the commission's authority, under the Act of 1906, was satisfactorily extended to all responsible corporations. All important railway data have since been currently tabulated by the Interstate Commerce Commission and are available to the public in weekly, monthly, and annual publications, and in publications of the United States Department of Commerce.

Table I is designed to show the significance of the more important items which are periodically reported in railway statistics and which are under constant observation of railway executives, business commentators, and regulating officials. The nature of railway operations and the financial and investment features of the business are such that conditions and changes in the railway situation are significant indications of present and future trends in certain other industries and sometimes are symptomatic of general economic conditions. "Freight car loadings," for example, is perhaps the best single measure of the current course of business. Changes in railway operating ratios and in net earnings are usually reflected in the general state of the stock market. A comprehension of the status of the railways and a competent knowledge of any railway problem begins with an understanding of the composition and significance of each of the items in the tables, its present magnitude, its trend over a period of several years, its relation to other items, and the causes which have been responsible for important changes.

The usual order of statistical presentation and analysis in the field of transport is followed in this chapter: (1) plant and equipment, (2) operation, (3) finance, (4) public relations.

Referring to Table I, pertinent comments upon the several items are presented below. The thoughtful reader will be able to supplement these observations.

Railway mileage. — Inasmuch as we are not at present primarily interested in the technological aspects of transport, only two items are chosen to indicate the development of the railway plant during the last 30 years, namely, *mileage* and *power and equipment.*

Having reached a maximum total mileage in 1916, the decline of some 4,000 miles of track during the last twenty years reveals an apparent reversal of the trend of railway extension which had been

continuous for nearly a century. This fact alone bears some evidence that industrial maturity and productive stability may soon be reached in this country. Considered together with contemporary trends of land under cultivation, volume of manufacturing operations, population growth, and foreign trade it certainly suggests fundamental economic and social changes which are imminent in this country. Of course, the actual decline in railway trackage is, in itself, no indication of the obsolescence of the railway as a means of transport. Neither is it evidence of reduced railway capacity, although it is superficially so argued by some who are either biased in the interpretation they wish others to place upon these figures or are themselves inept in the reading of statistics. For example, it is advanced that herein appears proof of the alleged destructive and unfair competition of motor vehicles and publicly maintained highways. However, the 4,000 miles of "abandonments" is easily explained as an actual improvement in the railway system. The reconstruction and straightening of railway lines which has been in progress in recent years accounts for a considerable reduction in mileage. Some lines which never have been profitable have been abandoned. Other tracks, especially in mining and lumbering districts, have been pulled up because the resources which they once served are now exhausted. A little more surgery carefully exercised would doubtless improve the financial ills and strengthen the railway system as a whole. Thousands of miles of line now in operation should never have been built, including at least one transcontinental road.

Power and equipment. — The number of locomotives in service reached a maximum for all time in 1924, which is also true of freight cars. Both steam power and freight carrying units have steadily decreased in number since that date, but the average size of steam locomotives has increased by 20 per cent, the capacity of freight cars by 7 per cent, and the number of electric locomotives has more than doubled. The ton-mile volume of freight carried and freight revenue continued to increase to an all-time maximum in 1929, and did not decline to the pre-war figure until 1932 when the paralysis of the depression had developed. Passenger traffic reached a maximum in 1920, and thereafter steadily declined, in 1933, to one-third of the peak volume, but has shown some increase for 1935 and 1936.

These statistics taken together indicate a technical improvement in railway equipment, some uncertainty as to the future volume of freight traffic, and a probable permanent decline in passenger traffic.

Railway wages and employment. — Items 6, 7, and 8 (Table I) reveal the employment situation on the American railways. They show a relatively favorable condition over the period of a generation, in both good and bad years, as compared with most other industries. However, definite conclusions should not be drawn from such gross averages without a knowledge of their composition. Railway employees may roughly be subdivided into the following groups which, when working full time, received, in 1933, approximately the average monthly wage indicated:

Number	Grade	Monthly Wage
62,882	Executives and officials	$420
263,067	Professional and clerical	150
180,186	Maintenance of way and structures	75
334,159	Maintenance of equipment and stores	125
396,762	Transportation service (train and engine)	163
190,237	Transportation service (yard, station, etc.)	125

Railroad revenues. — Items 9 to 13 (Table I) indicate the nature and amounts of railway receipts. The principal revenue sources are the carriage of freight and passengers which together normally approximate 90 per cent of total operating revenues. The remaining 10 per cent is composed, for the most part, of earnings from mail and express contracts. The land-grant roads, which received large areas of land from the public domain, as government subsidies, at the time of their construction, have at times realized considerable sums from land rentals and sales.

In normal times, before passenger traffic was reduced by motor car competition and other causes, the proportion of passenger earnings to freight earnings was about one to three. This ratio has in recent years decreased to one to less than seven. In making such general comparisons, it must be borne in mind that they are calculated on the basis of combined operations of all railways and may not properly be applied to individual roads. Some lines, such as the New York Central and the New York, New Haven and Hartford, carry a higher proportion of passengers,

while others, the Delaware, Lackawanna and Western and the Northern Pacific, for example, are primarily freight lines.

Revenue per passenger-mile and revenue per freight ton-mile indicate the prevailing level of passenger fares and freight rates. It is notable that the differential in the average revenue per passenger-mile between 1903 and 1933 was $\frac{1}{100}$ of one cent, although there was an extreme variation during the 30-year interval amounting, in 1909, to a decline of $4\frac{1}{2}$ per cent below the 2.01 cent level of 1903 and rising over 50 per cent above that level in 1921. Passenger carriage is largely intrastate and, until 1922, was subject to state control. An epidemic of two-cent-fare legislation among the states, which became effective in 1905 and again in 1908, forced fares to lower levels than had previously prevailed. In 1904 freight revenues reached the highest average ton-mile rate (.78 cent) since before the panic of 1893. Thereafter, the rate level steadily declined to .719 cent, in 1916, advanced to a maximum of 1.294 cents in 1921, and declined to .99 cent in 1934.

Railway expenses. — We have observed that railway revenues are classified and accounted according to the respective services from which they are derived — freight, passenger, mail, et cetera. If it were likewise possible to allocate total railway expenses among the respective services, several very bothersome problems in transport finance and administration would easily be solved. However, so-called "joint-expenses" cannot be thus resolved. Consequently, railway cost accounts are set up on the basis of expenditures for the respective *technical operations* of the transport mechanism, such as maintenance of way and equipment, operating trains, overhead items including taxes and rentals, and capital items including interest and depreciation.

These items can be further roughly classified as *fixed* costs and *variable* costs. Fixed costs remain about the same whether the volume of traffic is large or small. Variable costs increase or decrease in direct proportion to the volume of traffic. Under normal business conditions, the proportion of fixed charges is relatively much higher in the railway business than in other types of enterprise — averaging over 40 per cent of total costs. This burden is now further swollen by unwise financial policies. This fact explains why railway transport is perhaps the most outstanding example of an industry of "increasing returns."

Railway expenses usually are classified in the following manner:

Maintenance and Operating Expenses	Approximate Per Cent of Total	
Maintenance of way and structures	(Fixed)	12
Maintenance of equipment	(Variable)	21
Transportation	(Variable)	37½
Traffic, taxes, rentals, and miscellaneous	(Fixed)	4½
Capital Costs		
Interest, Depreciation, Retirements	(Fixed)	25
		100

Net operating income and dividends. — From the economist's point of view, the *net operating income of a railroad represents the return to capital "used and useful" in the enterprise.* The *basic capital* of a railway corporation is supplied by share subscribers in return for the stocks which they purchase. Additional capital funds are secured by exchanging the company's interest bearing bonds for cash. The aggregate interest bearing obligation thus created is called the *funded debt.* Stockholders and bond-holders each have certain rights of participation in the net operating income. However, before they are permitted to exercise these rights, care should be taken by the financial management to assure the proper *maintenance* of the capital assets. To do this, an adequate reserve should be set aside for replacement of wasting values including physical depreciation, obsolescence, and the retirement of such series of bonds as, under the terms of their issue, may not properly be refunded. Provision must also be made for satisfying the tax claims of the government, and a tax reserve should be maintained equivalent to calculated tax accruals against the corporation and its property. The rights of the bond-holders to receive their annual interest are next in order. Some types of preferred stock also carry prior dividends rights analogous to interest on bonds. These prior interest claims and cumulative preferred-stock dividends are collectively known as "fixed charges." After they are paid, the residue of the operating revenues constitutes net profits and is available for stock dividends. Not infrequently, carrier corporations receive income from other sources than operating

revenues. In such cases, the non-operating income is added to the net operating revenue before deductions for taxes, interest payments, and dividends are calculated.

Operating ratios. — The ratio of annual operating expense of a railway to concurrent operating revenue is known as the *operating ratio.* This phrase may refer to any industrial plant or establishment, but is most frequently used as a criterion of the operating efficiency and financial position of railways and other public-service corporations.

An interesting commentary upon business is that, in almost every field, executives, investors, credit agencies and trade and financial commentators adopt some rule of thumb as an easy way of judging the "position" of an enterprise — its efficiency, stability, probable future success, and comparative investment value. Accountants and statisticians supply such ready means of judgment in the form of "accounting ratios" and "statistical coefficients." In many cases the usefulness of these criteria, under certain conditions and within limits, can be demonstrated. But such ratios are so often erroneously calculated that conclusions based upon them generally are subject to doubt. The *operating ratio* of a railway corporation is more strongly intrenched in the public opinion as a test of quality of service, administrative efficiency, stability, prosperity, and investment value than any other accounting or statistical touchstone of business conditions, unless, indeed, it be the two most used ratios of the bank-statement — the "reserve ratio" and the "liquidity ratio."

The first suspicion which may fall upon the validity of any operating ratio as a proof of corporate integrity is that, inasmuch as corporation accounting has become a fine art as well as a science, operating accounts and financial statements may not always be taken at face value. Furthermore, in recent years, the pseudo-statistician has won for himself a place among professional charlatans which is comparable to that of the artful accountant and the cunning advertiser. His tables and charts sometimes conceal quite as much as they reveal.

Assuming that a railway company has been and will continue to be directed with unquestionable managerial, engineering, and financial wisdom, skill, and integrity, the operating ratio is a sound criterion of the status of the business and a dependable barometer of the not too distant future. But permit the rate

structure of a railway to be so formulated as to discourage the development of business within its territory or invite competition from without; or permit the management to maintain a favorable operating ratio by "skinning" the right of way, or "milking" the equipment, or neglecting obsolescence, or failing to amortize equipment and terminal bonds during the life of the properties for which they paid; or permit the funded debt to carry the greater portion of the capital burden — permit any of these things, as most American railway corporations have done at some time in their history, and the investor or the publicist who rests his judgment of the present or future financial status of a railroad on the operating ratio may learn that his confidence is sadly misplaced.

Investments and securities. — The defects of railway statistics are due to the fictitious nature of the capital accounts of the railway corporations which, in most cases, have been built up over a long period in a haphazard and dissembling way. The neglected records and the complex financial history of many railways have obliterated pertinent facts which should be reflected in present accounts and statistics. Variations in the definition of *value* and *capital* in accounting practice, in statutory law, in judicial opinion, and in economic parlance have permitted a wide range of choice in the selection of the items which have found their way into railway capital accounts. Finally, there are reasonable differences of opinion on questions of theory and variations in practice involved in the valuation and capitalization of railway assets; such, for example, as the adjustment of book value to meet changing prices, the valuation of physical properties for purposes of rate making and taxation, and the capitalization of intangibles.

For the above reasons, accepted statements of the *investments* of individual railway corporations, based upon "book values," may or may not have significant relation to actualities, either of *bona fide* investment of cash in the properties or of their possible market value. Taken in the aggregate, the annually reported railway "investments in road and equipment" provide a fair indication of *trend* over a considerable period of years, or did until 1933.[1] After all, the Interstate Commerce Commission and

[1] What reaction the devaluation of the U. S. dollar will have, or should have, upon the capital accounts of the railways and the valuation procedure and capital estimates of the Interstate Commerce Commission will have a pertinent bearing upon the determination of railway "investments."

the courts must assume some *investment basis* in the calculation of a "reasonable return to the investor," which they are required to do under the law. Consequently, in the absence of any better assumption, they have been obliged to take more or less seriously the vague investment figures supplied by the railway corporations. Furthermore, there is always in the foreground the possibility of nationalization of the railways. In such event, some *investment figure* must be officially available as a hypothetical measure of "just compensation" under the terms of the Constitution.

It was as a result of the reasonable skepticism of Congress upon the accuracy of reported investments that the Physical Valuation Law of 1913 was enacted. The law directed the Interstate Commerce Commission to make a scientific examination of all railway properties "used and useful," in the United States, determine their "fair value" and, thereafter, continue the calculation from year to year. Thus far, the efforts of the commission in this task have not been largely productive of satisfactory or useful results. The delay, however, is due not so much to the indolence of the commission as to interference by Congress and the courts.

Capitalization. — This term, as used in railway accounting, *is only remotely related to actual investment.* In the beginning, of course, and customarily thereafter, corporation funds are realized from stock and bond issues. But these securities are sometimes issued at a discount, and stock bonuses, stock dividends, and stock split-ups may augment the volume of securities outstanding without increasing the actual funds available for investment. On the other hand, railway earnings which were available for dividends have sometimes been "plowed" back into the property instead. In plain thinking, *the cash received from security sales and invested, or earned and reinvested, in the construction and equipment of a properly maintained railroad is the bona fide measure of its real capital.* But corporation managers usually have preferred to account the face value of the stock certificates and the bonds outstanding as the capital or "capitalization." Since it is a custom among railway corporations to secure by purchase, or otherwise, considerable quantities of the issues of other railway corporations and coal mining companies, the so-called *net capitalization* is derived by subtracting the "face value" of the com-

pany-owned securities from the face value of the "total outstanding" stocks and bonds.[1]

The funded debt. — This item measures the status of the railway corporations as long-time borrowers. As the record stands today, the excessive ratio of funded debt to share capital indicates one of the most questionable practices of modern railway finance.

The generally acknowledged sound and conservative credit policy is to limit long-time borrowing of successful industrial enterprises to 40 per cent, or possibly 50 per cent, of the current value of fixed assets. In 1905, the aggregate funded debt of the American railways was 52.3 per cent of the total capital outstanding. Since 1923, the ratio of bonds to total capitalization has averaged about 60 per cent. This figure, however, represents over 78 per cent of the net capitalization. Of the stocks outstanding approximately one-third customarily receive no dividends, which indicates that they have only "trading value" and do not represent effective capital. It is, therefore, reasonable to assume that borrowed funds constitute over 70 per cent of *bona fide* effective railway capital. In prosperity periods, this situation is a fortunate one for stockholders and traders; but, in lean years, not only are stockholders painfully aware of the excessive burden of fixed charges, but operating efficiency and service are impaired and the credit and solvency of the corporations are at stake. The shadow of government ownership has already appeared as a possible solution of this neglected financial problem.

Railway profits and interest. — In studying Table II, cross-reference to items 20 to 25, Table I, is instructive. Note first that, if items 21 and 22 were combined into a statement of *all stock outstanding*, it would not be very significant as a true measure of participating equities because it includes the two passive items *Railway-owned stocks* and *Non-interest bearing stock*. However, in Table II, column 4, we have a statement of the *Per cent of dividends declared to all stock*, which, by using an exaggerated index of proprietorship equities, illusively minimizes the apparent rate of return to stockholders. These dwarfed figures have been publicized as evidence of the niggardly dividends which railway shareholders are required to accept under the existing regime of government regulation.

[1] It is estimated that the coal company investments of the railways exceed $2,000,000,000.

TABLE I. — RAILWAY STATISTICS (5-year Intervals 1904 to 1929 — Annually 1933, 1935) [a]

ITEMS	1904	1909	1914	1919	1924	1929	1933	1935
1. Mileage owned and operated	213,904	236,834	252,105	253,152	250,156	249,433	245,703	241,822
2. Locomotives in service	46,743	58,219	67,012	68,977	69,486	61,257	54,228	46,593
3. Passengers carried (total)	715,419,682	891,472,425	1,063,248,850	1,211,021,934	950,459,378	786,432,468	434,847,907	445,872,300
4. Freight carried (tons)	1,309,899,165	1,556,559,741	2,002,025,830	2,185,285,250	2,331,291,297	2,584,333,226	1,322,462,572	1,427,042,460
5. Freight ton-miles (millions)	174,522	218,803	288,637	367,161	391,945	450,189	249,293	282,036
6. Railway employees (number)	1,296,121	1,502,823	1,710,296	1,960,439	1,795,493	1,694,042	990,839	994,371
7. Employees' wages (total)	$ 817,598,810	$ 988,323,694	$ 1,381,117,292	$ 2,897,769,171	$ 2,882,658,421	$ 2,940,206,163	$ 1,424,391,647	$ 1,643,878,510
8. Employees' wage, average annual	631	658	808	1,486	1,613	1,744	1,446	1,653
9. Passenger revenue (total)	444,326,991	563,609,342	703,483,691	1,193,430,616	1,085,672,299	875,929,297	329,816,306	357,904,808
10. Freight revenue (total)	1,379,002,693	1,677,614,678	2,126,716,945	3,624,886,453	4,437,380,089	4,899,167,876	2,528,968,226	2,790,551,400
11. Revenue per passenger mile (cents)	2.01	1.93	1 99	2.55	2.99	2.81	2.02	1.93
12. Freight revenue per ton mile (cents)	0.78	0.76	0.74	0.99	1.13	1.09	1.01	0.99
13. Total operating revenue	1,975,174,091	2,473,205,301	3,127,729,588	5,250,419,628	6,045,251,862	6,373,003,832	3,138,185,942	3,451,929,411
14. Operating expenses	1,338,896,253	1,650,034,204	2,280,415,791	4,498,816,672	4,608,806,549	4,579,161,848	2,285,217,647	2,592,741,419
15. Tax accruals	56,801,756	85,139,554	140,470,286	239,136,164	347,436,628	402,698,333	253,522,014	236,944,985
16. Net railway operating income	579,476,082	710,474,052	674,189,999	454,132,156	984,463,481	1,262,636,132	477,326,360	499,819,118
17. Net income	317,308,473	441,062,743	395,492,305	496,609,104	623,399,393	977,229,694	846,172,000	859,188,000
18. Dividends declared (total)	221,941,049	321,071,626	451,653,346	335,241,935	385,129,890	560,901,941	158,790,118	126,282,306
19. Operating ratio (per cent)	67.79	66.72	72 91	85 68	76 24	71.85	72 82	75.11
20. Investment in road and equipment	11,511,537,131	13,609 183,515	17,153,785,568	19,300,120,717	22,182,267,385	25,465,035,427	25,901,961,773	25,681,607,533 [b]
21. Common stock outstanding (par value)	5,050,529,469	6,218,382,485	7,304,479,846	7,193,405,278	7,538,994,845	7,852,768,522	8,056,676,584	7,994,085,098 [b]
22. Preferred stock outstanding (par value)	1,289,369,860	1,467,896,060	1,376,279,858	1,897,727,699	1,935,394,203	2,064 976,159	2,041,942,386	2,043,916,410 [b]
23. Funded debt outstanding	6,873,225,350	9,801,590,390	11,566,541 553	11,859,042,168	14,162,095,186	14,064,919,410	14,623,942,641	14,531,691,768 [b]
24. Total railway capital outstanding	13,213,124,679	17,487,868,935	20,247,301,257	20,950,175,145	23,636,484,234	23,982,664,091	24,722,561,611	24,569,693,276 [b]
25. Net capitalization	10,711,794,078	13,914,302,363	15,759,093,913	16,550,310,683	18,201,897,712	18,679,706,928	18,830,912,324	18,652,491,252 [b]
26. Stock receiving dividend (par value)	3,643,427,319	4,920,174,118	5,667,072,959	5,298,320,612	6,042,267,912	7,506,264,973	3,119,282,144	3,411,519,569 [b]

[a] For Class I Roads except Mileage which includes Class I and Class II Roads.
[b] Figures are for 1934.

TABLE II. — PERCENTAGE OF ALL RAILWAY STOCKS EARNING DIVIDENDS, DIVIDEND RATES ON DIVIDEND YIELDING STOCKS, RATIO OF DIVIDENDS TO ALL RAILWAY STOCKS AND PER CENT RETURN ON INVESTMENT

(By 5-year Averages, 1890 to 1935, Annually, 1930 to 1935)

(1) TIME PERIOD	(2) PERCENTAGE OF STOCK YIELDING DIVIDENDS	(3) DIVIDEND RATE ON DIVIDEND YIELDING STOCK	(4) PER CENT DIVIDENDS DECLARED TO ALL STOCK	(5) PER CENT RETURN ON INVESTMENT
1890–1894	38.26	5.37	2.05	
1895–1899	32.80	5.41	1.76	
1900–1904	53.17	5.56	2.97	
1905–1909	65.27	6.53	4.26	(1908) 4.80
1910–1914	65.92	7.41	4.88	(1910) 5.53
1915–1919	60.17	6.52	3.91	4.18
1920–1924	60.13	7.11	4.26	3.15
1925–1929	71.19	7.38	5.26	4.83
1930(Year)	76.93	7.83	6.02	3.36
1931(Year)	73.20	5.48	4.01	2.02
1932(Year)	32.51	4.57	1.50	1.25
1933(Year)	30.77	5.08	1.58	1.84
1934(Year)	33.98	6.21	2.13	1.81
1930–1934	49.48	5.83	3.05	2.05

TABLE III. — DISTRIBUTION OF THE RAILWAY OPERATING REVENUES EXPRESSED IN CENTS PER DOLLAR

(Class 1 Carriers)

ITEM	1914	1919	1924	1929	1933	1935
Labor (salaries and wages)	41.0	51.4	44.3	42.6	43.2	45.0
Fuel	7.8	9.2	7.4	5.4	5.1	5.9
Material	18.2	19.5	19.1	18.1	16.5	16.2
Loss and damage, injuries to persons, and insurance	2.7	3.0	1.8	1.6	1.4	1.5
Depreciation and retirement	3.0	2.5	3.5	4.1	6.5	6.5
Taxes	4.5	4.5	5.8	6.3	8.1	6.9
Hire of equipment, joint-facility net rentals	1.0	1.1	1.7	2.0	3.9	3.5
Total expenses and taxes	78.2	91.2	83.6	80.1	84.7	85.5
Net railway operating income	21.8	8.8	16.4	19.9	15.3	14.5

Now, let us observe item 20. We note that the book-value of railway investments materially exceeds the net-capitalization. (Net-capitalization is itself known to be an inflated accounting concept which includes non-dividend stocks, amounting to over $\frac{1}{3}$ of total stocks.) This method of calculation helps us to understand the apparently unreasonably low return on "railway investments" — a plausible statistical deduction which is also frequently published by the railways in their appeal for higher rates, restriction of motor competition, and other public favors.

Finally, recalling the long continuing increase of the *funded debt* of the railways, now amounting to over 70 per cent of their total effective capital, we observe, in Table II, the unfortunate result of the prevailing shoe-string policy of railway finance and the phantom proprietorship interests which are based upon equities having very little tangible value.

The railway corporation.

The construction and operation of the American railways presented, almost from the beginning, a situation in business organization which was unique in industrial and commercial experience. The unprecedented geographic spread of railway units and their activities, the tremendous physical task of construction and maintenance, the lack of adequate domestic capital and labor, and the complex nature of administrative and financial management, all required a type of business organization which differed materially from any earlier form of business unit. At first, it was thought that the railways would be organized and operated much as were the toll roads which preceded them in Europe and in the eastern states. The early railway charters were formulated after the pattern of charters customarily granted to private road companies. Railroad construction had scarcely begun, however, when financial necessity inspired the adoption of the none too savory practice of certain highly speculative European projects, typified by the ill-fated "South Sea Bubble" and the Louisiana Company. The profit-making possibilities of American railroads were widely advertised and an organized world-wide distribution of stocks and bonds was undertaken with all the theatrical trappings of a gold boom or oil development. The sale of shares abroad supplied a large part of the construction capital of early eastern and transcontinental lines. During the first 50 years of railway experience, the business was conducted on a highly speculative policy. The tremendous capital required necessitated the enlistment of funds wherever found, in whatever amount available, and by every effective means of persuasion. Both European and Oriental labor were imported directly for railway construction, and also for employment in the steel mills and coal mines which were developed coextensively with the railroads. In this initial development and interdependence in the United States of railways, steel, and coal one may understand the

persistent friendship and enduring community interests among these industries.

The early railway organizations were chartered as joint stock companies, but rapidly assumed the distinctive character of the modern corporation. They became the model for the type of business organization which obtains today in public service enterprise throughout the world. They devised the system of corporation finance which has become conventional in the great industrial and merchandising establishments. They also laboriously developed the technique of corporate integration, by which the proprietorship rights of innumerable individuals may arbitrarily be centered in the will of a few and exercised at their discretion.

The railway charter. — Railway charters are usually granted by legislative authority of the state and are issued by an administrative agency under terms of a *general corporation law.* In the early days of railway organization, however, charters were more often granted by special acts of the state legislatures and, in a few instances, by act of Congress. The charter is, by analogy, the birth certificate of the corporation, reciting its progenitors, its name, and its domicile. The functions and powers of the corporation are enumerated; also, the nature and authorized amount of its capitalization, the manner of its organization and management, its special obligations and responsibilities, and conditions of its possible dissolution. Because of the manner of its creation, and its legal rights to own property, to enter into contracts, and to have access to the courts, the corporation is sometimes characterized as "an artificial person created by law." The law recognizes three general types of corporation, *i.e.*, (1) the *private corporation,* (2) the *public corporation,* and (3) the *quasi-public corporation.*

The legal status of a private corporation, within its prescribed field of business activity, is analogous to that of a private person in business for a profit. It exercises similar legal rights and privileges in all business matters as do competent natural persons and, in addition, customarily enjoys the special dispensation of *perpetuity* and *limited liability.* The management of a private corporation, in principle, is vested in the stockholders, except as it may be subject to public intervention in behalf of the general welfare and the public safety under the "police power."

The public corporation is created by public authority for public purposes directly or indirectly related to government, and it may be dissolved at any time by the same authority that created it. In contrast with the private corporation, it exists, primarily, for the benefit of the public, not for private gain. Public charters are issued to municipal corporations, banking, industrial, or trading enterprises wholly owned by the government and operated by some governmental unit, and educational institutions and hospitals under exclusive governmental ownership and management.

The quasi-public corporation, as the name implies, occupies an intermediate position, or twilight zone, between the private corporation and the public corporation and partakes of the nature of each of them. The primary motive of its organization and the prevailing objective in its management is private profit. But the product of its operation, whether goods produced or services rendered, is considered essential to the maintenance of the prevailing standard of social welfare and is legally described as "a public convenience and necessity." The grant, to a privately owned corporation, of power to perform any kind of government function or exercise any form of government authority is, in the eye of the law, a *prima facie* badge of the quasi-public enterprise.

The railway corporations, just as industrial and merchandising companies, were organized and promoted for private gain. But the right of *eminent domain*, which the railways always have enjoyed, definitely marked them from the beginning as being vested with authority to take private property and use it for public purposes, which only a governmental agency may constitutionally do. The common carriage of goods and passengers always has been held, under English and American law, to be a service essential to the public convenience and necessity, and it was upon this consideration that the powers of eminent domain were first extended to the railway companies. This fact, *per se*, first established the legal status of the railway corporation as *quasi-public*. As we have seen in the previous chapter, the railway managers contemptuously disclaimed this position and resisted all attempts of government to regulate their services and charges until the decision of the United States Supreme Court in 1877 in the Munn case.[1]

[1] Above, p. 597.

It is quite impossible, economically, to precisely delineate public and private classes of business. In the final analysis, this is a political question, and may be decided not so much upon economic considerations as upon public policy. Banking and insurance for many years were practically exempt from governmental control. However, both have been placed within the category of quasi-public corporations by the states, and banks under federal charter are controlled by the federal government under the National Banking and Federal Reserve statutes. Furthermore, an act of Congress or, in intrastate business, of a state legislature, can instantly convert a quasi-public corporation into a public corporation, and, under some circumstances, the decision of a court may accomplish the same end. It is thus possible that the legislatures and the courts might gradually evolve the socialistic state.

Railway organization. — The nature of the corporate organization of a railway company is more or less definitely prescribed in the charter. The earlier charters, especially such as were granted by special acts of legislatures which were friendly to the incorporators, placed few restrictions upon the manner of organization or the conduct of business by the companies. Indeed, even the nature of the business was, in some cases, only vaguely defined. It is not entirely in jest that a great Canadian railway company is said to have been "in partnership with the government and all the industries of the Dominion."

In recent years, however, the states, with a few exceptions, have come to approximate uniformity in their railway corporation laws in respect of capitalization, manner of organization, selection of directors, responsibilities of officers, and the nature and conduct of the business. Unfortunately, most of the railroad charters anteceded the formulation of general incorporation laws. Nevertheless, two circumstances have made it possible for persistent legislatures and public utility commissions to withdraw franchise privileges which prove to be over-generous, or which otherwise minimize responsibility to the public, and to impose additional obligations which become desirable. Many charters granted for limited periods have expired and renewals have been conditioned upon the inclusion of changes necessary to protect the public and, in many cases, the new franchises are made "indeterminate" as a public protection against unforeseen contingencies.

A second manner of readjusting railway responsibilities and privileges occurs when changing conditions lead railway companies to seek favorable modification of their charters, or when interests of their stockholders or other beneficiaries inspire requests for abatements in matters of taxation or rate control. The states thus find a basis of bargaining with the railway companies which frequently have agreed to forfeit certain charter privileges in consideration of legislative or administrative concessions of more immediate concern.

The future status of the American railway corporation, for both business and political reasons, is a matter of uncertainty. For a number of causes, under the present legal status, the financial and operating position of the railway system as a whole is seriously disturbed and both private and public interests involved are unsatisfactory and insecure. Two remedial programs are proposed — both equally distasteful to the railway management and both, thus far, rejected by them. It appears evident, however, that railway corporations now operating more or less competitively under independent charters will be obliged either to co-operate in regional groups under federal supervision, or to yield their charters and abandon private ownership and management under the alternative expedient of nationalization.[1]

Corporate organization. — Railway corporations, in the nature of their functions and the manner of their organization, are classed as *operating companies* and *holding companies.* For the present, we shall confine our attention mainly to the operating company.

To one who is not familiar with business enterprise of large proportions, it is difficult to comprehend the administrative responsibility of operating a railway. There are variations in the organization set-up of different companies determined by the predominating nature of the business, *i.e.*, freight, passenger, urban, or suburban; and their relative geographic position, *i.e.*, trunk-line, cross-line, or feeder. The administrative organization of a railway in process of construction, or newly placed in operation, will also differ in detail from that of a mature and established

[1] A nationalization plan was formulated, in 1935, by Joseph B. Eastman, Federal Co-ordinator of Railroads, after he had failed in securing the co-operation of railway officials in a prior plan for regionalizing the railways under their existing management. *House Document No. 89, 74th Congress, 1st Session.* An excellent summary analyzed by Mr. Eastman is presented by Charles A. Beard and George H. E. Smith, *Current Problems of Public Policy,* 1936, Chap. XVIII.

property. When the extremes of complexity, diversity, and uncertainty are added to bigness, and when the magnitude of extraneous industrial, social, and political relations with which the railways are necessarily concerned is realized, we have a rough indication of the executive task of successfully managing a railway corporation in contrast with that of a large industrial enterprise.

The great amounts of capital incorporated under the larger railway administrative units are indicative of their relative importance in the investment field and the tremendous physical plants which they operate. In the East, the Pennsylvania Railroad represents an investment of approximately $2,000,000,000, and the New York Central and leased lines are valued at $1,700,000,000. The Atchison, Topeka and Santa Fé and the Southern Pacific, in the Southwest, each has an investment of over $1,000,000,000. The three great lines in the Northwest — Union Pacific, Northern Pacific, and Great Northern — represent approximately $750,000,000 each. The Illinois Central carries an investment of $700,000,000, and the main line of the South, the Southern Railway, has an investment of over $500,000,000. These lines constitute about one-third of the total investment value of the nation's railways. In normal years their aggregate earnings have been about $2,300,000,000. This sum, incidentally, represents the rail transport-bill of their patrons and constitutes an important item of the American family budget.

The above brief statement of significant features of the American railway business, which were formerly unknown in business experience, explains why the railway corporation has been the incubator of so many legal and financial innovations which typify the technique of modern business organization.

The railway corporate organization, like that of any corporation, rests, theoretically, upon the substructure of stockholders for whose pecuniary benefit it was brought into existence. Although it is presumed that the management of a corporation and the risk of the business reside with the stockholders, we need not be deceived by this democratic theory as applied to the modern railway or industrial corporation. The many thousands of stockholders are primarily interested only in the dividend rates and the "trading values" of their holdings. They are widely scattered and most of them have neither a general knowledge of the business nor a personal acquaintance with its admin-

istrative staff. More significant is the observation that very few of the many small stockholders are interested in the quality of the services rendered by their properties or in the public relations maintained by their corporations.

The control of the corporation. — In the determination of policies and the election of officers, each share of common stock may exercise a vote, and all share-owners are qualified to attend the annual meeting of stockholders. But, for obvious reasons, a relatively small number customarily attends. The few who are regularly in attendance generally represent, either in person or "by proxy," a controlling interest in the stock outstanding. The controlling interest may vary roughly from about a 20 per cent minimum to over 50 per cent of the total. In the experience of all of the older railway companies there have, at times, been battles royal in the stockholders' meetings where almost every share of stock was represented and voted in the struggle of rival groups to secure control of the property. These rivalries were reflected on the stock market in the struggle of contending groups to acquire shares solely for the voting privileges which their possession conferred, resulting in abnormal security prices and often in disastrous speculation. The notorious "raid" of James J. Hill and E. H. Harriman on the Northern Pacific Railway in 1891 is an example.[1] The days when the giants of the railway history strove so mightily to overcome their adversaries, and thus acquire dominion over the resources and industries of many states, have long since passed. Great regional transport systems which were brought together under their personal control, still survive in the names of Vanderbilt, Gould, Harriman, and Hill. Most of them are definitely lodged under the management of well-intrenched "controlling interests" which, in some cases, were established over a generation ago.

Administrative organization. — At the annual meetings of the stockholders the directors are chosen by majority vote. The voting system is so arranged that even strong minority interests seldom may secure representation upon the directorate. Railway boards of directors are composed of nine to twenty-one members and include, in addition to large stockholders, representatives

[1] The stock market activities of Hill, Harriman, and their associates in contending for the control of the Northern Pacific, in 1891, advanced Northern Pacific common shares precipitately.

of supporting financial institutions, of other railway companies, and of important industries served by the railways. Investment bankers always have exerted a strong administrative influence in the railway field. At the present time, one great group of interlocked railways is known as the "Morgan group"; the management of another is said to have been dominated, until recently, by Kuhn, Loeb and Company. Banking institutions have not always been wise or fair in the choice of railways to which they have given their financial support. Economically legitimate enterprises have sometimes been allowed to perish for lack of credit while the banks were adequately serving less important projects. On the other hand, banking institutions have at times been dominated by certain railway groups and obliged to place their resources at their disposal.

The principal function of the *board of directors* is to select from their own number an executive committee and choose the senior officers of the corporation. The directors are also responsible for the general policy of the administration. An *executive committee*, of three to five men, is directly responsible to the board for the planning and supervision of administration.

The administrative functions within the typical railway corporation are vested in the president and the chief executives of the six or seven departments. The president maintains direct contact with the board of directors and the executive committee, on the one hand, and, on the other, with his staff which is composed of the heads of all departments. The departmental chiefs, with exception of the general council, the purchasing agent, and the real estate agent, usually are vice-presidents.

Corporate integration.

In the railway field, integration began with the lineal combination and consolidation of the many short lines which were first built. Experience soon demonstrated that a successful railway must have at least two general terminals, each serving as a receiving and distributing point and with through traffic moving from each to the other. No railroad can live on local or one-way traffic, but many early roads were built with such prospects only. Their survival was made possible by so linking them as to form through lines between terminal points which were so located as to supplement local traffic with a profitable interchange of through

traffic. This physical unification of transport facilities necessitated a similar integration of the several managerial organizations into a single administrative unit.

Business integration is the drawing or bringing together of two or more operating, commercial, financial, or industrial units under a centralized management. Unity of management may, in general, be accomplished by either of three methods: consolidation, combination, or co-operative agreement. Combination and consolidation are generally emphasized as the obvious means by which corporate integration is made effective. However, co-operative agreement has probably been the most effective manner of integration in the railway field. Many combinations and consolidations were preceded by such agreements.

In the later epoch of railway integration, combination and consolidation became legally restricted and reversion to formal and informal co-operative agreements frequently accomplished the continuation of centralized management.

From the point of view of the legal nature of integrated corporate organization, there is a distinction, particularly necessary in the public service field, between "combination" and "consolidation" of previously independent units, although the practical results may not be materially different. *Combinations* are formed by bringing together two or more corporate units under the complete control of one management, but in such a way that the corporate identity of the companies is retained. Individual corporate charters, company names, securities, stockholders, boards of directors, and administrative officers of these "affiliated" and "subsidiary" corporations survive; but the directors cease to determine independent policies and the officers are restricted in their functions to minor matters of administration and supervision under command of their superiors at the head office. In legal contrast to the railway combination is the consolidation of a number of railway corporations. In the *consolidation*, the component units surrender their identity, old securities are withdrawn or exchanged for issues of the new company, old boards of directors and officials disappear — the legal entities of the old corporations are dissolved and a new corporation is created as the result of a legal reorganization.

We have said that, practically, the results of combination and consolidation may not greatly differ; but as long as corporate

identity remains, including charters, securities, properties, and legally responsible directors and officials, the component companies may be separately dealt with by legislative bodies, administrative commissions, and the courts. The chief significance of this situation is that a combination may be resolved into its original parts, either voluntarily or by court orders and its distinctive elements may thus recover their former individuality both in fact and in law. But a consolidation is a definite legal entity and presumably is permanent, except as its existence may be subject to charter limitations.

Railway *combinations* have customarily been formed by the voting trust device, the interlocking directorate, the holding company, and the lease. *Consolidations* are brought about by mergers and amalgamations. *Co-operative* agreements are essentially transient in nature and take the form of pools, joint traffic agreements, and more or less uniform conventions in respect of financial arrangements, classifications, rates, and service standards.

Group ownership systems.

Lineal integration came about early in the construction era of the railways as a result of disappointed expectations of rapid local traffic development. The unforeseen necessity of railway trunk-line extension, in search of sustaining terminals and through traffic, successfully drove early eastern construction onward from Lake Erie and the head waters of the Ohio to Chicago and the Mississippi and thence to the west coast. The resulting capital requirements were tremendous. High power distribution of stocks and bonds, the enlisting of bank credit, and the securing of government and state aid in cash and land grants brought into the spotlight a new type of railway promotion and corporation finance. It was in this period that the engineers, who had solved the problems of power, vehicle, and route and had won the "victory of science over time and space," ceased to be the dominant personalities in railway enterprise, and the masters of economic vision, financial management, speculation technique, and political influence gradually assumed command. These men had observed the deadly nature of railway competition, and also understood the beneficent operation of the principle of "increasing returns" in railway transportation. They wisely endeavored, therefore, to abandon the principle of competition among certain lines and

within certain territory and to co-operate by means of pooling contracts and rate agreements, in distributing the traffic and maintaining rates upon a profitable basis. As we have seen in the preceding chapter, the railway managers, in the flush of their first success, too often became arrogant in the conduct of their affairs, both in business and in their public relations, and sought to carry co-operation to the point of conspiracy and monopoly. The Granger protest interfered and the more progressive states vainly attempted to harmonize private and public interests in the railways; federal regulation which prohibited pooling was inaugurated by the Interstate Commerce Law of 1887, and the Sherman Act of 1890 was initially applied by the Supreme Court in the Trans-Missouri Association Case (1897) to prevent rate agreements.

The effects of anti-trust legislation. — The prohibition of co-operative pooling and rate agreements and the policy of maintaining competition, at all odds, were the primary regulatory principles of the anti-trust laws. However, instead of forcing the railways to maintain open competition, these laws unexpectedly reacted to accelerate integration by the process of cut-throat competition which was followed by combination. Such men as Cornelius Vanderbilt, Jay Gould, J. P. Morgan, James J. Hill, E. H. Harriman, and their associates used their financial and speculative power to drive the weaker companies into insolvency, and to acquire and combine them with the stronger lines into adequate and efficient organizations under unit control.

The physiographic character of the country, the natural resources and their location, the actual and potential industrial and trade development, the distribution of population, and the trend of settlement were considered of primary importance in the set-up of the ownership systems.

The territorial arrangement of the resulting ownership groups was such as to make them, to a considerable degree, non-competitive.

These transport arrangements of the "empire builders" were fairly well started during the 1880's, and they were enabled to attain maturity by conditions incident to the general economic distress which prevailed from 1893 to 1896 and the decade of reconstruction which followed. They have never been materially changed, as respects their geographic boundaries, and the so-called

"railway systems" of today closely resemble, in their financial and managerial composition, the "railroad trusts" of 1900. The ownership groups which first came to maturity were, for the most part, assembled by the rare business acumen and financial skill of a scant dozen men, whose names continue to identify most of the properties which they organized.

(*References follow Chapter XXXI.*)

CHAPTER XXX

TRANSPORT ECONOMICS: RAILWAY RATES AND FARES

The complexity of the elements and conditions which enter into the practice of railway rate making are, at first glance, so appalling as to discourage all but the sturdiest students. The oversized freight classification books list every conceivable item which is carried by freight and classifies it separately for each of the three classification territories in the United States, and also for the Canadian and Mexican classification territories. The tariffs, or rate books, quote rates over every line, from every terminal and way station to every other, on every commodity, shipped knocked down (K. D.) or set up (S. U.), in bulk, bags, barrels, crates, or boxes, and in car load lots (C. L.) or less than car load lots (L. C. L.).

In formulating classifications and tariffs, and the numerous supplements thereto, the rate making authorities of each railway, the three territorial classification committees, the regulatory agencies of the several states, and the Interstate Commerce Commission all take a hand. The state legislatures, Congress, and the courts also are given to promulgating rate policies, and they frequently have exercised their legislative and judicial powers in the determination of railway rates. The same procedure goes on, but in relatively simple manner, in the determination of passenger fares. In spite of the mass and intricacy of the rate structure, its many details and its complicated procedure fall within a design of established principles which is not difficult to understand.

For the general student of economics, the subject of railway rates should be approached with the object of securing (1) a perspective of the actual *traffic and rate lay-out* of the American railways; (2) a knowledge of significant technical facts concerning the *production and marketing of railway services;* (3) an understanding of certain *basic principles in the determination of*

transport rates which pertain alike to prices of all goods and services; and (4) an understanding of certain *considerations in the determination of public service rates* which do not pertain to prices of other goods and services.

Territorial design of the rate structure.

The prevailing railway rate structure throughout the United States has been compared to a crazy-quilt. If the actual rates per ton-mile on a single item of freight, cheese for example, were shown on a map of the United States, the accuracy of the crazy-quilt analogy would be apparent. To begin with, cheese would appear under different classifications in each of the three major classification territories, some states would have a separate classification for intrastate shipments and in some areas special *commodity rates* would prevail. There would be a variety of *local rates*, C. L. and L. C. L., few of which would appear reasonably comparable. There would be *through rates*, *transit rates*, and *export rates*, each different from the others, some of them variable from state to state and all of them variable within the classification districts shown on Fig. 1. Cheese is one of some thousands of articles carried by freight. Multiply the above complexity of cheese ratings by 6,000 and we have an illustration of the confusion of classifications, tariffs, and rates with which the freight traffic official has to deal.

Some of us have among our family heirlooms a patch quilt, a souvenir of the skillful and patient handicraft of a previous generation. Just why the selection of materials and the intricacies of the pattern are as they are we cannot say with assurance, but we may be certain that when the quilt was put together there was a reason for every feature of its design and structure. So also with the railway rate structure. It has come down to us a complicated patchwork of the past which has been in aimless metamorphosis for a century. Students of economic history may know the reason for each feature of the railway rate structure, but for practical purposes it is necessary only that we shall know the general design and manner of operation of the existing rate system. Also, we should understand the relations of railway charges to other affairs, so that we may judge wisely of possible ways and means of keeping them in harmony with changing economic and social needs.

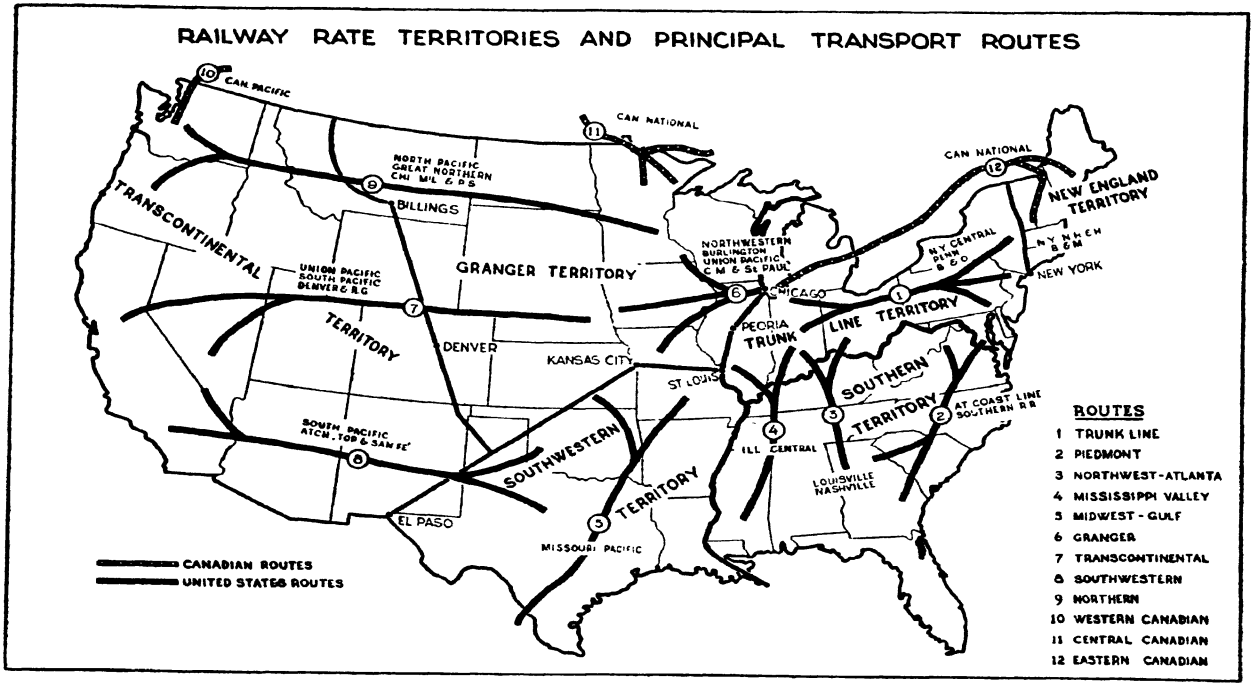

RAILWAY RATE TERRITORIES AND PRINCIPAL TRANSPORT ROUTES
CAN PACIFIC
CAN NATIONAL
CAN NATIONAL
NORTH PACIFIC
GREAT NORTHERN
CMI MIL & PS
BILLINGS
TRANSCONTINENTAL
TERRITORY
UNION PACIFIC
SOUTH PACIFIC
DENVER & RG
GRANGER TERRITORY
NORTHWESTERN
BURLINGTON
UNION PACIFIC
C M & St PAUL
CHICAGO
N Y CENTRAL
NYNH CH
B&M
B & O
NEW YORK
NEW ENGLAND
TERRITORY
PEORIA
TRUNK
LINE
TERRITORY
DENVER
KANSAS CITY
ST LOUIS
SOUTHERN
TERRITORY
AT COAST LINE
SOUTHERN RR
SOUTH PACIFIC
ATCH, TOP & SAN FE
SOUTHWESTERN
TERRITORY
ILL CENTRAL
LOUISVILLE
NASHVILLE
EL PASO
MISSOURI PACIFIC
CANADIAN ROUTES
UNITED STATES ROUTES
ROUTES
1 TRUNK LINE
2 PIEDMONT
3 NORTHWEST-ATLANTA
4 MISSISSIPPI VALLEY
5 MIDWEST - GULF
6 GRANGER
7 TRANSCONTINENTAL
8 SOUTHWESTERN
9 NORTHERN
10 WESTERN CANADIAN
11 CENTRAL CANADIAN
12 EASTERN CANADIAN

FIG. 1

Territorial divisions. — The railway geography of the United States recognizes three grand-divisions. *The Eastern District* includes territory east of Lake Michigan and the Mississippi River and north of the approximate line of the Ohio and Potomac rivers. *The Southern District* lies south of the Ohio and Potomac and east of the Mississippi. *The Western District* includes all areas west of the Mississippi River and Lake Michigan to the Pacific. All territorial reference to railways in the United States is based upon these three districts. In recognition of regional peculiarities of the railway system and its business, the three districts above described are further subdivided. Boundary lines are drawn upon consideration of: (1) physiography, natural resources, and industrial products; (2) historical and social characteristics; (3) peculiarities of route and terminals; and (4) competitive conditions.

For purposes of classifying freight the country is divided into *Official Classification Territory*, *Southern Classification Territory*, and *Western Classification Territory* (see Fig. 1). These classification areas coincide almost exactly with the three basic regional districts mentioned above. It is noteworthy, also, that the ownership systems which we have studied are closely identified with these geographic delineations. Although there is a great diversity of conditions within each of these great classification areas, each territory as a whole is in such contrast with the others as to give sufficient cause for concerted action of traffic officials in the development of separate classifications of goods for the purpose of calculating freight charges. The more or less distinctive community interests of the carriers within respective classification territory has, at times, also resulted in their co-operative action in legal matters and in the adjustment of rate levels and wage scales. A number of minor *rate territories* are also set off within the boundaries of the three basic districts. These subdivisions are significant in the variation of rates upon specific commodities. They have no relation to freight classification.

The New England Rate Territory, which occupies the northeast corner of the Eastern District, requires separate consideration for several reasons. Its traffic is almost exclusively local. Customarily, there has been a larger proportion of passenger business than elsewhere, manufactured goods are in high ratio to raw

materials, and minerals, except building stones, are conspicuously scant. Coastal water competition is also significant in the determination of railway rates.

Trunk Line Rate Territory occupies the major portion of the Eastern District. Among its distinctive features are (*a*) the heavy through traffic between the principal Atlantic ports and the great central cities; (*b*) the broad current of joint traffic entering eastern territory from the west; (*c*) the handling of export and import goods; (*d*) the movement of relatively large quantities of coal; and (*e*) the fact that traffic conditions in this region were substantially seasoned prior to railway development in the South and West.

Southern Rate Territory is coextensive with the Southern Classification District. Three outstanding characteristics are sufficiently unique to give it separate and individual distinction in the rate structure. The old South was relatively well served by water transport; consequently, extensive railway construction was delayed and when railways were finally built they were considered supplementary to water transport and were confined within the navigable borders of the region. For economic reasons and for social and political reasons also, their ownership and arrangement were distinctively sectional. The early roads were built in connection with the development of port facilities and were co-ordinated with water traffic on the rivers and the Gulf of Mexico. The southern roads of today remain mostly occupied with local traffic. Water competition, actual or potential, still is a potent factor in determining rail rates to and from Southern Territory. The basing-point rate structure, which until recently was highly discriminatory against shipments from the North, is peculiar to this territory. The composition of southern traffic differs greatly from that of the North and West.

The Western District is separated into three areas under existing traffic arrangements. The Granger Territory is between Chicago and St. Louis on the east and the Rocky Mountains on the west. The Southwestern Territory is bordered on the north and northwest by a line from St. Louis, through Kansas City, to El Paso, on the east by the lower Mississippi, and on the south and southeast by the Gulf of Mexico and the Rio Grande.

Granger Rate Territory, in its relation to other portions of the Western District, somewhat resembles the relation of Southern

Territory to the Eastern District. The development of the old Northwest was originally quite distinctive socially, economically, and politically, and so remains. The railways were first built from cities on the eastern border of the Granger Territory to the headwaters of the Mississippi and, thence, onward to the Rockies, and were intended to serve local traffic. Although these roads have since been pushed on to the coast and participate in transcontinental transport, their traffic remains largely local. Grains, livestock, packing-house products, dairy products, and an increasing proportion of northern fruits and vegetables comprise the bulk of it. Keen competition between the markets served by the granger roads and rival cities to the south and southwest is strongly reflected in the rate structure. State regulation of railway rates and services was first and most effectively applied in Granger Territory as a result of the agitation by the farmers for more uniform and reasonable rates.

Southwestern Rate Territory claims distinction in consideration of the composition of traffic and peculiar competitive conditions growing out of the complex relations of the Gulf ports and water routes with eastern industrial and commercial centers and eastbound railway service. Furthermore, the rate structure of Texas, like that of the old South, is peculiar for reasons both inherent and traditional.

The Transcontinental Rate Territory extends from the eastern foothills of the Rocky Mountains to the Pacific and from the Mexican border to Canada. It is characterized by the three parallel groupings of railway lines which traverse it from Chicago and Mississippi River points to the Pacific. Each of these normally competitive systems has traffic arrangements with trunk-line roads, which make them practically continuous from coast to coast and theoretically competitive in all east- and westbound through traffic. The composition of the traffic also varies from the average — longer hauls, more farm products, livestock, and lumber in the north, fruits and vegetables in the south, and a relative scarcity of passengers and heavy minerals. Water competition in the transcontinental movement of bulky and non-perishable goods, greatly facilitated since the opening of the Panama Canal and the prohibition of railway ownership of steamers, is the most distinctive factor in the rate structure of this territory.

Freight classification.

In fixing the rate to be applied to a given shipment of a particular commodity, two preliminary steps are necessary. *First*, the several thousands of *commodities are classified* by distributing them into a relatively small number of categories according to certain similarities as respects the conditions of their transport. This operation results in the Official Freight Classification, the Southern Freight Classification, and the Western Freight Classification in the respective classification territories previously described. *Secondly, class rates are established.* A specific unit charge, per hundredweight or per ton, is set upon all commodities within each class, from any given shipping point to any given destination. In the latter operation, shipping points and points of destination are treated more or less according to general rules which are applicable to the traffic districts within which they are located. For example, a uniform rate, or rate rule, applies on all commodities within any given class from New York to all southern "basing-points," likewise to all "common points" in Granger Territory or to all points in Transcontinental Territory, except "competitive points" on the Pacific Coast.

In each classification territory a Classification Committee, composed of a small number of men, none of whom is personally connected with any railway, is constantly occupied with classification matters. They have authority to determine the classification of all freight moving within their respective territories, subject to the right of any carrier to make exception of certain items upon its own lines. Prior to 1919, a separate freight classification, together with numerous supplements, was issued at regular intervals by each classification committee. Since that date, joint publication of the three territorial classifications has been undertaken by the Consolidated Freight Classification Committee, the members of which are the chairmen of the respective territorial committees. The Consolidated Classification does not attempt to harmonize the territorial classifications except as to standardization of rules and descriptions, and uniform dates of publication.

Each territorial classification, in the beginning, distributed all commodities into five classes numbered from 1 to 5 consecutively. First-class traffic took the highest unit rate and fifth-class took the lowest rate. With the passing of time, the number of classes

in Official Territory has been advanced to eight, and in Southern and Western Territory to ten each.

Freight classifications primarily and generally indicate relative costs of the service. Goods of large bulk, furniture for example, occupy much costly shipping space and the classification is high. Glass and china are valuable and fragile. They must be safely and carefully handled, consequently the expense and risk are great and the classification is high. Coal, building stones, and lumber are shipped in carload or train-load lots and are handled by the shipper and consignee. They are given a low classification. Manufactured articles are relatively valuable and a heavy freight charge represents a small percentage of the value transported. The "value-of-the-traffic" justifies a top classification. In addition to these differentials, classification factors of space, risk, value, handling costs, and certain conditions of competition, when of a permanent nature, are also reflected in the classifications. A large volume of constantly variable items composed usually of highly competitive traffic, moved in large volume, is excepted from classification and handled on special or "commodity tariffs."

Freight tariffs.

The second process in rate-making is to arrange schedules of freight charges, per unit, to be applied to the various *classes* of traffic within and among the several traffic territories, and also as respects certain competitive terminals. These schedules are known as *Tariffs* or rate books.

The principles of tariff-making are simple, but their successful application exceeds the skill of the expert chess player, because the practical determining factors are exceedingly variable and sometimes intangible, and certain elements which cannot be neglected, unavoidably remain incompatible and incongruous. The prevailing public policy toward the railways in the marketing of their services is to permit private interests to express themselves in the initial determination of both the quality of services offered and the price demanded. Thereafter, public authority may be exercised only to effect a change in the quality or in the price, keeping in mind certain constitutional limitations. The tariff structure constitutes the price system of the railways.

The basic principles of merchandising railway services, from the point of view of private management, are : (*a*) to formulate a rate structure which will get business to the approximate capacity of the plant and equipment, either by attracting existing business from competitors or developing new business; (*b*) to attain a spread of average rates charged over average unit costs

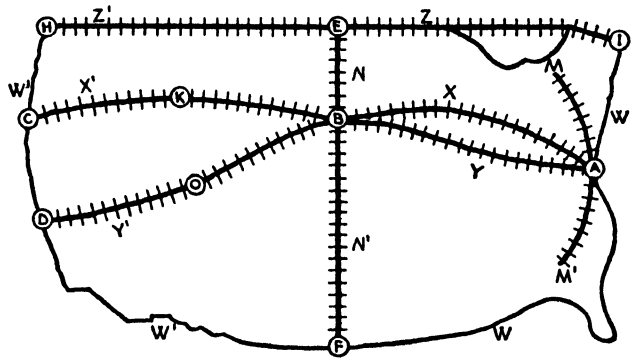


FIG. 2

which will yield the highest net earnings consonant with holding present business and gradually developing traffic density to the normal capacity of the roads; (*c*) to take advantage of any competitive differential which may exist, or may be created, to exact a more favorable combination of rates; (*d*) to exercise service and rate policies with an eye to the future position as respects both technological and competitive progress and to avoid any act or policy which will alienate shippers, arouse public indignation, or invite government interference.

We may illustrate, by use of a chart, a few of the various types of traffic situations with which traffic officials and regulating authorities have to deal in the formulation and revision of the rate structure.

It is assumed in the above chart (Fig. 2) that the lines XX' and YY' represent "normally parallel and competing" trunk-line railways with common terminals A and B, and extensions, by system or traffic agreements, to C and D, located on western navigable waters. Cross lines MM' and NN' intersect the trunk lines at A and B, respectively, and ZZ' represents an independent transcontinental line to the north. All eastern and western terminals are located on continuing navigable waters, the con-

tinental coast line being represented by WW'. (The following analysis disregards possible motor-truck competition.)

1. Through-traffic between A and B is truly competitive. In the absence of maintenance of rates by agreement or by official control, minimum rates would logically obtain.

2. Local traffic moving from any way stations on either X or Y would, at first glance, appear to be free from the influence of any competitive factor, thus permitting the possible exaction of monopoly rates among local points and between all local points and the terminals A and B. However, the actual situation is not quite so simple. If X exacts a monopoly local rate, a reduced rate schedule on Y may induce industries to locate on the southern route, thus X ultimately loses traffic to Y. Again, if local rates on outbound traffic from intermediate points on either X and Y are excessive, contributing industries on these lines will find themselves at a disadvantage in the markets at A and B where they compete with industries served by the cross lines MM' and NN'. On in-bound traffic from A and B to local points, the factor of market competition is less apparent; however, the possibility of regional dislocation of industry by excessive rate differentials remains. This observation is also true as respects local rates among way stations. Thus, we see that considerations of market competition and the competitive location and success of traffic-contributing industries actually complicate a local traffic situation which is commonly thought to be monopolistic.

3. Local traffic moving among the isolated points NN' and between these points and A, their only available market, is entirely without competitive features, except potential dislocation. In the absence of regulatory action, there is no forbidding restriction upon the imposition of monopoly-rate schedules; unless the circumstances be such as to invite the appearance of some new competitive service.

4. Turning now to western territory, complications of a different kind appear. The competing lines X' and Y' have no common west coast terminal, but C and D are, in effect, a common point because of connecting competitive and unregulated ocean carriers. Water transport of goods which are comparatively non-perishable and may be moved slowly is notably inexpensive. This fact colors the entire picture of the transcontinental and western rate structure. The northern independent line, possibly

a foreign company, may become a competitor for transcontinental traffic between *C* and *A*. Conditions are such as may stimulate the operation of auxiliary steamer lines by competing railway companies.[1]

The low water-transport rates between west-coast and east-coast points which are not subject to regulation must be met by the railways or they lose the traffic. Such rates will be highly competitive and extremely low, and revenues resulting therefrom may, at best, be expected to cover little more than the variable costs of their movement. Consequently, overhead costs on this service must somehow be loaded upon non-competitive rates.

5. The burden of non-compensatory transcontinental rates, in customary rate policy, ultimately falls upon local shippers in the western district, particularly that area neighboring the western boundary of Granger Territory and commonly known as the inter-mountain region.

This region, by concerted action of the transcontinental roads, has long been sentenced to bear the overhead deficit of trans-continental service. Consequently, commodity and class rates were so set up that west-bound shipments from trunk-line points took the through west-coast rate plus the local return differential.[2] To illustrate from the chart, rates from *A* to *K* are calculated by combining the through rate from *A* to *C* and the local return rate from *C* to *K*. Rates applicable to intermediate points between *K* and *C*, and *O* and *D*, were similarly calculated.

The discriminatory burden of mid-western tariffs was not confined to the west-bound rates just described. In order to cover the burden of competition elsewhere, local rates and out-bound rates to central and eastern markets have always been relatively high. This traffic situation has notably retarded industrial growth in the inter-mountain country.

[1] This was done by the Southern Pacific and the Northern Pacific Companies until forbidden by the courts. The Canadian lines, which actually operate under conditions illustrated by *ZZ'*, continue the practice of maintaining joint rail and water services on the Pacific and the Great Lakes.

[2] This unfortunate and controversial situation gave rise to the famous long-and-short-haul clause (Section 4) of the Interstate Commerce Act. This provision, although twice amended, has never been successfully applied. Under the Act of 1910, the Interstate Commerce Commission divided the territory affected into five districts and permitted differentials varying from 7 per cent to 25 per cent. In 1917, these differentials were suspended and since that time a definite showing of effective water competition must be made to secure Section 4 relief from the commission. This section, as it now stands, forbids a greater charge for a longer haul than for a shorter haul over the same line, or route, and in the same direction, except with the specific approval of the commission, upon application and after an appropriate investigation.

At this point, we may advantageously anticipate a subsequent portion of the present chapter by calling attention to the staggering potentialities of the development of highway and air competition within local non-competitive railway rate areas and also within the long-haul monopoly rate areas of the inter-mountain districts.

Rate-making.

Thus far, we have described the purpose of freight classifications, sketched the geographic boundaries and the respective economic and social characteristics of the three classification territories, and explained the work of the classification committees. We have also indicated the method of classifying territories on the basis of different traffic conditions for the purpose of adjusting rates to the needs of each territory. The next process in the building of the rate structure is the assignment of concrete charges, per hundredweight, or per ton, for the movement of each of the several *classes* of freight and, also, for the many items which move under special *commodity rates.*

Reverting, momentarily, to the "crazy-quilt" character of the existing rate structure, we may observe that, taking the situation as we find it, rate-making can scarcely be said to be basically constructive. Rather, it is of the nature of alteration and repair of an ancient structure, traces of which undoubtedly are destined to remain as long as private ownership of the railways survives. This is true, not only because any fundamental disturbance of rates would destroy the equilibrium of the national transport system, but because the roots of industry, commerce, and finance are so thoroughly imbedded in the rate structure that these business interests are as deeply involved as are the railways themselves.

Three agencies are customarily involved in the process of changing an existing rate, or of setting up a new rate upon the very rare occasion of adding an item to the variety of goods carried. The action is usually initiated by the traffic officials of the railway most immediately concerned. The proposal is transmitted to the members of the appropriate district freight association for their information and possible concerted action, and to the Interstate Commerce Commission for examination and approval. Non-competitive local rates may not warrant the joint action of the several railways represented in the associa-

tions, but all proposed changes pertaining to the organic tariff structure or policy receive their consideration. The approval of the Interstate Commerce Commission is necessary to every case before a change becomes effective. Rate changes may also be initiated by the Interstate Commerce Commission, or by interested shippers, through an appeal to the commission. In all controversial cases, hearings are had before the commission and, after due investigations, the proposed change is either approved or disapproved. In case of approval, a commission order is issued putting the tariff amendment or supplementary rate into effect. In case of commission disapproval, on other considerations than "a finding of facts," the railways concerned may claim their Constitutional right of judicial review. In urgent cases, temporary orders of the commission may be issued pending further consideration of the facts. Proposed rate changes filed by the railways may be suspended by the commission for 120 days, and an additional 3 months if needed, for investigation by the commission. In Interstate Commerce Commission procedure, the burden of proof as to the unreasonableness of any ruling of the commission to which the railway companies are opposed, rests with the representatives of the railways.

Although purely local and non-competitive rates may be said to be the concern of a single railway line, there are, in fact, practically no rates which are not in some way subject to competitive forces, pertaining either to the traffic itself, or to the market or to industrial rivalry. It is for this reason that a certain degree of co-operation and harmony among carriers in the several traffic zones and in the country as a whole is necessary. This is accomplished by the traffic associations which function under the eye of the Interstate Commerce Commission as rate co-ordinators in their respective districts and also in the arrangement of through and joint rates. In this rather informal co-ordination of rates there are seven recognized rate zones.[1]

[1] The New England Territory includes the New England States. Eastern Trunk-Line Territory lies in the Eastern District east of Buffalo and Pittsburgh. Central Freight Association Territory occupies that portion of the Eastern District between Buffalo and Pittsburgh on the east and Milwaukee, Chicago, and St. Louis on the west. Southern Freight Association Territory is coextensive with the Southern District. Western Trunk-Line Territory approximately coincides with the Granger Territory. Southwestern Territory occupies that part of the Western Division lying south of Granger Territory and extending to the western borders of Texas. Transcontinental Territory occupies the remaining portion of the Western District extending from the Rockies to the Pacific and northward to Canada.

The three general freight classifications in Official, Southern, and Western classification territories and the lists of commodities selected for special treatment outside the classifications form the substructure of the rate system. The superstructure is composed of the *tariffs* which in general are set up as follows:

1. Local rates among points within each tariff territory.
2. Rates from common-points within each tariff territory to common-points within each of the other six traffic territories.[1]
3. Rates from key-points in each traffic territory to common-points in other territories.[2]
4. Rates from common-points in each territory to key-points in other territories.
5. Rates from each key-point, or group of key-points, in each territory to each key-point or group of key-points in other traffic territories.

The distance principle. — Relative length of haul is the most plausible and persistent consideration in the fixing of freight rates. It is not an exaggeration to say that distance is the first consideration and that every variation from a distance tariff is a conscious recognition of some extraneous factor which in the particular instance transcends the basic function of transportation — the elimination of distance.

In early days, before the complexities of rivalry and competition appeared, the distance tariff generally prevailed, as it still continues to do in local traffic. It was argued that both the cost of the service to the carrier and the value of the service to the shipper are commensurate with the length of the haul, and that railway rates, like prices in an open market, should represent that equilibrium between cost of production to the seller and effective utility to the buyer. The fallacies of this argument are not far to seek.

[1] Common-points are shipping and receiving stations within a specified area which for varied reasons, including equalization of the rate structure and maintaining equality of industrial and commercial opportunity, are granted identical or blanket rates either to or from other territory or certain key-points.

[2] Key-points are outstanding cities and traffic centers so strategically located, or otherwise circumstanced, as to command special consideration in the determination of rates on shipments to, from, and through them. Principal Atlantic Coast cities, including New York, Philadelphia, and Baltimore, are key-points in respect of through rates east, west, north, and south; also, export and import rates. So also are the basing-point cities of the south, Atlanta, Charleston, Birmingham, and New Orleans; Pittsburgh and Buffalo between Eastern Trunk Line Territory and Central Freight Association Territory; Ohio River crossings from Parkersburg to Cairo, Milwaukee, St. Louis, and Mississippi River crossings; Minneapolis and St. Paul (Twin Cities) and Duluth; Cheyenne, Denver, and Salt Lake City; Texas gulf ports and Rio Grande crossings; Pacific Coast cities, from Los Angeles to Seattle — all are key-points in the rate structure.

The purchase and sale of railway services cannot be so conducted as to permit the perfection of the bargaining process which tends to place commodity prices at the point of equilibrium of production costs to producer and utility to the consumer. The technical situation of most railway enterprises requires them to function at less than plant capacity with heavy overhead costs, and the consequent operation of the law of decreasing unit costs with increasing traffic density frequently results in a lower unit cost for a longer haul in compact traffic than for a shorter haul in traffic of low density. Again, the effective value of the service to the shipper is usually too intangible to be measured and converted into a rate.

A popular illustration of the value of the service, as applied to freight rates, runs as follows: When spot wheat in Minneapolis is worth 60 cents a bushel and, in Chicago, 75 cents a bushel, the value of transport from Minneapolis to Chicago is 25 cents the hundredweight, and this figure should establish the rate. The fallacy of this statement is revealed by the simple fact that the difference in wheat prices in Chicago and in Minneapolis is usually explained in terms of the freight rate. That is to say, the Chicago price exceeds the Minneapolis price by the current cost of transport plus interest and insurance in transit. Furthermore, inasmuch as local consumer demand for wheat west of Chicago does not approximate the annual harvest, "the amount which the shipper would pay rather than do without the service," obviously is an evasive basis upon which to establish a rate. Finally, it is observed in the accounting of railway costs that, for every shipment, there is a proper separation of the approximate *costs of carriage* and actual *terminal costs*, including handling, storage, and insurance. The latter cost items apply with little variation to all shipments of a given class of freight, whether long or short.

The percentage rate plan. — The so-called MacGraham Scale is a modified application of the distance principle which has prevailed in Central Freight Association territory since devised by a Pennsylvania clerk in 1876. A tariff was then in effect between New York and Chicago by which certain points were assigned proportionate rates in terms of the New York-Chicago rate and the respective distances involved. Clerk MacGraham, observing the inequity of a distance rate which failed to recognize

a more or less uniform terminal charge, devised a scale whereby *each rate included two elements, one a slightly variable terminal charge, and the other an amount directly proportionate to distance.* This composite was expressed in a percentage of the New York-Chicago rate. Modifications, necessitated from time to time by the competitive influence of cross lines, have resulted in the subdivisions of this territory into irregular belt-zones, all points within each of which take a like percentage of the New York-Chicago rate varying from 50 per cent, in the Pittsburgh zone, to 120 per cent, in the most westerly belt which borders the Mississippi River. Eastbound traffic from Milwaukee, Louisville, and intervening points, to New York, shares the 100 per cent Chicago rate. The Indianapolis rate is 93 per cent, the Cincinnati rate is 87 per cent, and Detroit and Toledo rates are 78 per cent, respectively, of the Chicago rate.

Rate revision, under the recent policy of the Interstate Commerce Commission and with the approval of the courts, shows a well-defined trend in the favorable recognition of the distance principle, as modified by other considerations of comparative costs.

The equalization doctrine. — In its application to the determination of railway rates, this theory emphasizes entirely different considerations than those of cost and value which underlie the distance and percentage system as applied to the class rates in New England, Eastern, and Central Territory.

In the course of development of new agricultural, mining, manufacturing, and merchandising industries, shippers always insist upon an equality of opportunity with established and competing interests. The "protective tariff" was the original golden calf to be worshiped under the creed of equality of opportunity for infant enterprise. This principle, when used as an incentive to legitimate development is an unquestionably sound basis for the granting of favorable commodity-rates, the temporary application of which often serves simultaneously to stimulate economic development and to build an enlarged and ultimately self-sustaining traffic in the future. Unfortunately, the equalization of opportunity often stimulates the growth of parasitism. The vested interests which sprang like mushrooms from concessionary railway rates, frequently have become so politically and financially influential as to retain their rate concessions and

prevent the timely substitution charges in lieu of the initial subsidizing rates.

The equalization policy invariably tends to diverge from the development principle to that of "keeping-everybody-in-business," which is profitable neither from the point of view of social economics nor railway finance. Despite the obvious dangers of the equalization policy, which has been painfully realized by the railways, it has continued to dominate the transcontinental and granger tariffs. Only recently has the Interstate Commerce Commission shown an inclination to challenge the parasitic interests so strongly entrenched behind these tariffs, and to insist that they pay their own way as a means of relief to the financially distressed railways which serve them.

The basing-point system. — This method of rate-making, which for a long time prevailed in Southern territory, was an ingenious rate structure designed to promote the industries of the South and to serve as a defense against northern competition in southern markets by both rail and water. There is no doubt that the basing-point tariffs once served these purposes well.

The social and economic conditions indigenous to the South, the paralyzing effects of the Civil War, the delayed construction of railways, and the prevalence of water transport on the frontiers were all contributory factors in the development of the basing-point system. Although gradually abandoned under regulatory pressure, in favor of rates more commensurate with distance and relative costs, remnants of the system still survive.

The set-up of the southern tariffs was simple. The industrial South and the railways which serve it are almost self-contained behind the traditional borders of the Potomac and the Ohio rivers on the north, the Mississippi and its confluents on the west, and salt water on the east and south. Even today only one southern railroad penetrates any considerable distance north of the Mason and Dixon line. Consequently, before the advent of the Interstate Commerce Commission, the rate structure below the Virginia and West Virginia gateways and the Ohio and Mississippi River crossings was entirely within southern control. Shipments entering Southern territory, either by rail-crossings or sea ports, were subject to such discriminatory rates as best served the interests of southern industry and commerce. The principal industrial and trading centers were designated as

"basing-points," and through-rates were equalized between these points and the several gateways, crossings, and ports of entry. Commodity-rates were made se'ective so as to stimulate traffic favorable to southern industries, and class-rates to basing-points were made extremely burdensome upon entering competitive goods. Shipments consigned to southern points, other than basing-points were billed on composite rates made up, in each case, of the rate from shipping point to southern gateway, plus the rate from gateway to basing-point, plus the local rate from basing-point to point of destination. It was largely because of the marked discrimination of these composite rates and the inter-mountain rates in Western Territory that the famous section 4, the *long-and-short*-haul clause, was written into the Interstate Commerce Act.

Despite the favorable operation of the basing-point system in the promotion and protection of southern industry, it was not without its disadvantages to the southern rate-payers and railway stockholders. Violent discrimination among shippers, indifferent railway service, and financial weakness of the railways became so definitely symptomatic of the fundamental evils of the system, that both government regulation and financial pressure were directed to its displacement by a more equitable and economically sound rate policy.

Passenger fares.

The nature of the passenger service is so well known and the rate structure is so simple that, for the present purposes, no more than an abbreviated treatment is necessary.

The American classification of passenger service is less exact than the three or four exclusive classes which prevail on British and European railways, and we have no comparable low class-fares. Nevertheless, the variations of day coach, chair car, parlor car, tourist and standard sleepers and local trains, express trains, and excess-fare trains offer even a greater choice of services on American roads than elsewhere.

The determination of passenger fares, with the exception of commutation rates in metropolitan areas and special excursion fares, is a simple application of the distance principle, and through-rates are customarily identical with the "sum of the locals." In metropolitan service, monthly commutation rates and 50-trip

tickets are usually much lower than standard fares for the same route and distance. They are arranged by zones, which roughly recognize relative radial distances from metropolitan centers.

Excursion rates, tourist fares, and settlers fares are based roughly on the calculated "additional cost of the service." Government troops, by virtue of a contractual condition of the federal gifts-in-aid of early construction, are moved over land-grant roads at reduced rates.

The many 2-cent, 2½-cent, and 3-cent fare laws enacted by the States between 1903 and 1910 proved, indirectly, to be a significant influence in the standardization of passenger fares. The discrimination which resulted from these statutes inspired the Supreme Court Decision of 1922, in the Wisconsin Passenger Fare Case, which discontinued further state legislative interference with passenger fares.

The relative decline in the ratio of passenger traffic, since the advent of the automobile and the paved highway, is a matter of grave concern to the carriers. On an average, the decline of the passenger ratio approximates 50 per cent. For roads in New England, Eastern Trunk-line, and Southern Territory the decline is heavier and the financial position of the roads proportionately endangered. Distressed railway officials and stockholders are outspoken in their condemnation of the federal and state highway policy which, it is alleged, practically subsidizes the competitive movement of both passengers and freight by motor vehicles. The railways are also losing mail contracts, passengers, and express to a subsidized air service. In this allegation there is much truth, and also a touch of irony, in the fact that the railways now find themselves in a position somewhat analogous to that of the canals and the river steamers in the unhappy days of their decline in the face of government-subsidized and unregulated railway competition. However, the railways have cause to expect a fair measure of relief from unfair competition through the intervention of the Interstate Commerce Commission, which may now apply the same principles of supervision and regulation to commercial highway and air traffic as the railways themselves enjoy.

There is, also, a transparent fallacy in the frequent acclaim of railway partisans that the railways are being deprived of the passenger traffic which now moves by air, bus, and private auto-

mobile. An undetermined, but obviously large part of the present highway and air travel would not be undertaken at all if railway transport were the only means available. The automobile has been directly responsible for a wider dispersion and accelerated movement of the population, the development and popular usage of state and national parks, and the enlarged recreational enjoyment of mountain, field, and stream. This increased social mobility has doubtless contributed to motor traffic many times the loss of railway passengers. The railways must also face the fact that in the march of progress they hold no guaranty of perpetual dominance in the field of transport and, even now, may no longer confirm their former character as a "natural monopoly."

In the opinion of many travelers, the negligence of the railways in failing to provide reasonable comfort and sanitation, except to Pullman and excess-fare passengers, was largely responsible for the loss of legitimate passenger traffic. Furthermore, we need only to examine the schedules of state, federal, and municipal gasoline taxes and automobile license fees, levied upon the private car owner, to dispel any illusions concerning the incidence of highway maintenance and construction costs. When the American railway companies have made their standard passenger trains as comfortable, clean, sanitary, and orderly as they are fast and safe, and when they have made plain sleeping and eating accommodations available to the common traveler at a reasonable price, as the European railways do, it is probable that a surprising proportion of the lamented passenger traffic will return. The railways have been disappointingly tardy in adjusting their services and policies to changing conditions.

Railway rate theories.

Freight Classification practice, traffic policies, and rate systems had taken form long before rate theories received serious consideration in railway parlance. Indeed, in the making of railway rates, the logical sequence of theory and practice has customarily been reversed. Rate theories were an academic novelty to most railway officials until, in 1887, they were faced with the determination of certain legal facts concerning their rates before the Interstate Commerce Commission and in the courts. They were there reminded that their *rates must be reasonable to the shipper*,

to the investor, and to the public. For twenty years thereafter, the commission and its futility was a subject for jesting among railway executives. But when, in 1910, backed by the Hepburn and Mann-Elkins amendments, the commission attacked then existing tariffs upon theoretical standards of "reasonableness" with which they did not conform, the burden of proof rested with the railroads. Since then theories have ceased to be merely of academic interest to railway managers.

The railways were not slow to evolve theories of their own in defense of their classifications and tariffs. In many legal controversies, the courts have listened to the recital of facts and the promulgation of theories by both commission experts and railway counsel, reviewed constitutional interpretations of proprietary and contractual rights and of the regulative powers of Congress, formulated their own theories regarding the facts and the rates, and have decided from time to time that rates should stand or must be changed. In most cases they have been changed. Since 1906, the Supreme Court has accepted the "finding of facts" by the commission, but reserves to itself the final word upon questions of theory and the law.

Inasmuch as the serious consideration of rate theories came last in the story of American railway transport, their discussion logically occupies the concluding paragraphs of this chapter. Their chief usefulness heretofore has been in the testing of rates of more or less spontaneous and uncertain origin. In the recent rapid turning of events, however, rate theories have assumed a dynamic role in the sequence of cause and effect in the formulation of railway rate structures and their public supervision.

There are three basic theories of the rates; the *ability theory*, the *cost theory*, and the *social-need theory*. These theories, in their application, have been subdivided in various ways and presented under a variety of conventional titles. In these titles one observes a similarity to the recognized principles of the incidence of taxation. This likeness is not accidental. It resides in the fact that the organized carriage of goods and persons is a public service. It is as essential to the continuing social, economic, and political existence of the individual, the community, or the nation, as is any function of the local, state, or federal government. Consequently, the theories of railway rates, in their social aspects, may logically be expected to conform to accepted principles of public charges.

The ability theory, in its application to the distribution of the burden of public charges, assumes that they who are most able to pay should carry the greater share of the burden while those who are less able should share in proportion to their respective abilities, and that the resulting benefits of the service should be shared alike. In the field of taxation, the application of this theory places the costs of government more heavily upon the wealthy and those of larger incomes and proportionately upon persons of lesser financial resources. The application of the theory to railway rates assumes that goods of high unit-value and commodities commanding a profitable market should bear relatively high rates, and that goods of low bulk-value and commodities which command small margins of profit in the market should be moved at proportionately lower rates. This theory has been outstanding in its general acceptance by both the railways and the regulative agencies. It is conveniently applicable under a number of circumstances and in varying degree. These circumstances and the manner of the application of the theory are, however, subject to limitations which are themselves variable and consequently require frequent readjustment.

"*What the traffic will bear*" is the more popular phrasing of the ability theory. In its practical application, it may extend to the charging of *all that the traffic will bear*, which leaves only marginal profits to the shipper; or *what the traffic should reasonably bear*, which permits to both the shipper and the railroad a fair share in the benefits of the enterprise. In the first instance, the theory may be applied to support a monopoly rate. In the second instance, the determination of a "fair rate" very definitely indicates a limitation in the application of this theory and the necessity of supplementing it by another.

The developmental principle in rate making, discussed on a previous page, is a salutary exemplification of the ability theory. Here also, the limitations of its logical application are definite. When an industrial community has enjoyed a reasonable period of promotion and growth, so-called developmental rates if perpetuated become a means of unfair and unjustified discrimination.

The ability theory, fundamentally, lends itself to discrimination. From the point of view of the shipper and the public, discrimination may be *reasonable* or *unreasonable;* from the point of view of the carrier, discrimination may be *voluntary* or *involuntary*.

During the regime of prevalent railway monopoly and arbitrary rate practices, the application of this theory generally resulted in maximum rates. In more recent times, there has been a notable tendency for traffic to disappear under pressure of former rate schedules and revenues have fallen to levels so low as barely to permit the survival of the railways. The explanation of this situation is found in two causes, *i.e.*, non-railway competition which has diverted traffic to cheaper means of transport, and the decreasing spread between costs of industrial production and market prices which has restricted production and further reduced traffic.

The cost of the service theory may be applied with different emphasis under varying conditions and also from the respective points of view of the shipper, the carrier, and the public. The carrier insists that the theory may be correct in principle, but in practice, can only be applied "on an average and in the long run," that the total annual costs, including a fair profit, must be covered by the sum of the rates collected annually, but that a further refinement of the theory is inexpedient. The shipper prefers to interpret the cost of the service as the approximate expense to the railway company of handling each particular shipment, and he is not easily persuaded that such cost accounting is impossible. It is in the public interest to know, with reasonable accuracy, the nature of all cost items which are admitted to the railway accounts, to insist upon their classification within significant categories of fixed and variable expenses and so far as possible to secure a cost analysis of each element of the service.

The railways have vigorously opposed attempts to apply the cost theory, arguing that the prevalence of joint and variable costs in the transport business made impossible the development of accounting practice which would accurately relate definite outlays to specific services. This position was successfully defended against the attacks of Congress and the Interstate Commerce Commission for twenty-seven years. But, by 1914 the uniform accounting system, which was authorized by Congress in 1906 and formulated by the Interstate Commerce Commission, had come into general use and provided an accurate analysis of the operating revenues and expenses of every railway, with the exception of the capital costs. The LaFollette Railway Valuation Act of the previous year authorized the commission

to make a fair, complete, and scientific valuation of all railway property "used and useful" in the service. By this agency was to be secured the final capital cost item essential to an accurate accounting of all railway costs.[1] Tentative results of the railway valuation were published in 1920, and annual revisions have been made since 1931.

The prevailing policy in rate regulation during the past decade has followed a determined trend in the increasing application of the cost theory. It is now rather definitely ascertained that total railway costs, under normal conditions, may be divided between operating expenses and other outlays in the approximate ratio of 6 to 4, or 60 per cent for operation and 40 per cent for maintenance and capital outlays. Variations from the basic ratio may be approximately determined for the various services and under different circumstances. The results thus obtained are sufficiently accurate to supply a satisfactory cost-guide for the formulation of tariffs within the significant categories of the service.

The additional cost of a specific service is a variation in the application of the cost theory which determines the minimum rate at which *additional business* may be accepted without loss. The assumption is that certain fixed charges having been already incurred in the maintenance of existing services, the additional cost of expanding the service, within a limited range, will be confined to an increase in variable expenses. By this process of reasoning, concessions can be made to new business, or to highly competitive business, upon a rate-basis which may return operating expenses only. Indeed, a railway may continue to function temporarily upon revenues which make no contribution whatever to capital charges.

The social need, or public welfare, theory constitutes a third general consideration which may claim place in the formulation of rate schedules. Under a regime of private ownership, the collective needs of the community and the private interest of railway stockholders very frequently coincide. This is more often true during the initial period of railway operation when industrial growth and railway development are interdependent. Development rates to young industries are equally justified by the ability theory and the principle of social need. The diver-

[1] For details of this Act and its operation, refer to a previous chapter. p. 605.

gence between private profits and social welfare, as reflected in the rates and the service, is a notable symptom of mature railway organization and under-restrained private initiative in the management. With the intrusion of regulative authority economic and social ends of a public mature become increasingly potent in determining the rate structure. Social progress and related political reconstruction have made an issue of the nationalization of railways in all countries. The certain result is either official prescription in the readjustment of the rates, or reluctant but voluntary concessions of private pecuniary interests to alleged social needs.[1]

[1] The Hoch-Smith Congressional Resolution, in 1925, was a somewhat exaggerated application of the social need theory advanced in behalf of distressed farmers. This Resolution states, "It is hereby declared to be the true policy in rate making to be pursued by the Interstate Commerce Commission in adjusting freight rates, that the conditions which at any given time prevail in our several industries should be considered in so far as it is legally possible to do so, to the end that commodities may freely move." It directs that the commission should put into "effect with the least practicable delay such lawful changes in the rate structure of the country as will promote the freedom of movement by common carriers of the products of agriculture affected by that depression, including live stock, at the lowest possible lawful rates compatible with the maintenance of adequate transportation service."

(*References follow Chapter XXXI.*)

CHAPTER XXXI

MODERN TRANSPORT

Modern transport is technologically typified by the development of the internal combustion engine and the newly designed rapid-transit vehicles of the land, the air, and the water to which it has been adapted. Economically, its greatest achievement is in the expeditious and comparatively inexpensive movement of passengers and freight over hard surfaced roads in the several types of motor driven cars. The development of aircraft, the organization of air mail and passenger service, and the military adaptations of the airplane during the last fifteen years are quite comparable with the growth of automobile transport during the corresponding period of its development. This observation is explained by the fact that the technical development of the motor car and the airplane were, in many essentials, contiguous applications of identical or similar scientific principles. These principles, having been successfully worked out and applied in automobile construction and liquid fuel production, were the more readily available in the development of aircraft and the improvement of marine navigation.

There are now (1937) approximately 25,000,000 automobiles in the United States, of which 21,416,000 [1] are private passenger cars, 108,200 are busses, and nearly 3,410,000 are trucks. These vehicles operate over some 875,000 miles of surfaced roads, nearly half of which belong to the state highway systems and include the national trunkline interstate routes.

These national highways traverse the country, in roughly parallel routes, in both directions — six of them east to west from coast to coast, and a larger number from the eastern seaboard to Chicago and the Mississippi, and an increasing number from Canada to the southern border. It is estimated that, during the most active period of highway construction, 1921 to 1931,

[1] A decrease of nearly one million since 1931.

over $20,000,000,000 was expended on the building and improvement of highways, although little actual mileage was added to the old network of "dirt roads."

Motor passenger traffic.

The total volume of motor traffic and its distribution among private cars, busses, and trucks are known only within rough estimates. Since the commercial operations of motor vehicles have been practically free from state or government regulation, no official records or reports of prevailing rates and fares, volume of traffic or mileage are available. A few monographic motor traffic surveys have been made by the United States Department of Commerce, the Bureau of Public Roads, the National Automobile Chamber of Commerce, and the General Motors Corporation. This information, gathered at different times and places and under variable conditions, is neither sufficiently representative nor adequately homogeneous to afford satisfactory bases of estimates. It does, however, supply some samples of motor transport organization and operations which typify the several classes of passenger and freight services and indicate their relative magnitude and importance.

Private passenger cars. — With an average load of 2.35 passengers per car, and an average car mileage of 6,500 per year, the annual performance of the private automobiles of the country totals over 360,000,000,000 passenger miles. This volume of travel by private automobile is in striking contrast with the total passenger miles of the Class I Railways which was 47,370,000,000 in 1920, declined to about 20,000,000,000 in 1934, and has since shown a substantial increase.[1]

It is not to be assumed, as is sometimes alleged, that all or even a major portion of the motor travel is "taken away from the railways." Neither should it be assumed that, in recent years, all traffic lost by the railways has been absorbed by the highways. An Ohio traffic survey indicated the average length of journey for an Ohio car to be 37 miles for business trips and 146 miles for non-business and touring journeys. How much of this traffic was taken from the potential business of the railways, how much from horse-drawn vehicles, and how much was *created* by the automobile can only be surmised.

[1] See table, p. 733.

Passenger transport by bus. — Busses may roughly be divided into three classes. About 60 per cent of all busses are private vehicles of various kinds used in the irregular service of schools, hotels, tourist agencies, etc. Intrastate busses, which render scheduled services at regular rates, but do not operate across state lines, comprise 32 per cent of the total. Interstate busses, operating from city to city and, in some instances, from coast to coast, through different states account for only 8 per cent of the total. We see, therefore, that only about 40 per cent of all busses are lawfully rated as *common carriers* and, as such, are subject to federal or state regulation. The operations of only one-fifth of these fall within the category of *interstate common carriers*, which brings them within the regulative authority of the federal government under the Motor Transport Act, effective in 1936. Interstate bus operations are organized on a fairly large scale. In 1931, the 24 larger companies operated 100 or more busses each. Since that time, such organizations have increased in both number and size. However, there is an apparent trend toward integration.

By the terms of the Motor Transport Act, the Interstate Commerce Commission may deal with interstate *common carrier* busses and trucks in much the same way as it has heretofore supervised the rates and services and the financial structure of the railways. It may also regulate, within somewhat less restrictive terms, interstate *contract carriers* and *private carriers* as well. Common carriers must secure a certificate from the commission which specifies the nature of the services to be rendered, routes and schedules to be followed, terminals and territory to be served, and they must maintain standard equipment, prescribed conditions of employment, and a uniform system of accounting. Contract carriers, although *not* required to follow specified time schedules and routes, must secure a permit from the commission. Both contract carriers and private carriers may be subjected to regulations concerning safety, conditions of employment, hours of service, and standard equipment.

In 1931, *interstate* bus routes in the United States approximated 112,000 miles and *intrastate* routes exceeded 243,000 miles. About 465,000 passengers traveled an average of three miles each, making an annual total of nearly 1,400,000,000 passenger miles. No doubt a considerable fraction of this business was

secured in competition with the steam railways and the urban and interurban electric transit lines. Combined bus-line and private-car competition has resulted in the abandonment of thousands of miles of interurban and street surface lines, and has rendered remaining enterprise of this kind generally unprofitable throughout the country.

Passenger revenues of steam railways declined from over $1,000,000,000, in 1926, to less than $378,000,000 in 1932. Since that date there has been a substantial increase.[1] One-fifth to one-third of the decline in railway passenger traffic has been charged to intercity bus-line competition.

Passenger tariffs by bus. — In recent years the bus lines have repeated the experience of the railways in the 1880's, with cut-throat competition. The ease with which an independent operator could enter into competition with established lines has resulted in frequent rate cutting. The inadequacy of state control and the absence of federal control was an invitation to the irresponsible, poorly equipped, and irregular competitor to enter the field with little to lose and the hope of either securing a share of the growing business or exacting a bounty from the established companies. Rates have frequently been forced below 1 cent per passenger-mile and occasionally as low as half-a-cent. A case is reported in which an established line made a rate of $1 for a distance of about 500 miles between two mid-western cities to drive an aggressive "wildcatter" from the field.[2]

In general, rates continue to vary upon a competitive basis in which equipment, comfort, scenic features of the route, and terminal facilities are important considerations. Contract busses, seating as many as 40 persons, may in some places be secured at 30 cents to 50 cents per route mile and for any distance to 1,000 miles. Such party rates are very advantageous and are not confined to the restrictive provisions of railway excursion rates.

Standard tariffs on intercity bus lines tend to stabilize at 3 cents for shorter distances to 5 cents per passenger-mile for distances of 500 miles or over, and a 10 per cent round-trip reduction.

The future of bus services and charges is not at all certain. The Interstate Commerce Commission has not yet defined its policy in the regulation of this form of transport. Under its

[1] See table, p. 667.

[2] Miller, *op. cit.*, p. 583.

present authority it might conceivably regulate interstate busses out of existence. It is the hope of the railway interests that something will be done to protect them from further inroads of bus competition. To this end, two avenues are possibly available.

It is easily conceivable that, on the theory of placing bus operators upon an equality with the railway companies, tax burdens, including a charge for the use of the highways, might be made sufficiently heavy to force them out of business. Probably a majority of railway executives take the view that the carrier on the highway should "pay his share" of the construction and maintenance costs of the roads which he uses.

A second possible disposition of the problem of bus competition (and truck competition) is the ease with which the railways might themselves acquire the competing motor lines and either operate them with the monopoly advantage of centralized control or suppress them and return the traffic to the rails. Definite provision exists in the Motor Transport Act of 1935[1] for the creation of holding companies in the motor transport field. The more progressive railway companies have already entered the field. With the lawful privilege of uniting, merging, or consolidating with any motor carrier, or acquiring control of any motor carrier by purchase, lease, or contract to operate its properties, the way seems quite open for the corporate absorption of unwelcome motor competition by the offended railways.

Freight transport by motor truck.

From the days of canal and steamboat transport prior to the Civil War to about 1920, the railways occupied an essentially monopolistic position in the movement of freight. In this key position of handling the movement of goods from producers to consumers, the railway corporations were potentially able to exercise a very substantial influence over both the industrial and the marketing institutions of the nation, and, indirectly, over general economic conditions. It was the development of this situation, which became apparent in the 1880's, that gave rise to the public policy which has since dictated the main lines of government regulation of business.

[1] The law provides that two or more motor carriers may unite or merge, but that any person not a motor carrier may also acquire control of one or more such carriers by buying its stock or for a railroad, express, or water company to consolidate, merge with, or acquire control of any motor carrier by purchase, lease, or contract to operate its properties.

Before the World War, the motor truck had served in a limited field of freight transport which the railway companies were not interested in developing and which they were quite satisfied to see taken over by the trucks. This service for the most part consisted of (1) delivering goods to the railways for further shipment; (2) distributing goods from railway stations to consignees; and (3) handling of small short-haul shipments of perishable or fragile goods. The first two of these services were considered supplementary to the railway function and were accepted by the railway companies as desirable gratuities. The third form of service relieved the railways of a class of bothersome and presumably non-profitable business.

During the war, however, the intensive demand for additional transport facilities and the inelastic nature of the railway service tremendously stimulated the technical improvement of trucks and expanded their use. Their design was standardized and construction entered the phase of mass production. A sufficient number of improved roads were available to accommodate a considerable expansion of highway freight traffic. Hundreds of thousands of trucks were used in the military services, a large operating personnel was trained and the technique of packing and handling goods in motor transport was developed. The flexibility, dependability, and reasonable costs of this service made it the most outstanding success of the experimental commercial innovations of the war.

The period of motor-truck competition with the railways dates from 1920. A large fleet of trucks built for war-time service was available, unemployed drivers and mechanics were likewise numerous and in need of employment, and shippers had learned the superiority of the truck over the freight car in certain kinds of delivery. Equally important, also, improved highways were rapidly being extended at public expense. These roads were primarily meant for the use of private motorists, but they were available, in most cases, to commercial traffic and were immediately used to extend the range of the motor truck. Soon the through traffic of the railways, between terminals as much as 1,000 miles apart, was being tapped by the motor trucks. They not only offered the shipper lower rates, but accepted consignments at the loading platform of the shipper and delivered them inside the warehouse or at the door of the consignee.

In the meantime the railway companies were lethargic. Traffic managers saw no reason to expect serious motor truck competition. Railway executives were preoccupied with their efforts to exact the largest possible tribute from the federal government in return for the use of their properties during the war, and in securing from Congress the most liberal terms possible in the framing of the revisory legislation which was undertaken at that time.

Motor truck operations. — A rough analysis of trucking operations is accomplished by classifying burden-vehicles into three groups and separating the operations of each group into intrastate carriage and interstate carriage.

Owner-operated trucks are used exclusively in the movement of goods belonging to the owners of the trucks, the delivery of goods sold by such owners, or services otherwise pertaining to their business and for which no direct charge is made. They constitute approximately 85.8 per cent of all trucks. Of this type of truck, 83.2 per cent are engaged wholly in intrastate operations, and 2.6 per cent participate in interstate traffic.

Contract hauling trucks accept consignments for transport at such rates and under such conditions as may be agreed upon, subject only to such controls as may be imposed upon them by law. They constitute 8.7 per cent of all trucks; 5.4 per cent being operated intrastate, and 3.3 per cent, interstate.

Common carrier trucks hold themselves ready to accept specified consignments for transport under specified conditions and at scheduled rates. They constitute 5.5 per cent of the total, 4 per cent being used in intrastate and 1.5 per cent in interstate movements of freight.

TABLE I. — DISTRIBUTION OF MOTOR TRUCKS IN THE UNITED STATES BY TYPE OF SERVICE AND ZONE OF OPERATION[1]

(Estimates for 1936)

TYPE OF SERVICE	INTRASTATE		INTERSTATE		TOTALS	
	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total
Owner service . . .	2,836,567	83.2	88,643	2.6	2,925,210	85.8
Contract hauling . .	184,104	5.4	112,508	3.3	296,612	8.7
Common carrier . . .	136,373	4.0	51,140	1.5	187,513	5.5
Totals	3,157,044	92.6	252,291	7.4	3,409,335	100.0

[1] U. S. Bureau of Public Roads.

The outstanding revelation of the above table is the relatively small proportion of trucks which fall within the *common carrier* group (5.5 per cent) and are subject to state and federal regulation in a manner analogous to the established controls of the railways. The fact that, of this total, only 1.5 per cent appear to be operating in interstate trade and are consequently subject to federal regulation, tends to minimize the anticipated results of the Motor Transport Act of 1935. At the present time, the Railway Express Agency, with 9,250 units, is the outstanding common carrier and the only one operating a large fleet in interstate service.

It might be possible, under federal authority, to force the many large contract haulers into the legal category of common carriers. If this were undertaken, doubtless, much of the traffic now handled by contract would be withdrawn to owner-operated trucks. Indeed, the obvious trend in heavy-motor transport is from the contract truck to the owner-operated truck. Aside from farm trucks, which constitute nearly one-third of owner-service trucks, most owner operators are large commercial or industrial corporations and require fleets of considerable size. Fifty or more trucks to an owner is not unusual and the trend is upward. In this process, contract traffic tends to be absorbed by the owner-fleets, many of which now exceed 1,000 units. The ten largest fleets of owner-service trucks (not including federal and state governments) have a combined total approximating 67,000 units. The three largest are the American Telephone and Telegraph, the Standard Oil of New Jersey, and the Borden Company, with 15,500, 12,000, and 10,000 units, respectively. Only a negligible fraction of these trucks move in interstate service. If they are to be subject to any substantial regulation, it must be exercised by state authority. Inasmuch as the demand for their regulation originates with the interstate railways, seeking protection for their rate schedules and the forced return of lost traffic, rather than considerations of the public convenience and safety, little immediate aid may be expected from the states.

The varied and flexible conditions under which interstate traffic may be moved over the highways are such as would appear to defeat successful federal standardization and regulation of rates, routes, and services. For example, the maintenance of loading platforms and warehouses at state boundaries could easily

facilitate the transfer of interstate shipments from intrastate contract or owner-operated vehicles of one state to those of another without incurring the penalties of interstate regulation. Of course, full and uniform co-operation of the forty-eight states with the federal government would adjust this difficulty. That such co-operation is probable is a broad assumption. It therefore appears unlikely that any serious attempt by the Interstate Commerce Commission to use its new powers of regulating interstate trucking will be easily successful in accomplishing the ends contemplated.

Many kinds of goods and types of consignments are adapted to motor transport. The following classes are significant:

1. Package goods moving short distances in less than car-load lots.
2. High-class goods of small bulk subject to high rail rates.
3. Goods requiring careful handling, particularly in loading and unloading.
4. Shipments requiring personal attention *en route*.
5. Shipments requiring picking-up or distribution *en route* — milk, gasoline, chain store supplies, etc.
6. Shipments requiring inside or door-to-door delivery— household goods, industrial supplies, etc.
7. Goods requiring extensive crating for rail shipment.
8. Shipments subject to indirect and time-consuming rail delivery.
9. Consignments to and from points distant from railway stations.
10. Goods subject to discriminatory or monopolistic railway rates.

Trucking, until a few years ago, was confined to traffic of small bulk and high value, moving in maximum loads of three to five tons for distances seldom exceeding 100 miles and at speeds seldom exceeding 12 miles an hour. In recent years the average load, speed, and distance are, roughly speaking, three times the respective maxima of ten years ago. All-season trucking between the lake ports, Mississippi River points, and the Atlantic seaboard has developed to a density which is forcing tourist travel from the more direct routes to the roundabout highways via the Gulf and the northern border. A similar situation is developing on the meridian routes in eastern and central states.

California fruits and western vegetables are trucked eastward 1,500 miles. Florida fruits and vegetables are trucked to Baltimore and Washington. Georgia melons and vegetables and Carolina and Maryland peaches are trucked to New York. New Jersey, Delaware, and Connecticut make overnight deliveries of

fruits, vegetables, dairy products, eggs, and live fowls to New York. This class of traffic is moved almost exclusively by truck. The New York milk-shed, from Canada and the lakes on the north to the headwaters of the Ohio and the Susquehanna on the west and south, is served by tank-trucks.

This modern motor transport of foodstuffs must be moved at high speed. Indeed, distances which may be traversed overnight or, at most, in 24 hours, fix the limit of the most effective zone of the motor truck and its most disastrous competition with the railway. Forty to sixty miles an hour, driving time, and two- to four-lane highways are required to meet present standards of motor freight operation.

The movement of cotton affords an excellent example of contract trucking in the Southwest. Despite the fact that railway rates have been greatly reduced, cotton moving by truck into New Orleans, Houston, Galveston, and Texas City has increased from less than 2 per cent of the total, in 1928, to over 50 per cent. Shipments average 150 to 200 miles, and consignments from Arkansas and Oklahoma points exceed 400 miles. Single truck loads of 16 bales of 500 pounds each are common, 20-bale loadings are not unusual, and truck-and-trailer units carry up to 40 bales.

Factory shipments of automobiles were probably the first and one of the most painful traffic losses admitted by the railways. Not many years ago all automobiles were shipped in specially built freight cars, occupied much space, and required extreme care in terminal and transit handling. They took a high freight classification and tariff and shipping damages were frequent. Railway freight formed a considerable part of the customer price of an automobile in all markets remote from points of manufacture. Thrifty western stockmen, receiving free personal transportation when bringing shipments of cattle to Chicago, hit upon the idea of buying their cars at the factory in Detroit or Toledo and driving them home. Car manufacturers saw the economy of the scheme and established the practice of delivering cars, where roads were good, "under their own power." Caravans of new cars were soon moving over the highways in every direction from manufacturing points in Michigan and Ohio to retail markets as distant as California. This practice continues, but has been largely supplemented by the use of a special type of auto-carrying truck known as the *truckaway*.

Three to six cars may be moved at a load, and with transport savings under freight charges of $5 to $20 per car. The transport of automobiles, with the exception of cars crated for the export trade, is now largely lost to the railways.

Next to the carrying of perishable foods, the movement of livestock to market is perhaps the most fitting use of the motor truck. The shipping of livestock by rail has always been accompanied with inconvenience, market risks, injury to animals, and deterioration of values. All of these disadvantages are subject to reduction by motor shipment provided the haul does not greatly exceed 100 miles. With the exception of Chicago, where shipments are received from excessive distances, the receipts of livestock by motor at the leading markets approximate half of total unloadings. At the smaller markets the truck deliveries are proportionately larger. Trucking rates on livestock average 50 per cent higher than rail rates, but other savings justify the higher freight charge. Pigs and calves are more extensively moved by truck than are cattle and sheep.

One of the outstanding examples of railway monopoly rates has long existed in the freight charges on coal in certain districts. Such rates have not only been burdensome upon consumers, but in many instances have determined which mines may operate at a profit and which shall be denied a market. A somewhat similar situation more recently developed in the cement business. Coal mines and cement mills, handicapped by prohibitive rail rates which were maintained under a "stabilized system" of marketing, have recently employed contract trucks or are purchasing their own fleets and are moving their products at a profit to the confusion of the established order of transportation and marketing.

Officials of the Reading Railroad reported, in 1931, that the movement of anthracite by truck in their district had increased from 144,000 tons to 500,000 tons in one year, and hauling distances had been doubled. Similar conditions prevail in the neighborhood of St. Louis and Denver. Truck operators solicit orders in advance or sell from house to house. Coal rail rates are established for mine groups rather than particular points. Trucks, serving near-by mines at low cost, are said to be steadily increasing their activities and are thus "threatening a fundamental principle in coal-tariff construction."

Advantages of motor transportation.

The remarkable development of motor transport which, within less than a generation, has almost completely displaced the horse-drawn vehicle and now challenges the supremacy of the steam locomotive and the railroad, is the result of definite advantages which flow from the services of the automobile. These advantages, in so far as they attach to the passenger bus and the motor truck operating on the highways, may be summarized as follows:

1. The flexibility of the route enables motor vehicles to render service at points and in districts which are inaccessible to other means of transport.
2. The adjustability of size and other qualities of vehicles to a great variety of service requirements.
3. The general availability of motor services of any kind at any time or place.
4. The continuity of transport services, thus often avoiding transit delays, passenger transfers, and rehandling of goods at terminals.
5. Financial advantages, for the most part, related to the relatively small initial capital investment and low ratio of fixed charges to total expenses. Capital investments may be quite definitely limited to actual requirements, and operating and maintenance outlays are directly proportionate to current services rendered.

Disadvantages of motor transport.

Fundamental changes in the economic structure and innovations in the mechanism of production and commerce, no matter how great their net advantage may be, are invariably accompanied by disadvantages. The defects of experiment and immaturity are always in evidence. Socially considered, the disadvantages of economic progress are submerged in general benefits; but there are always individuals and economic groups to whom the disadvantages of change outweigh the concrete benefits of "things as they were." Usually, something of appreciable or intangible value is lost to society in general as the price for progress — a concession which is sometimes made with reluctance by a great many people, and which sometimes seems to a great many others not to have been justified. The revolution of modern transport has not been free from disadvantages, some of which are of a serious and, possibly, enduring nature. They may be characterized as follows:

1. Mechanical failure of equipment.
2. Susceptibility to climatic and weather variations.
3. Limited zone of operations and uncertain schedules.
4. Irregular financial responsibility.
5. Unseasoned organization and management.
6. Lack of standardization.
7. A low coefficient of safety.
8. Unsound competitive practices.
9. Inevitable injury to certain established enterprise and vested interests therein.

The disadvantages of motor transport which we mention above have been more or less conspicuously revealed by its unfavorable comparison in certain respects with customary facilities of railway transport. The first six items may be passed with brief comment. They are really of the nature of *defects of immaturity* rather than inherent disadvantages. The railway service, in its earlier years, was afflicted with all of these defects. None of them was overcome more rapidly in the experience of the railways than they have been remedied by motor transport. Some of them remained chronic afflictions of the railways until arrested by mandatory state and federal controls.

It is reasonable to assume that the predominance of the profit motive will resist private expenditures for the perfection of motorized transport equipment beyond the point of maximum return per dollar invested. Thus, desirable precautions for public safety will inevitably continue to be neglected. As was true with the railways, public authority will prove to be the only remedy.

The same may be said of *financial responsibility, publicly irresponsible management, unstandardized rates and services,* and *irregular competitive practices.* In all of these matters, we may safely conclude that contract carriers and common carriers on the highways will repeat the performance of the rail carriers. Their managers and owners are made of the same stuff. They will instinctively react to the same pecuniary motives, and will yield with the same reluctance under analogous circumstances to the same directive forces.

The increasing density of trucks and busses on the highways is one of the major factors of the growing danger of motor travel. These vehicles are needfully subject to measures of safety control which, for the time being, are not easily applicable. One needs only to drive the highways or attend a traffic court to observe the

apathy of officials in applying the moderate controls which are now legally provided for their operation. Safety of the highway is entitled to receive first priority in the necessary reorganization of motor transport, and should immediately be applied to the more careful operation of commercial carriers.

Unsound competitive practices take a great variety of forms. The unrestricted opportunity of entering into the business of carrying passengers by bus and freight by contract or peddler truck lies at the root of a number of competitive problems. The back-load problem extends beyond the immediate concern of the carriers themselves and upsets the "competitive balance" of established industrialists and merchandisers in most unexpected ways. The railways also have always had the back-load problem. They have never solved it. Just as the truckers are now doing, the railroads picked up back-loads at any attainable rate sufficient to contribute a farthing to the operating expenses of an otherwise empty haul.

Peddler coal trucks pick up back-loads of groceries and hardware at any rate in excess of out-of-pocket costs. Contract trucks are carrying pay-loads of livestock to market and returning back-loadings of feed and fertilizer at "ballast rates" so low as to destroy the balance of local prices based upon customary rail rates — rail rates which, originally, were possibly established in a similar way. When the railways set up their schedules, they considered only their own best interest. They "had to live." The result was that established industry and trade, and the canal-barge and river-steamer competitors of the railways, were obliged to adjust themselves to the railway tariffs as best they could. Many of them disappeared in the process. Many railways also went down in the competitive struggle for traffic.

Used trucks often become available at bargain prices when developmental jobs and public works projects are completed. Many a discharged workman, with a month's wages in his pocket, buys the truck he has been driving on the job and becomes a contract operator. He hauls for what he can get. Customary charges and railway tariffs mean nothing to him — he "has to live." Established carriers would have him pay a license tax, post a bond, secure a certificate of "public convenience and necessity" from the Interstate Commerce Commission, confine his operations to restricted territory, and make his charges conform

to authorized tariffs. This being a country where individuals have habitually been permitted to choose their occupation, to exercise freedom of movement and contract, and to make unrestricted use of their own property, the owner of a truck on the public highway fails to understand why he should be regulated out of the way for the benefit of *established interests*, many of which got their start exactly as he is getting his.

The analysis of competitive methods in a new industry and the determination of what is lawfully *fair* and what is *unfair* and what is economically *sound* or *unsound*, present problems which do not yield to off-hand solutions by judicial precedent or rule-of-thumb.

Any disturbance of the *status quo* of existing conditions usually creates a certain amount of destruction. Economic change, whether progressive or degressive, leaves wreckage in its wake. If the change is progressive, the wreckage represents a loss of value less than that of the new thing which takes its place. If the things destroyed were of greater social value than the things which are put in their place, the change is regressive. In the field of the exact sciences, there is seldom much resistance to progress or controversy over abandoning the old and accepting the new. In business, however, the reverse is generally true. The power of pecuniary vested interests nearly always stands in the way of progress. It is for this reason that efficiency of distribution lags behind efficiency in production. Business technique evolves more slowly than engineering technique. Consequently, business requires occasional readjustments which may be more or less violent and destructive. During these periods of readjustment, much that is old, much that is obsolete, much that represents great book value but may have little *value in use*, tends to disappear. It is not unlikely that much of the values, established practices, and vested interests, which have been in the making for over half a century are about to be "written off" in the inevitable readjustments which are in process.

Highway costs and their distribution.

Many questions concerning the ownership and use of automobiles, the freight rates and passenger fares which should be charged by trucks, busses, and cabs in public service, and the taxation and regulation of motor vehicles are dependent for their solution upon the burdens of highway costs and the policy of their distribution.

At the present time, the probable annual requirements of the future for new construction are most difficult to estimate and the continuing costs of maintenance and replacement of recently constructed roads are equally uncertain. At least another decade of experience in road building and repairs, with different materials and under a wide variety of conditions, will be necessary to establish dependable standards of construction and accurate means of estimating these annual outlays.

Forty years ago the cost of maintaining the highways each year was about $75,000,000. This was a county and city tax burden, usually levied as a "poll tax" and in large part "worked out" by the resident farmers by direct labor on the roads. Within 25 years following the advent of the automobile, the increase in mileage and the surfacing of roads advanced the annual expenditure to over $1,000,000,000.

During the earlier period, no attempt was made to adjust the *incidence* of road taxes to the individual vehicles which traveled the highways, excepting only an occasional bridge toll surviving from antibellum days in a few obscure counties. But, in 1918-1919, because of the mounting public costs of the war, the pressing industrial and commercial needs for road construction and the obvious pecuniary benefits to commercial vehicle owners using the roads, there appeared a logical demand that a definite proportion of highway costs be placed upon the automobile. Also, the "ability principle," that the then select few who could afford to operate private cars could equally well afford to contribute to the highway fund, provided a convincing argument for the reallocation of road building and maintenance expenses.

The theory of road taxes.

Instinctively, the owners and manufacturers of motor vehicles have resented the theory that the incidence of highway costs should fall directly and proportionately upon the vehicular traffic served by the roads. In defending their position, they invoke the general welfare principle that the highways serve society in many ways not directly chargeable to the motorist. This is particularly true, it is argued, of local roads and city streets which are necessary for farm and factory products to reach the railways and distributing points, and also are necessary for customers to reach the markets. Without these capillaries of the industrial cir-

culatory system, the trunklines of transport and communication would be useless and the economic and social establishment would be unable to function. Furthermore, the streets and highways and motor equipment are necessary for fire and police protection and for the maintenance of schools, hospitals, churches, and practically every cultural activity. The highways render "general welfare" and "social progress" services, it is claimed, and it would be absurd to charge all the cost upon the motorists.

The converse position is taken by partisans of the railways who feel the paralyzing thrust of motor competition and, responding to the instinct of self-preservation, they demand that the entire cost of highway improvement since the horse-and-buggy days be charged to the automobile.[1] As in most instances of partisan controversy, *reason* probably will be found between the two extremes.

An intermediate approach to the problem of highway costs is advocated by the United States Bureau of Public Roads. The Bureau proposes that the motor-vehicle operator accept responsibility for the state highways or trunkline roads, and that local roads and city streets be maintained from general tax funds. The controversy of the incidence of highway and street taxes remains partisan and unabating, but the trend of reasoned opinion is toward the position which we have just stated above.

The incidence of highway costs. — In recent years, highway funds have been derived from four sources: (1) general property taxes and appropriations; (2) motor taxes, including gasoline tax and license fees; (3) state bonds, generally secured by future motor taxes; and (4) federal aid. In this classification, both bonds and motor taxes are ultimately paid by the motor operators. They must also pay their proportionate share of the other state, local, and federal taxes from which the balance of the road fund is supplied.

For the year 1921, 49.9 per cent of the year's total highway and street construction and maintenance costs were paid from motor taxes and bonds combined. The balance was paid from general

[1] "Not only do the railways emphasize the burden imposed upon general property for local-road and city-street construction as well as maintenance, but stress the accumulated 'deficits' chargeable to the motor vehicle — deficits that were great in earlier years when highway outlay was large and motor-vehicle revenues relatively small, and that allegedly continue to accumulate despite license and gasoline tax yields." — Miller, *op. cit.*, p. 605.

taxes and federal aid. In 1930, the motorists contributed in direct taxes and bond obligations 63.5 per cent of the total, and in 1931 the corresponding figure was 79.5 per cent.[1]

A report of the Bureau of Public Roads shows total fees and taxes (federal, state, and local) upon motor vehicles, in 1932, to have amounted to $1,001,150,000.[2] Total funds available for state highway purposes in 1932, were $1,173,576,000, and actual disbursements were $955,446,000.[3]

During the fiscal year 1934–1935, the federal funds made available for road building under the National Industrial Recovery Act and the Hayden-Cartwright Act amounted to $600,000,000, only a part of which was spent. In addition to federal funds, the states spent out of taxes approximately $586,000,000 over 90 per cent of which they collected from motorists.

Air transport.

Almost until the present generation, navigation of the air was associated with the working of miracles and the imaginings of mythology. The development of chemistry resulted in successful experiments with the hydrogen balloon by Charles and Rozier in France in 1783. The theory of the airplane was worked out, independently, by Caley and Henson in 1843. Sir George Caley described flight as purely a mechanical problem — "To make a surface support a given weight by the application of power to the resistance of the air."

The perfection of the internal-combustion engine, in 1898, enabled Santos Dumont, a Brazilian, and Count F. von Zeppelin, of Germany, to convert Rozier's passive gas-bag balloon into a dynamic airship by the successful installation of a propeller. Five years later the brothers Orville and Wilbur Wright successfully applied a gasoline-driven unit and steering device to Caley's "tilted plane" and accomplished their initial flight of 120 feet in 12 seconds, at Kitty Hawk, North Carolina.

Lighter-than-air-craft were brought to a high degree of perfection in Germany during the war as observation units by day and offensive units at night. A considerable number of "Zeppelins" were constructed at Friedrichshafen and used during the war,

[1] Compiled from National Automobile Chamber of Commerce figures.

[2] U. S. Bureau of Public Roads, Dept. of Agriculture, *Taxation of Motor Vehicles in 1932*, Washington, October, 1934.

[3] Statistical Abstract, 1934, p. 337.

mostly for bombing attacks over England and France.[1] By the terms of the Treaty of Versailles, the construction and use of military aircraft was suspended in Germany. A commercial ship, the "Graf Zeppelin," was built in 1928. Its initial flight to the United States and return with mail, freight, and 60 passengers and crew, a journey of 6,300 miles, was accomplished in 112 hours. The following year this ship circumnavigated the globe. Subsequently, it maintained a regular transatlantic commercial and passenger service between Germany and Rio de Janeiro. The remarkably successful operations of this airship induced the Zeppelin Corporation to undertake the construction of a larger and improved craft of the same type for the northern transatlantic service. This project was successfully carried out and regular service installed in 1936. The great ship Hindenburg maintained a regular service between New York and European points without incident for an entire year. In May, 1937, the ship was destoyed by fire while landing passengers.[2] Great Britain and the United States have persistently, but unsuccessfully, experimented with the Zeppelin type of aircraft in the military and naval services. Germany's success with lighter-than-air ships in both military and commercial service is in striking contrast with well-nigh complete failure elsewhere.

Heavier-than-air craft. — The development of the airplane is marked by three distinct periods: (1) a decade of adventure and rival experimentation; (2) military adaptation during the World War; (3) post-war commercial adaptation, civilian flying, and continued military development.

Prior to the war, both civilian and military experiments were successfully conducted with the airplane in the United States and Western Europe. But the unfavorable ratio of motor-weight to motor-power was, for several years, a limiting factor in the efficiency of aircraft. For this reason, it appeared impossible to build planes with sufficient capacity or cruising range to do more than carry one person for a short distance. However, a sporting interest in "flying" and in speed and altitude tests continued to stimulate experimental construction and resulted in the training of a considerable number of venturesome pilots.

[1] British war records show that 208 Zeppelins appeared over England during the war. They dropped 5,907 bombs, killing 528 persons and wounding 1,157 persons.

[2] The disastrous destruction of the Hindenburg is ascribed to the use of hydrogen gas, a result of the lack in Germany of sources of helium gas.

The actual use of planes was confined to rival speed, altitude, and endurance contests, and exhibition flying. The armies were experimenting with planes as mobile observation units and manufacturers were striving to improve body design in respect of balance, weight, strength, and air resistance, and to increase the power ratio. Perhaps the most interesting phase of physical research in airplane construction and the most important in recent years has been the design of propeller blades.

In 1914, airplanes capable of carrying two persons, and having a cruising range of 500 miles and a sustained speed of 80 miles per hour, were built. Individual one-man records of speed at 84.5 miles per hour, unbroken flight of 930 miles, and altitude of 9,032 feet had been established. In 1914, all armies in the World War were using unarmed two-seater planes for observation on the Western Front. Combat planes with machine-gun armament became general in 1915 and were soon followed with bombers capable of carrying two persons and a cargo of several hundred pounds of explosive.

As a result of the military development of the airplane during the war, all major combatant powers were supplied with an abundance of experimental aircraft and trained operators and were equipped to build planes in large numbers. An adequate air service was universally conceded to be an essential element of modern military organization and equipment. To this end, the establishment of auxiliary commercial air services, and the development of production was made a matter of vigorous public policy in all important nations, save in Germany where treaty restrictions temporarily intervened, and in the United States. Generous subsidies were granted and passenger, express, and mail services were rapidly organized and have been maintained. On a few foreign passenger lines operating revenues have approximated expenses. The Paris-London service is an example.

Until recently, government subsidies have been in disfavor in this country. Funds appropriated for the development of military aviation in the United States have been relatively meager, and civil aviation has been obliged to make its own way. A large stock of war-time machines was sold as "surplus war material," and others were continued in army service for many years. This policy has been doubly disastrous. The demand for new machines, both military and commercial, was so reduced as to retard the

advance of engineering technique in aircraft construction. Secondly, unsatisfactory performance of this obsolete equipment has resulted, generally, in a loss of confidence and enthusiasm in the development of all phases of aviation. Despite the front-rank position of our inventors and early operators of aircraft, our experience for several years after the war was not very progressive.

Inadequate training, mechanical failures, casualties, faulty organization and administration, public apathy, and lack of capital generally prevailed. Nevertheless, the persistent endeavors of a small group of private citizens and public officials have achieved some rather remarkable results.

The air-mail service. — In 1918, the Post Office Department established an experimental air-mail service between Washington and New York which was continued for three months. Upon the successful results of this experience, a transcontinental service was planned and put into operation by sections, over a period of a few months. Regular service was available from New York to San Francisco on September 18, 1920.

At the end of five years, the pioneer work of a transcontinental air service was finished. Routes and terminals had been established, personnel had been trained, progress had been made in the design and procurement of requisite types of planes, and a fairly efficient mail service had been developed. It was then thought that the government, having seen the project through the initial period of financial and technical development, should withdraw and make way for private enterprise. In the course of two years thereafter, private operators had taken over all government main-line routes and many branch lines had been organized.

The carrying of the mail was transferred to private air lines on the basis of contracts awarded to lowest bidders, at rates not to exceed $3 a pound which, as was anticipated, ultimately netted a considerable loss to the government. The Post Office Department first attempted, unsuccessfully, to sell air postage at 24 cents an ounce. This rate was successively reduced to 16 cents, then to 6 cents and, for a time, to the standard postal rate of 2 cents. The rate was thereafter readjusted from time to time until on July 1, 1934, it was made 6 cents for each ounce or fraction thereof.

In 1926, the last year of complete government operation, 810,000 pounds of domestic and foreign air mail were moved. In 1928, the government paid $7,430,000 for the movement of

4,060,000 pounds of mail. The annual volume reached a maximum, in 1931, of 9,500,000 pounds, and dropped, in 1932 and 1933, to a little less than 8,000,000 pounds, at a gross annual cost to the government of over $30,000,000. The excess of mail contract payments to carriers over air postal revenues, from 1928 to 1933 inclusive, has been calculated to be $54,605,787.[1] In November, 1935, mail service was established between Alameda, California, and Manila, P. I., via Hawaii, Japan, and China, a distance of 8,000 miles. Flying time required on this journey approximates 60 hours.

Air passenger service. — Under government operation, no attempt was made to develop passenger traffic. However, the time which may be saved on long journeys by air has sustained a certain demand for passenger accommodations since the air-mail lines were first established. During the first year of complete private operation (1928), 29,713 passengers were carried. The Watres Act of 1930 was so formulated as to require the private companies receiving mail contracts from the government to provide passenger accommodations in mail planes. By 1933, the number of passengers had increased to 568,940, and thereafter changed but little until 1936 when a considerable increase was attained.[2]

In the beginning, fares were set at 12 cents a mile. Operators soon learned that few passengers were willing to pay so high a rate. The rates were lowered and many comforts and conveniences were added to the service. In 1929–1930, arrangements were made with railway companies by which transcontinental passengers were transferred to Pullman trains at night and permitted to continue their journey by plane during the day. The rates were made to approximate Pullman fares. By July 1, 1935, the average prevailing passenger rate had declined to 5.9 cents per mile.

Carriage of goods by air. — Air transport companies assemble and distribute express shipments in a manner similar to that in effect on the railways. One group of air lines operates a subsidiary express company which makes ground collections and deliveries and arranges interline transfers. A number of air lines

[1] Paul T. David, *The Economics of Air Mail Transportation*, The Brookings Institute, Washington, 1934, p. 159.

[2] United States Dept. of Commerce, *Aeronautics Bulletin*, No. 1, 1935.

utilize the ground services of a railroad express agency under contractual terms similar to those existing between the agency and the railways. In 1934, 3,449,675 pounds of air express were carried by the scheduled air lines. Contract package transport by private carrier must have added greatly to this total.

Goods commercially adapted to transport by air must be relatively valuable and of small bulk. Newspapers, motion-picture films, securities, building plans, and jewelry are customary types of consignments. A variety of perishable goods, also, are being moved by air. Articles, including cut flowers, fancy fruits, and vegetables are receiving rapid distribution to distant markets and discriminating customers by the air express. Refrigeration by means of carbon-dioxide ice has been introduced to facilitate this service. Whenever speedy delivery of merchandise is sufficiently important to justify the high transport cost, air express is the logical carrier.

A second consideration sometimes prevails which commands the service of the airplane in the transportation of both passengers and express. Remote districts, not otherwise possible or conveniently accessible, have been explored and their resources are being exploited with the indispensable aid of air transport. Mining operations in the Great Bear Lake region of Canada is a case in point. A considerable population, together with their domestic and industrial supplies, including mining tools, machinery, and building hardware, are being transported some 300 miles by airplane, and concentrated ores of radium and gold are being removed. The probability of similar operations in South America, Africa, Russia, and interior Asia are indicative of the reasonable prospects of air transport in regions heretofore isolated.

Competition between air and surface transport. — Aside from the loss of mail-tonnage by the railways, as a consequence of the subsidized air-mail service, there appears to be no considerable zone of competition between air and surface transport.

The express tonnage of the air lines, when compared with the volume of freight and express moved by truck and railway carriers, is negligible. Furthermore, very little of it actually would be moved by rail or highway if air service were not available.

The estimate of passenger competition is almost as insignificant. The total revenue air-passenger miles for a period of five years, ending Dec. 31, 1935, approximated 500,000,000; the number of

passengers carried in 1935 was 746,946. When compared with 100,700,000,000 miles of railways during the same year, and 17,000,000,000 passenger miles of the busses, the contrast is sufficient to dispel any fears that surface transport agencies are in danger of cut-throat competition from the air. The extent of postal service by air will almost certainly be confined to a relatively small amount of high-class long-distance mail which never has been particularly attractive to the railways. The annual total, which shows little tendency to increase, is now less than 3,000,000 ton miles. Finally, it may well be considered that United States mail contracts always have conferred upon the carriers a substantial measure of subsidy. The railways have shared liberally in this "patronage." Nor have the benefits of carrying the mail, in the case of the railway corporations, been confined to the contractual payments made to the companies for that service. The "necessity of expediting the movement of the U. S. Mail" has frequently placed the railway properties under the protection of the government and has assured the continuity of their operation when in danger of being suspended by striking employees.

The subsidy feature of the air-mail service should, perhaps, be a matter of greater public interest than it is. There are three general methods by which an air-mail service may be maintained. (1) a government owned and operated service, as was the case prior to 1926; (2) a privately owned and operated service carrying mail under government contract, but in no way making the conditions of carrying mail or compensation therefore contingent upon the carriage of passengers or goods; (3) a privately owned and operated service in the joint and coincident business of moving the mails under government contract and carrying passengers and express in competitive commerce. This policy prevails at the present time, under the provisions of the Watres Act of 1930. It is in keeping with our traditional methods of forwarding the mails, whether by ship, stagecoach, express rider, or railway train — except, that mail contracts never before so clearly indicated the intention of the government that mail carriers should provide passenger accommodations in mail-carrying vehicles.

The McNary-Watres Act clearly was intended to serve other purposes than to *facilitate the carrying of the mail.*[1] There was an

[1] Paul T. David, *op. cit.*, pp. 160–162.

undoubted intention of placing within the Post Office Department authority to aid the development of passenger service in commercial aviation. This purpose is evidenced by the rate formula of the Post Office Department, effective May 1, 1930, by which was determined the compensation of air mail carriers. The formula provided, in addition to base rates calculated upon space and weight of mail, that a variable mileage allowance would be paid in consideration of passenger accommodations in mail planes. This item ranged from 1.5 cents to 13 cents per mile, according to the number of passenger seats and the style of plane in which the mail was carried.

Mr. Paul T. David, working under the auspices of the Brookings Institute of Washington, estimated the aggregate air-mail payments to carriers during three years (1931–1933) to be $56,281,994. The "expense plus fair profit" of carrying the air mail for this period he calculated to be $21,775,559. The resulting difference, $34,506,435, he considered to be a "passenger subsidy element of air-mail payments." So considered, the federal government must have contributed 15.4 cents for each mile of passenger travel — slightly more than twice the amount contributed by the passenger himself.[1]

The specific air-mail deficits discussed above constitute an important part of a probable total of over $100,000,000 expended by the government in mail subsidies. The question properly arises as to the actual motives and justification of such public expenditures. Whatever the alleged and conscious motives may be, the fact remains that the results will show themselves in a variety of ways — economic, political, and social. Space does not permit a discussion of these several aspects of mail subsidies. It is reasonable to believe, however, that Congress, in promoting commercial air service by means of mail subsidies, was not unmindful of the value of aeronautical development, both in the progress of civic industries and in the maintenance of the national defenses.

The safety of air travel. — The hazard of the airplane is a consideration of sufficient gravity to deter many persons from travel by air. Because of the vague nature of data on this subject, delusive statements are frequently made, especially as concerns the relative risk of flight and travel by automobile.

[1] David, *op. cit.*, pp. 167–170.

As simple as the problem at first glance seems to be, a statistically accurate and convincing statement of the hazard of air travel is difficult to formulate. The ratio of "passenger-miles per personal injury" and of "passenger miles per fatality" are published annually, and are frequently used as criteria of risk. Similar data are available for travel by automobile. These figures are sufficiently accurate to measure the *highway hazard* of the automobile from year to year and in one place and another, or the *casualties of* coincident *travel by air;* but they are not a satisfactory means of determining the *relative danger* of the two modes of travel. This is true for the following reasons:

First, accidents in the air are usually confined to travelers in the plane. "Motor casualties" are divided between riders and pedestrians, but statistical records impute all highway accidents and casualties to the motor car. Consequently, "passenger-miles per fatality" means one thing in air travel, and quite another in motor travel. Second, in airplane accidents, a relatively larger proportion of casualties are fatalities than in motor accidents where injuries are more prevalent. A comparison of "fatalities" is, therefore, unfair to the airplane. Third, the question arises as to whether *travel risk* should be measured in terms of *distance* or *time.* Industrial accidents are enumerated in terms of time, and insurable hazards are also so calculated. Why not, therefore, compare the airplane, the automobile, and the railway coach, as respects danger, in terms of hours of travel — the *time* to which the traveler is exposed to the risk?

The following calculations of airplane and motor fatalities, in terms of time and distance, are perhaps as comparable as any that may be prepared from available data. They are subject to interpretation in the light of the above observations. They are based upon the records of regularly scheduled mail and passenger airplanes for a period of three years, ending Dec. 31, 1934, and upon the records of motor traffic for the year 1934.

Average number airplane passenger-miles per passenger fatality	10,567,000
Average number of airplane passenger-miles per combined passenger and pilot fatality	6,560,000
Average number of flight-miles per fatality	1,641,000
Average number of airplane passenger-hours per passenger fatality	84,533
Average number of airplane passenger-hours per combined passenger and pilot fatality	52,580
Average number of automobile passenger-miles per motor fatality	10,956,000
Average number of automobile passenger-hours per motor fatality	226,000

TABLE II. — CIVIL AVIATION IN THE UNITED STATES, 1926–1935 [1]

ITEM	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
1. Airports	—	1,036	1,364	1,550	1,728	2,093	2,117	2,184	2,297	2,369
2. Airways (miles)	8,252	8,867	15,590	24,864	29,887	30,450	28,550	27,812	28,084	28,267
3. Lighted airways (miles)	2,041	4,468	6,988	12,448	15,258	17,512	19,500	18,655	19,081	—
4. Mail carried (tons)	405	827	2,031	3,886	4,257	4,841	3,955	3,909	3,024	6,638
5. Passengers carried	5,782	8,679	49,713	173,405	417,505	522,345	540,681	568,940	561,370	860,761
6. Goods carried (tons)	2	2	108	128	234	575	800	1,226	1,729	2,756
7. Airplanes licensed	—	1,908	3,165	6,685	7,354	7,553	7,330	6,896	6,339	7,371
8. Pilots licensed	—	1,572	4,887	10,215	15,280	17,739	18,594	13,960	13,949	14,805
9. Airplane production	1,186	1,995	4,346	6,193	3,437	2,800	1,396	1,324	1,615	—
10. Miles flown (daily average)	11,830	16,083	29,242	68,881	101,220	129,825	139,542	149,706	133,662	174,084

[1] *Aeronautics Bulletin*, U. S. Department of Commerce.

Comparative travel in the United States.

The changing travel situation in this country is revealed by the following calculations for 1921 and 1934.

TABLE III[a]

MEANS OF TRAVEL	PASSENGER MILES (BILLIONS)	
	1921	1934
Steam railways	37	18
Private automobiles	75	358
Busses (intercity)	—	11
Airplanes	—	0.2
Total	112	387.2

[a] Estimates for 1936 indicate a continued proportionate increase in the total including some recovery in the railway position and a notable advance in air travel.

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CHAPTER XXXII

AGRICULTURAL PROBLEMS

Since the World War the changes in American agriculture have been exceedingly rapid and the need for readjustments has been so great that unusual policies have been adopted to cope with the situation. The World War greatly stimulated production. The application of science and the mechanization of agriculture had intensified the culture of and increased the production on the better grades of land and brought millions of acres of poorer grades of land into use on the plains, on the cut-over lands, and in the drained and irrigated areas. On the other hand, east of the Mississippi other areas were being abandoned and were reverting to brush and forests. After the war, agriculture had to be readjusted to a decreased demand. The sharp decline in prices called for drastic readjustments on both the intensive and the extensive margins of cultivation. Foreign markets were curtailed as European nations adopted the policy of self-sufficiency. A more restricted immigration policy, a slower rate of population growth at home, changes in the consuming habits of the American people, even during the period of urban prosperity, still further reduced the market for foods and fibers. The substitution of trucks and tractors released about 30 million acres for the production of human food which only a few years before had been needed for the support of the horses and mules that had supplied power for both city and country. Improved techniques and mechanization continued to increase production in spite of lowered demands. Long before 1930 it was evident that agriculture was over-expanded and that there were "too many farmers." [1] The repercussion is seen in Table I.

It will be noted that there were fewer people on farms in 1930 than in 1920, accompanying a decrease in the number of farms during this decade. The numbers of acres of land in farms de-

[1] Wheeler McMillen, *Too Many Farmers*, William Morrow and Company, New York, 1929.

TABLE I. — CHANGES IN AGRICULTURE, 1920–1935

	1920	1925	1930	1935[a]
Farm population	31.6 million	31.0 million	30.4 million	31.8 million
Number of farms	6.4 million	6.3 million	6.2 million	6.8 million
Land in farms (acres)	955.8 million	924.3 million	986.7 million	1,055.0 million
Land in harvested crops (acres)	363.0 thousand	344.5 thousand	359.2 thousand	295.6 thousand
Value of land and buildings (dollars)	66.3 billion	49.4 billion	47.8 billion	32.8 billion
Number of tractors	229 thousand	473 thousand	851 thousand	—

[a] 1935 figures preliminary and not available as yet for certain items. Other items from U. S. Census, 1920, 1925, and 1930.

clined sharply between 1920 and 1925 but recovered rapidly, especially after the "back-to-the-land" movement started in 1929. The decrease in the acreage of harvested crops after 1920 was so marked as to be noted by the Secretary of Agriculture as "the first decrease ever shown by census statistics in the agricultural area of the nation." The value of farm real estate today is less than half of what it was 15 years ago in spite of the increase in the number of farms, the numbers of acres of land in farms, and an increase of our total population of approximately 20 million people, who represent new customers for the farmers' products.

Evolution of agriculture in the United States.

Agriculture began in the northern states largely as self-sufficing farming. Even under the plantation system where cotton and tobacco were grown for export the farm was organized to produce many of its needs at home. Gradually the so-called "commercial farm" was evolved. More and more of the articles once made on the farm were made in factories. The hand-made flail, scythe, rake, plow, and other tools were replaced by factory-made threshers, binders, mowers, rakes, gang plows, and other complicated machines. At first we substituted animal for human power; and recently the internal combustion engine has replaced the horse and mule to a large extent. In 1920, 3.6 per cent of the American farms had tractors, ten years later 13.5 per cent. Table I shows that the number of farms with tractors almost quadrupled in this decade of agricultural depression; the number of farm-owned automobiles doubled, and motor trucks increased from 139,000 to 900,000. The result has been a greater division of labor, the release of farm labor for industry, larger

farms per operator, a greater income per man, and a great surplus of products above the needs of the farmer to feed and clothe urban populations and to supply raw materials for manufacturing and export. This transformation has lifted the typical American farmer out of the self-sufficing or "peasant" stage to the rank of "manufacturer" of food fiber and other raw materials. It has given him the opportunity to enjoy a high standard of living as measured in terms of a modern home, cars, radios, electric lights, and other evidences of prosperity.

On the other hand, selling his products on the market and buying the goods of the manufacturer instead of producing for his own use places the farmer at the mercy of the "price system." The "peasant" farmer has fewer of the amenities of life but he is sure of a home, food, clothing, fuel, and shelter. He is independent and has a sense of security which is the envy of urban dwellers and specialized farmers in this period of depression.

While it is true that agriculture has become more and more commercialized and specialized there are many farms which are still more or less self-sufficient, and therefore share the old with the new features of agriculture. How far this is true can be seen from Table II, which shows the principal types of agriculture in the United States as reported by the census of 1930. At that time there were about 6¼ million farms in our country. Of these a half a million (7.9 per cent) were classed as self-sufficing because more than half of the farm products, by value, were used at home. This is, however, far from complete self-sufficiency. About one-eighth of the farms were classed as "general." These are the diversified farms with many crops, no one of which comprised more than 40 per cent of the total value of all the products of the farm. Farms of this type go very far in providing home-grown food, fuel, and other necessaries of life for the farm family.

At the other extreme are the cotton farms which constitute the largest single class, 26 per cent of the total. Here the farmer's entire energy is used in growing a single crop which he can neither eat nor wear in its natural state. Sometimes the cotton farmer does not even raise feed for his animals or grow vegetables or fruits for his own table. In such cases his fate rests upon the abundance of his crop and the price of cotton balanced against his bill for food and clothing, his rent, and the cost of the money borrowed to "make the crop." The "cash grain" farmer pro-

TABLE II. — NUMBER, TENURE STATUS, LABOR EXPENDITURES, SIZE OF FARMS, AND VALUE OF LAND AND BUILDINGS PER FARM BY FARM TYPES, 1930 [1]

TYPE	NUMBER	PER CENT OF TOTAL	NUMBER TENANT OPERATED	PER CENT OF CLASS TENANT OPERATED	PER CENT OF CLASS REPORTING EXPENDITURES FOR LABOR	AVERAGE SIZE OF FARM (ACRES)	VALUE OF LAND AND BUILDINGS PER FARM
Cotton	1,640,025	26.1	1,192,195	72.7	28.3	72	$2,960
General	1,044,266	16.6	281,213	26.9	47.4	138	7,199
Dairy	604,837	9.6	129,444	21.4	59.9	139	9,865
Self-sufficing	498,019	7.9	132,377	26.6	19.5	70	2,447
Animal Specialty	479,042	7.6	156,777	32.7	65.1	230	16,276
Cash Grain	454,726	7.2	233,068	51.3	65.4	352	17,580
Crop Specialty	431,379	6.9	201,586	46.7	45.4	109	6,162
Part Time	339,207	5.4	[a]	[a]	[a]	47	3,445
Poultry	166,517	2.7	21,126	12.7	40.5	62	5,981
Fruit	141,418	2.3	16,155	11.4	75.5	71	17,997
Truck	84,561	1.3	27,917	33.0	58.6	60	9,734
Stock Ranch	71,000	1.1	10,969	15.4	61.7	2,912	28,044
All Other	333,651	5.3	261,538	38.9	21.0	121	7,043
Total	6,288,648	100.0	2,664,365	42.4	41.8	157	7,614

[a] Included with "All Other." Data not available for this item.

ducing corn, wheat, flax, or rice is almost as specialized as the cotton farmer and is subject to the same risks. Two other groups of farmers — those raising crop or animal "specialties" — are often at the mercy of the price system. The three together are almost as numerous as the cotton farmers. Dairy, poultry, fruit, and truck farms and the ranches need no explanation, but their very names indicate that the operator is concentrating on one or more lines of agricultural production.

Finally, there are the part-time farms, which in 1930 comprised over 5 per cent of the total number of farms, but which no doubt have become more numerous since then. Part-time farmers have two jobs — one in some non-agricultural occupation and the other in the operation of a small tract of land. In some cases most of the work on the farm is done by other members of the family. This type of farming is of considerable interest at the present time because it represents Henry Ford's much publicized idea of part-time work in industry with the land to fall back upon in times of unemployment. It is also the ideal of those who wish to decentralize industry and set up "subsistence homesteads."

[1] Adapted from U. S. Census, 1930, "Type of Farm."

Geographic specialization.

Not only are farms specialized by recognizable types as to crops and functions, but these types are localized geographically. Under a peasant or self-sufficing economy all farms tend to produce the same crops within the same large geographic regions. Since a variety of crops is needed for home use there is little specialization, but under commercial agriculture each region tends to grow that crop or crops which are most profitable. Regions which are not adapted to growing a diversity of crops could hardly be utilized for self-sufficing agriculture, as, for instance, the semi-arid regions. Specialization releases the services of all types of soils and climates and permits them to contribute their products for the benefit of mankind.

However, geographic specialization means that some crops have to be grown long distances from the great consuming centers, which in the United States are in the Middle Atlantic States and in the Great Lakes region. Stock ranches and grain cash crops are predominantly western types of agriculture. More scattered and at still greater distances from the chief markets are some of the fruit, truck, and poultry farms. It is this great distance between producers and consumers that is partly responsible for the marketing problems of the farmer, and the more specialized and localized the farmer is the more acute is his need for adequate marketing machinery. This need has not yet been met in any co-ordinated or comprehensive way.

The diversity of crops and types of farming also means that agriculture is not a unit. The interests of farmers are often at cross purposes. The specialized poultry farmer who buys grain and sells eggs wants cheap feed and high priced eggs, whereas the wheat farmer in eastern Washington prefers to have high priced wheat and low priced eggs. The more specialized the type of agriculture the more active is the competition between those at home and abroad who raise a particular crop. Many of the staple crops, notably wheat, cotton, tobacco, and pork, are raised in such quantities in this country, that we have an exportable surplus. Under such conditions the American farmer cannot expect a tariff to shield him from the competition of the foreign farmer. Hence the many devices, including the A. A. A., aimed to create the machinery which would do what a tariff would do if we were importing the product.

The organization of the farm and the size of the farm business.

With but few exceptions each farm is a separate business unit managed by a single entrepreneur, usually the head of a family with the members of the family as the entire working force. In 1930 only 42 per cent of all the farms reported any expenditure for outside labor, and many farms employed a "hired man" for only a few weeks. The average number of days of labor employed per farm was 158 days. As Table II shows, there is a great variation among the different types of agriculture. Self-sufficing, cotton, poultry, and general farms are predominantly family labor farms, whereas the fruit, grain, and animal specialty farms rank higher in their dependence on outside labor.

Being centered around the working force as represented by the family, the size of the farm, measured in acres or value, tends to be of that magnitude which the farm family can handle efficiently. This is not only the case in the United States but throughout the world. A farmer with unusual capacity may employ considerable outside labor and increase the size of his business. Generally the family farm tends to be of sufficient size to give full employment at productive labor to the members of the family. In case the family is large and the farm small they may try to enlarge it by the rental of additional land; more generally the surplus members of the family work for neighboring farmers or seek employment in the cities. In the cotton section, the landlord will often adjust the area of a particular renter according to the size of the tenant's family.

Certain corollaries flow from the family farm type of organization. It produces an inflexible labor force, which, with a fixed area of land and more or less fixed amount of equipment for a given year, means that the farmer cannot easily reduce production. He cannot "fire his family," and taxes, interest on his borrowings, and other fixed charges continue whether half of his land is in use or all of it. It might pay him to use his labor and equipment to produce a full crop at a lower price in place of a small crop at a higher price. Wherever natural conditions will permit diversified farming the farmer can, of course, shift from one crop to another in order to employ his land, labor, and capital to full capacity, but he has little or no choice of crops in wheat, cotton, and other one-crop types of agriculture. For this reason the advice of the Federal Farm Board to wheat farmers to re-

duce production fell on deaf ears and efforts to control cotton acreage and production by voluntary effort failed.

The family farm also implies a patriarchal relationship between the head of the family and the second generation who work together as soon as the children can carry an armful of wood or carry the lunch to the workers in the field. This makes the calculation of labor costs difficult, if not impossible. Besides there is labor which is performed at odd times or when weather does not permit field work which can hardly be charged at any regular rate.

Because the family is an economic asset on the farm, agriculture has been favorable to large families, quite in contrast with cities which are not reproducing their own numbers. To maintain even a stationary population there should be about 370 children under 5 years of age per 1,000 women of child bearing age, *i.e.*, 15 to 45 years. In 1930 there were only 293 children less than 5 years of age per 1,000 women in cities over 100,000 population, and even in cities of 2,500 to 100,000 there were not enough children to maintain the present population. This latter group of cities had only 341 children 1 to 5 years old in contrast with 471 children in villages and 575 on farms per 1,000 women of child bearing age. Some of the areas where the most primitive, almost self-sufficing agriculture, predominates, especially in the Appalachians, have the highest birth rate. Here there were over 900 children less than 5 years for every 1,000 women 15 to 45 years of age.[1]

From this it is quite evident that the movement from the farms to the cities is a normal and desirable one in spite of the age-old bewailing of the "rural exodus." Given a farm of the proper size and a family of four or five children, it is obvious that only one of them can inherit the parental farm. Dividing it equally among the heirs as is the French custom merely means more and more uneconomic units as time goes on. It is said that one reason for the small families among French peasants is to avoid the subdivision of economic units into tiny tracts. Very little division of farms takes place for this reason in the United States; rather there is a tendency for farms to become larger rather than smaller. Even if some of the children marry other farmers' sons and daughters and so remain in the neighborhood, three or four chil-

[1] O. E. Baker, "Rural-Urban Migration and the National Welfare," *Annals of the Association of American Geographers*, Vol. XXIII, June, 1933.

dren must seek farms elsewhere or find other employment. While the frontier was open it absorbed much of the surplus rural population, but from the very beginning of our history rural people have migrated to the cities. Industry and commerce expanded rapidly, demanding more and more brain and brawn. Cities grew in numbers and size until more than 56 per cent of our people are now living in cities and incorporated places of 2,500 inhabitants or more. Even though urbanization should cease and cities remain at the present level of population, a steady cityward migration is necessary to maintain them because of the low urban birth rates. This assumes, of course, little or no foreign immigration. Economic opportunities represented the real "pull" of the cities more so than the much trumpeted "white lights."

With the mechanization of agriculture and increase in the size of farms the normal migration of surplus farm population as described above was augmented by those displaced by machines and power. Offsetting the cityward migration there has always been a farmward movement consisting of farm boys returning to the country after earning money in urban occupations and of city-bred people tired of urban life. The *net* cityward migration has always been less than one would suppose. However, between 1920 and 1930 the usual rural exodus was accelerated by the disparity in prosperity between city and country. The total net migration to the cities during this decade is estimated at 5,898,000 persons.

Between 1930 and 1933 this trend was completely reversed; more people went to the farms of the United States than left the farms for the cities.[1] This re-absorption began with young unemployed people drifting back to the home farm. Some of them were married and had children, but room was made for them in the old homestead. Others without connections occupied abandoned houses on the poorer lands or in the suburbs. Part-time farmers who lost their city jobs became "whole-time" farmers. This accounts for the astonishing increase since 1930 in the number enumerated as farmers in the 1935 agricultural census and the increase of farm acreage.

This phenomenon illustrates the relative economic security of agriculture, particularly the diversified and self-sufficing types of

[1] Since 1933, however, the net migration to the cities has been resumed. Total farm population, however, is still increasing because of the high rural birth rate.

farming, and the power of the rural country to absorb population. This has caught the imagination of the public and even prominent people look upon "subsistence" agriculture as a solution for unemployment and the depression. They deplore the complex life and wants of the city and wish to lead people back to a simpler society "with fewer wants per wanter, *i.e.* lower material standards of living." [1] Others do not desire to turn back the hands of the clock quite so far, so prefer part-time farming to a complete retreat from the machine age. To industrialists who can discharge laborers and let them take care of themselves by working their "farms" this arrangement supplies cheap unemployment insurance. But to the farming population *per se* it can only mean new competitors or the loss of former markets whenever a city man becomes a farmer or even raises his own food.

With the family as the limiting factor it follows that the farm as a business is restricted in area and in the size of the enterprise. As Table II shows, the average farm of the United States contains 157 acres, varying with the type of farm. Among the small farms are the truck, fruit, cotton, and self-sufficing farms. Smallest of all are the part-time farms. At the other end of the scale are the large grain farms and the cattle ranches of the West. Using investment in land and buildings as a test, the order is somewhat different. The lowest investments were on cotton and self-sufficing farms, but fruit farms were in the same rank as the grain farms, exceeded only by the stock ranches. If the value of livestock and equipment is added to land and buildings, the average farm of the United States represented an investment of $9,103 in 1930, ranging from $2,116 in Mississippi to $23,229 in Iowa.

In one sense of the word, farming is a small scale industry organized on an individual proprietorship basis. Partnerships and corporations, when they do occur, are so few as to attract public attention. But the ownership of a property worth almost $10,000 accumulated in a short period of active farm occupancy is no mean accomplishment in an economic society where so many own very little productive property. Mechanization has tended to increase the size of the farm unit. Between 1925 and 1930 the average farm expanded from 145 to 157 acres. This increase was experienced in every state in the Union except in the case of

[1] Troy J. Cauley, *Agrarianism*, University of North Carolina Press, North Carolina, 1935, p. 111.

eight cotton states, which indicates that the increase in the average was not entirely due to the enlargement of the farms of the West.

The increase in the size of farms is not due to a change in the organization of the farm business. For many years, much to the dismay of those who reverence an independent individualistic yeomanry, it has been predicted that agriculture would inevitably follow industry in enlarging its units. It is held that the small "inefficient" independent farm must give way to large mechanized farms financed by a corporation, in charge of a manager, and operated with hired labor. The arguments in favor of corporation farming are: better utilization of equipment, the ability to hire experts for the different lines of work, smaller man power, and better bargaining power in buying and selling. In spite of these alleged advantages, the attempts at corporation farming have generally failed, largely because of the heavy overhead costs and difficulties of managing an industry spread over a large land area and subject to the vagaries of nature. The simpler, more primitive individual family farm can weather difficulties better than the more complex commercial organization.

In spite of certain advantages, there are some disadvantages in the family farm. Concerted and co-operative effort is difficult in an industry with millions of independent producers scattered over enormous areas. A few years ago much was said urging farmers to "control production" in imitation of industrialists. But farmers find it difficult to agree to regulate the acreage of a given crop and impossible to enforce the agreement. Even if they could reduce the acreage by common consent, they could not necessarily reduce production. With favorable weather conditions the total production may be larger than before; with unfavorable natural conditions acreage reduction and a short crop may produce a miniature famine, as recent events have shown.

Even if farmers could regulate acreage among themselves they have not been able to control their numbers. They have not even tried to have a "closed union." Besides, public opinion and our land policies have always encouraged a large rural population. It has meant cheap food and raw materials in cities and an influx of millions of young people at their most productive ages, educated and trained largely at the expense of the rural areas.[1] Many

[1] O. E. Baker, "Food and Folks from the Hinterland," *Survey Graphic*, October 1932.

people favor a large farm population for its contribution to population alone and see in the continued urbanization unfavorable reactions on our welfare. Public reclamation was started to create more farm homes and is still going forward, sponsored and encouraged by the Reclamation Service of the Department of the Interior, while another branch of the government was collecting taxes with which to pay farmers to reduce the acreage of certain crops until the Supreme Court declared the "Triple A" unconstitutional.

Since 1920 many agrarian policies which have been suggested aimed at producing an artificial scarcity for an industry subject to confusing public policies, unable to control its output, and which cannot benefit from a tariff except in the case of a few products such as wool and sugar. Among the policies suggested or used are bounties, export-debentures, the McNary-Haugen proposal, purchase of products under the Farm Board, and the Agricultural Adjustment Administration plan to control production.

Land ownership and tenancy.

Because of the individual proprietorship of farms, the farm must pass to the second generation or to a new purchaser as a unit. Farms cannot be bought by purchasing one share after another. Since few men have the cash to buy a farm outright, the sale and purchase of a farm usually means a large down payment and a mortgage for the remainder. In normal times the majority of mortgages are merely part of the transfer of farms from one person to another.

The family ownership of farms signifies that the children acquire rights to the property even though the legal title still rests in the father's name. One of the sons or perhaps a son-in-law inherits the homestead. Since the other children are entitled to their share of the estate and since many of them migrate to the cities, this means a substantial transfer of rural wealth to urban areas. This is of significance in connection with farm credit and the relation between the farmer and the commercial world about him.

To become the owner of the average farm means an accumulation of over $9,000 for the operator. Unless the farm is inherited without debts, the acquisition of a farm is a gradual process. So many farmers have begun this accumulation by working as farm laborers, then renting land and buying a farm with a mortgage

which is gradually paid off, that the procedure has been called the "agricultural ladder." Some farmers include other "rungs" such as working in cities; others shorten the ladder by omitting one or more stages; a few gain possession by marriage or gift.

From the social standpoint tenancy is a most important step on the "agricultural ladder" because of its relation to the tenure system of the nation. Tenancy means sharing the ownership of the factors of production between landlord and tenant. The landlord supplies land and buildings, which on the average farm were valued at $7,600 in 1930, whereas the remainder of the farm property usually furnished by the tenant was worth about $1,500. For tenant farms these figures are too high but they indicate the relative contributions fairly well. Tenancy thus permits a renter to utilize $7,600 of real estate with only $1,500 capital of his own. This arrangement also suits the retiring farmer. He can keep an active interest in the farm, supervise and assist the tenant, and share in the greater productivity resulting from this partnership. Eventually he "retreats" completely by selling the farm. Thus the transfer is made gradually at the lowest cost to the young farmer.

In some countries this partnership between landlord and tenant is permanent. The tenant prefers to keep his capital in mobile equipment and livestock and pays for the use of the land instead of buying it outright. Permanent landlordship is also the prevailing type in certain sections of the United States, but for other reasons. In 1930, 55.5 per cent of the farms of the South were rented, running as high as 65 per cent or more in four states, in contrast with an average of 6.5 per cent in New England or 18 per cent on the Pacific Coast. The Corn Belt is also a high in the proportion of tenant-operated farms. At least one-third of the farmers are renters in this region, with Iowa and Nebraska heading the list with 47 per cent of tenant-operated farms. However, here tenancy is usually a step on the "agricultural ladder," whereas this is unusual in the South.

In the South, tenancy is the result of historical factors. After the Civil War, propertyless negro slaves had to start with nothing to begin the road to ownership. Non-slaveholding whites had but little part in cotton culture before the war, but after the emancipation of the negro white families began to compete with negroes as renters on the old plantations. The white renters have increased steadily until today they outnumber colored

tenants. They also tend to form a permanent tenant class. Some of them do not own the usual equipment, tools, and livestock and are in reality mere laborers paid by getting a share of the crop. These are the "croppers" or "share croppers." The relative importance of the tenure classes of the South in 1930 is shown in Table III. It will be noted that there are only 182,000 colored owners and only a handful of colored managers. Twice as many colored farmers were croppers as owners. It is a notable fact, however, that the white croppers were almost as numerous as the colored but represented a smaller proportion of the white tenants of the region.

TABLE III. — CLASSES OF TENANTS IN THE SOUTH, 1930

	OWNERS	MANAGERS	CROPPERS	OTHER TENANTS	TOTAL TENANTS
White . .	1,233,656	16,529	383,381	708,563	1,091,944
Colored .	182,019	829	392,897	305,942	698,839
Total . .	1,415,675	17,358	776,278	1,014,505	1,790,783

The tenant problem of the South is complicated by the differences in race — the landlord almost always being white and the tenant colored — and by other factors such as credit, the marketing machinery, and customs and practices which have grown up as the result of reactions between landlord and tenant.

Another factor favoring a high proportion of tenant and cropper farming is the fact that cotton, tobacco, and one crop specialized farming is conducive to tenancy. Supervision even at long range, and the division of the crop on a share basis is much easier on such farms than in the more diversified and complicated types of agriculture. It will be noted from Table II that 73 per cent of the cotton farms were operated by tenants in 1930. In fact almost one-half of all the tenants of the United States raise cotton. Other types of agriculture with a large proportion of tenant farms are the grain and "crop specialty" farms, the latter devoted to beans, tobacco, hay, potatoes, etc. At the other end of the scale are the fruit and truck farms, of which more than seven-eighths are operated by owners. Even one-fourth of the self-sufficing farms are tenant-managed.

Although there are economic advantages, there are serious drawbacks to tenant farming as conducted in the United States.

In the first place, the tenant has no interest in the conservation of the soil. He prefers to exploit its fertility and move on. Unfortunately, many owners have taken the same attitude toward land, with the result that 51 million acres have been reduced to non-arable condition by erosion and 5 times that area has been injured more or less. England, however, has evolved a landlord-tenant system under which both parties co-operate to maintain the soil, and in time we may create similar laws and customs which will conserve this great natural resource. One of the most constructive policies of recent years is the work of the United States Soil Conservation Service in co-operating with farmers to prevent and control erosion and to demonstrate the proper technique.

American farm tenancy is also associated with an unstable rural life. Tenants move frequently in certain areas and in general have little interest in the schools, churches, or co-operative enterprises of their communities. They do not stay in one place long enough to become part of the social life. Absentee landlords likewise often have little regard for the welfare of the community where their land is located. Between the two a tenant community tends to become a rundown and forsaken place. For this reason there was real concern when the census of 1930 reported that 42.2 per cent of our farms were operated by tenants, whereas in 1925 this percentage was 38.6 per cent. During this half decade the total number of farms in the United States decreased about 83,000, but the number of owner-operated farms decreased by over 200,000. This indicated that many farmers who had been owners had lost their hold on the upper rungs of the agricultural ladder and became tenants or moved into the cities. That many became renters is shown by the increase of over 200,000 tenants between 1925 and 1930, of whom 150,000 were croppers. Indications are that the number of rented farms has become still larger since 1930. The 1935 census figures on tenancy may not tell the full story of the lowered status of southern farmers because the cotton reduction program has tended toward the displacement of tenants.

Farm indebtedness.

The decline in land values, beginning in the early nineteen twenties, was especially significant in the Middle West, has had and continues to have a marked effect on land tenure. During the "boom" of 1919 and early 1920, land was transferred at

inflated prices and mortgages were given for a high proportion of the selling value, higher than usual in many cases in view of the optimistic tone of the land market. As Table I shows, by 1935, farm real estate was worth less than half of its reputed value of 1920. In this rapid decline the amount of the mortgage soon exceeded the value of the property, and banks and others who had extended loans to farmers began to foreclose. The Federal Farm Land banks, insurance companies, and others became involuntary owners of large areas of farm land. It is estimated that in 1933 the total value of all land in corporate ownership was 770 million dollars or more than 2 per cent of the value of all farm lands of the country. More than half of the corporation owned land was in the West North Central States, with substantial areas in the East North Central and West South Central States.[1] The distress of the indebted farmers was so acute that acts of violence became common in the Middle West and foreclosures were stopped by threats of lynching in some places. This situation has been relieved by the Farm Credit Administration primarily designed to cope with the emergency situation.

The farm credit problem, however, goes deeper than the present crisis. As has been said, a farm can be acquired only as a unit and financed by mortgage credit. The mortgage for the sale price of the farm is in fact a substitute for prolonged tenancy and is a normal part of the process of transferring the property from one person to another. In other cases farmers borrow on mortgage credit as a result of heavy investments in buildings, livestock, or equipment. Sometimes it is necessary to borrow because of sickness or other unfortunate circumstances. In all cases the turn-over in agriculture is so slow that such loans cannot be repaid in 5 years; in fact, loans for 20 or more years are more acceptable and should be combined with arrangements for the gradual retirement of the principal over this period of years. Commercial credit institutions, however, prefer to have short periods for repayment, although there are some organizations, especially insurance companies, which are looking for long-time investments. To meet the needs of agriculture for long-time credit the Federal Farm Loan Act was passed in 1916 (based upon European credit systems such as the *Landschaft* of Prussia). The Farm Land Banks lend to their members on real estate mortgages

[1] *National Resources Board Report*, 1934, p. 192.

and issue bonds secured by the entire body of mortgages. The farmer repays the loan on the amortization plan, *i.e.* he pays a stated sum each year somewhat larger than the interest on the full loan. In about 33 years the entire indebtedness is retired. These banks have had a marked effect in decreasing the interest rate which had been very high in the western and southern states where capital accumulation had not taken place and where agriculture is more uncertain.

In addition to long-term credit, farmers also need credit for a shorter period, usually for the length of the growing season or about 6 months. This is longer than a 60- or 90-day loan, the kind of accommodation commercial banks prefer to give. Short-term credit is of particular significance in specialized one-crop areas. These farmers have no income to speak of until the harvest has been reaped and the products have been sold. Meanwhile they have to live, buy seeds, pay their laborers, etc. Unless they have a reserve these farmers are a year behind in paying their bills. Truck, poultry, and dairy farms tend to have more regular periodic incomes which reduces the need for short-time credit. The general or self-sufficing farmer is also less dependent on credit than "commercial farms."

The credit situation is most acute among the tenants and croppers of the South. Being without property they have little or nothing to offer as security outside of the crop itself. Often the only credit available to them is "store credit" consisting of advances of food, clothing, and other goods furnished by the landlord or by a "credit merchant" upon the security of the landlord from whom the tenant rents. Prices charged include high interest because of the risks involved. Sometimes loans are obtained from banks under similar circumstances and safeguards. In most cases the lenders dictate the crops to be raised and keep close track of the tenant's operations. The amount of the loan or advance is extended or contracted as the prospects of the crop are favorable or adverse. The credit merchant's security is the crop which must be turned over for disposal by the creditor in payment of the debts against it. The merchant keeps the accounts and fixes the prices. Even if the merchant is honest, the method of lending tends to leave little or no balance for the tenant. In fact, many have to start the new crop year with unpaid debts incurred the year or years before.

The one-crop system compels the entire cotton area to act in unison; all borrow at the same time and have money to repay at the same time. This forces the entire South, including merchants and banks, into the same system. The differences in race, education, and economic status between landlord and tenant invite exploitation, although the lender as well as the borrower is caught in a system in which the individual is helpless.

The tenant-farmer South has been characterized by a low standard of living, congested living conditions, inadequate food, and poor health conditions, which can be traced to the historical background and the farm credit and tenure system. Where accumulation of capital is practically impossible as has been the case with the cropper, the agricultural ladder does not exist. The plight of the cotton farmer is reported to have become worse since the Agricultural Adjustment Act caused cotton to be plowed up and the acreage to be reduced. Prices went up, but careful observers are convinced that the act has favored the landlord and credit merchant at the expense of the tenants. This, of course, was not the intent of the Act, but the landlord-tenant system lent itself to this purpose. Benefit payments to tenants were seized to pay old accounts, and in other cases tenants were dismissed entirely.[1]

The future of the "cotton kingdom" is not a bright one. There are indications that the small independent farmer is being replaced by concentrated ownership, which movement will be accelerated by further mechanization. There has already been a decided shift in the center of cotton production to the West as the result of the use of machines in place of hand labor in Texas and Oklahoma. These two states produce nearly half of the cotton crop of the United States and could expand their area considerably. A mechanical cotton picker would create a revolution in cotton production as profound as the cotton-gin and would wreck the present tenure system. The use of such a machine, recently invented by the Rust brothers, may be "just around the corner." Faced with what seems to be a permanent loss of a large part of the world market for cotton, the question is a pertinent one, "Is King Cotton doomed?" [2]

[1] Johnson, Embree, Alexander, *The Collapse of Cotton Tenancy*, The University of North Carolina Press, 1935, North Carolina. pp. 46–63.
[2] *Ibid.*, Chap. III.

For certain purposes, such as financing livestock, a third type of credit is desirable, known as "intermediate credit" because it falls between short term and mortgage credit in the length of time for which the money is borrowed. To meet this need the *Agricultural Credit Act* of 1923 was passed which made certain changes in the farm loan act, established 12 federal intermediate credit banks to make loans on agricultural paper with a maturity from six months to three years, and authorized the incorporation of livestock loan companies that may lend on the security of agricultural products as well as livestock.

Marketing problems.

The disparity between the prices received by farmers and those paid by consumers for the same products was an important factor in centering the attention of the public as well as the farmer on marketing. The first reaction was to "get rid of the middleman" and get producer and consumer closer together. However, years of study and experience have shown that the problem is not so simple as that. Farm products are not grown next door to the consumer. Many of them are produced on farms thousands of miles away from Boston, Chicago, or New York by growers specialized geographically as well as by crops. Someone has to assemble the products in carload lots at the producing end, ship them across the continent (as is the case in California oranges or Washington apples), and at the consuming end break up the large lots for the retailers who in turn sell a half a dozen or even fewer apples to a consumer. Products cannot be brought from producer to the consumer unless all these functions are performed.

Dissatisfaction with the private middleman has led to the organization of co-operative marketing associations. In fact, some farm products could not have found a profitable market without the concerted action of farmers engaged in producing the particular product, usually a specialized crop. Self-sufficing and widely diversified agriculture either produce so little for the market or has such small quantities of several crops for sale that there is less opportunity for co-operative action. Co-operative marketing has not eliminated the various steps needed to bring the product from producer to consumer, but farmers themselves have assumed these functions and are receiving the reward and taking the risks involved in performing them.

Their work has been made easier by the establishment of a new institution called the Bank for Cooperatives. There is one for each of the 12 Federal Land Bank districts and a central bank in Washington to take care of the credit needs of the larger associations.

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CHAPTER XXXIII

INSURANCE

Nature of insurance.

The essential basis of the institution of insurance is co-operation in the bearing of losses which may occur to any of a large group of persons but which will actually fall upon but few members of the group.

Although insurance has often been considered a form of gambling, mainly because certain forms of wager policies were written before the present era, it is in reality the direct opposite since it minimizes the scope of chance and is the antithesis of that idea. A gambler seeks to gain a fortune; an insured person seeks to avoid misfortune. There must be an insurable interest, a something to lose, before there can be insurance; otherwise it is gambling and beyond the theory of insurance. The payment of a stipulated premium for a contract of insurance should be considered as the contribution of the payer to the fund for indemnification of the direct sufferers. Although repayment from this fund alleviates the burden of the sufferer, the process should not be construed as conservation, since something of worth has been lost to society.

Insurance is productive in the same sense as other economic activities, in that it provides security for which persons are willing to pay. Furthermore, the relief of distress among the unfortunate without compelling them to accept charity represents a distinct social gain. The business operations of the world are facilitated by the system of insurance in that assurance for the continuation of business activity is guaranteed in spite of crippling calamities.

At one time insurance was considered the hand-maid of commerce, but today it is rather the guardian of commerce, industry, and the general welfare. It exerts a very definite influence in the direction of prevention as well as of protection against losses.

Although it does provoke a certain amount of loss in the way of incendiarism, self-mutilation, suicides, and fraud, on the whole the beneficial importance of this institution which equalizes economic shocks and multiplies the incentive for thrift is evident.

In life insurance there is usually no positive loss; when an insurance policy matures the insurer usually repays all the premiums which had been paid on that policy plus some accumulated interest, the insurer charging for the protection afforded only a small part of the interest earned on the premiums contributed. Modern life insurance thus represents co-operative investment as well as co-operative risk-bearing.

The law of probabilities.

A special profession (that of the actuary) and a special branch of mathematics have grown up as a basis of the institution of insurance. It is the knowledge of the "law of large numbers" that changes insurance from a wager to a business of routine nature. No man knows with certainty the date of his death, or that his home will be demolished by fire or tornado within a certain period of time; but, given a large number of policy-holders, an insurance company can predict with uncanny accuracy the number of deaths or property losses which that group will suffer next year, the next ten years, or the next fifty years. The company can therefore estimate the average loss per member or policy holder, add its own business costs, subtract the income to be derived from its investment of premium receipts, and arrive rather accurately at a per capita charge for each person which will enable it to assume safely the burden of unpredictable individual losses. This has been worked out and applied most definitely to life insurance, but in other lines also an effort is made to gather data that will enable the formulation of statistical laws as guides in making business plans or distributing risks equably.

Origin and development.

Arrangements embodying the idea of insurance date back to when the King of Babylon recognized in the code of Hammurabi the advisability of the sharing of future losses. There are records of definite contracts in Bottomery (now termed Marine Insurance) as far back as 250 B.C. Authentic records of written insurance agreements relating to losses in maritime commerce and evidence

that insurance on shipping was encouraged by the government appear in the reign of the Roman Emperor Claudius (54 A.D.).

It was not, however, until the Great Fire of London in 1666 that insurance in the modern sense really came into being. This fire, which lasted for four days and nights, burning over 436 acres of ground and destroying over 13,000 buildings, was the most disastrous fire in history and forcibly awakened the people to the necessity for a form of protection against such calamities. In the following year Dr. Nicholas Barbon opened an office in London and let it be known that he individually would write insurance on buildings. The venture proved successful, and on May 12, 1680, he took others into the business and in the *City Mercury* announced the opening of the "Fire Office," known also as "The Insurance Office for Houses at the rear of the Royal Exchange."

The beginning of life insurance is first found in individual underwritings, which were opposed by the church, for there appears to have been a simultaneous movement against such insurance throughout all Catholic countries about 1575, due to the abuses of insurance. The ordinance of the Emperor Charles V on December 4, 1544, forbade "wager insurance on little boys and girls." In 1693 Edmund Halley made a report to the Royal Society regarding mortality at various ages upon the basis of tables of births and funerals in the City of Breslau. But, practically, life insurance as a business dates from the organization of the "Old Equitable" in 1762. Before this there had been many associations for conducting insurance on a speculative basis, which entered into wagers of every conceivable description.

> "Even the morality of the newspapers of that day were shocked by such proceedings: we find the *London Chronicle* of 1768 thus declaiming, 'The introduction and amazing progress of illicit gaming at Lloyd's Coffee-house, is among others, a powerful and very melancholy proof of the degeneracy of the time. Though gaming in any degree is perverting the original and useful design of that Coffee-house, *it may in some measure be excusable to speculate on the following subjects:* Mr. Wilkes being elected member for London; *which was done from 5 to 50 guineas per cent;* — Mr. Wilkes being elected member for Middlesex, from 20 to 70 guineas per cent; — Alderman Bond's life *for one year*, now doing at 7 per cent; — On Sir J. H. (mark the modesty) being turned out in one year, now doing at 12 guineas per cent; — On John Wilkes' life for one year, now doing at five per cent. N.B. — *Warranted to remain in prison during that period;* — On a

declaration of war with France or Spain in one year, 8 guineas per cent.' 'But,' continues the sensitive journalist, 'when policies come to be opened on two of the first peers in Britain *losing their heads at* 10s. 6d. per cent or on the dissolution of the present parliament within one year at 5 guineas per cent, which are now actually doing, and under-written *chiefly by Scotsmen*, at the above Coffee-house, *it is surely high time to interfere.*'" [1]

In the United States, fire insurance was fairly well established even in pre-revolutionary days as is evidenced by the formation of several mutual insurance companies, the first being "The Friendly Society for the Mutual Insuring of Houses against Fire," organized under royal charter in Charlestown, S. C., in 1735. In 1830, the New York Life and Trust Company was organized, and twelve years later appeared the Mutual Life Insurance Company of New York, the oldest of the active American life insurance companies which insure more than a restricted class of individuals. In the seventies numerous failures brought the "old line" life insurance companies into discredit, and this, together with the desire for cheap insurance, caused a marked development of assessment insurance, against which there was in turn a reaction because of its unscientific basis. Subsequently some of the "old line" companies again suffered a loss of prestige on account of extravagance and corruption revealed by official investigations.

The accompanying tables show the growth in American life insurance since 1850. The marked decrease in 1880 may be noted. Between 1890 and 1910 the total amount of life insurance in force in ordinary and industrial companies increased fourfold. Table I shows a more rapid rate of increase, both in ordinary insurance and in industrial insurance, after 1910 than before, and a new development, that of group insurance. (The figures do not include the insurance of fraternal orders, or business written in the United States by foreign companies.)

Forms of insurance organization.

Fire insurance may be divided into four distinct classes as to type of carrier or insurer: stock companies, mutual companies, reciprocal exchanges, and Lloyds associations. Stock companies are corporations with definitely authorized and paid-in capital

[1] Walford, *The Insurance Guide and Handbook*, C. Layton, London, 1901, 4th ed., p. 27.

TABLE I. — AMOUNTS OF LIFE INSURANCE IN FORCE, BY CLASSES[1]
(In Millions of Dollars)

YEAR	AMOUNTS OF FIRE INSURANCE IN FORCE		
	Ordinary	Group	Industrial
1850	68,614		
1860	180,000		
1870	2,262,847		
1880	1,581,841		20,533
1890	3,620,057		428,789
1900	7,093,152		1,468,928
1910	13,227,213		3,179,489
1920	32,827,156	1,614,387	6,922,572
1930	79,774,841	9,886,029	18,287,408
1931	80,657,119	9,954,011	18,274,432
1932	76,780,238	9,108,742	17,265,390
1933	71,918,829	8,911,742	17,154,473
1934	71,298,680	8,593,022	17,650,708
1935			

which is the nucleus for the business of writing insurance; the shareholder in this type of company is merely an investor. Mutual Companies (usually corporations without capital stock and shareholders) are permitted by law to write insurance and are owned and operated by the policy holders themselves. They are non-profit organizations, refunding to the policy holders that portion of the premium left over after losses and operating expenses have been paid, and levying assessments in the event of insufficient funds to meet obligations. Reciprocal exchanges are not companies but plans for the exchange of private contracts of insurance through the medium of attorney-in-fact. Lloyds associations are comprised of men who underwrite insurance individually, each being liable only for that portion of the risk which he has underwritten.

Life insurance companies are also classified according to the plans of premium payments: (1) "old line" level premium; (2) assessment; and (3) stipulated premium.

Where risk enters in modern life, companies are often organized to offer an escape from it through insurance even before enough data have been collected to make possible the accurate prediction of the amount of loss. In addition to life insurance we have indemnity in case of sickness, accident, destruction by fire, wind,

[1] Data from the *Life Insurance Year-Book* of *The Spectator*, New York.

hail, or explosions of boilers or fly wheels, broken windows, loss from burglary, or the unfaithfulness of employees. Liability insurance in many different forms guards against loss from damage suits. It is impossible to discuss here the problems that are peculiar to each one of these branches, and attention will be confined to some of the leading features of life insurance and of what is called social insurance.

Life insurance.

1. *Life tables.* — A life table or mortality table shows how many of a large group of persons of the same age will survive to each higher age. A number of these tables have been compiled, but the one generally used in this country is the American Experience Table, a portion of which is here produced:

TABLE II

AGE	LIVING AT BEGINNING OF YEAR	DYING DURING THE YEAR
10	100,000	749
11	99,251	746
12	98,505	743
13	97,762	740
14	97,022	737
15	96,285	735
16	95,550	732
17	94,818	729
18	94,089	727
19	93,362	725
90	847	385
91	462	246
92	216	137
93	79	58
94	21	18
95	3	3

With such data and with an assumed rate of interest and expense, it is possible to estimate with considerable accuracy how much money must annually be collected from the policy holders in order to pay each one $1,000 or other specified sums at death.

2. *Premium plans.* — It would be possible to collect from those surviving at each age enough money to pay for the deaths that would happen during the ensuing year. This *step rate or natural premium plan* necessitates a larger and larger assessment with

advancing age, *i.e.*, as the earning power of the insured is declining. This induces many persons who continue in good health to discontinue their insurance, thus leaving only an "adverse selection of risks" for the insurance company or association. It has become customary to arrange the payments on what is known as the *level premium plan*, *i.e.*, the same annual payment being made throughout the life of the policy. This payment may be on the *ordinary life plan*, that is, the payments continue throughout life; or ten, fifteen, or twenty *limited payments* may be made, the policy continuing in force for life; or the insurance may be for only a *term* of years during which the premiums are paid, the insurance ceasing entirely at the end of the term. This is the cheapest kind of insurance, for the insurance company knows that many of the insured will survive beyond the term, and to them no payment need be made, but when the insurance continues for life, the payment becomes a certainty in every case.

3. *The reserve.* — If a level premium is charged, the income of the company in the earlier years of a policy exceeds the expense of carrying the risk, as measured by the losses on account of the deaths among the policy holders of like age. The portions of the premium not currently used must be held for the credit of the policy holder until the later years, a certain rate of interest being allowed. This accumulating fund is known as the *reserve*. In the later years of the life of a policy, the reserve is gradually drawn upon to meet the deficit arising from the fact that in these years the level premium payments will be insufficient to meet the cost of carrying the risk, — smaller, that is, than they would have been under the step rate or natural premium plan.

4. *Surplus.* — If the insured live longer than was assumed by the company in calculating its premiums, more money will be collected than is necessary to meet the obligations of the insurance contracts. This is an operating gain and one source of *surplus*. Again, the funds held in trust by the company may be invested at a higher rate of interest than was assumed in the calculations, and this is a second source of surplus. A third source of surplus lies in keeping expenses below what was assumed in the calculations. The addition which is made to the net premium to cover expenses is called "loading," and is commonly not far from a fourth of the gross premium. The amounts paid in by those who

subsequently lapse or surrender their policies do not all go to the surplus, for it is customary now to allow "surrender values" and "paid-up insurance"; but as these allowances are subject to a surrender charge, there is some addition to the surplus from the surrendered or lapsed policies. Out of the surplus are paid the dividends on the capital stock, if there be any, and the dividends to each policy holder, which in some cases are credited or paid annually to each policy holder, but in other cases not until the expiration of a period of years.

5. *Endowments.* — What is ordinarily called an "endowment policy" is a combination of two distinct forms of contract. A simple life insurance contract promises to pay a certain sum upon the death of the insured; a *pure endowment* contract would pay a certain sum if the holder of the policy survives after a period of years. A twenty-year endowment insurance policy combining these two features means that payment would be made at death if that occurred within the twenty years, or at the expiration of twenty years if the policy holder survives.

This form of policy has been declining in popularity because in its ordinary form it is disadvantageous to the policy holder, unless he be so thriftless that he cannot be induced to save in any other way. If insurance could not be obtained in any other way, it might be wise to purchase such a policy, but the objects of saving and insuring can be more cheaply accomplished by separating the two features. Many purchasers of endowment polices are not aware of this fact. If, instead of paying $50 for an endowment policy, the holder paid part of this for term or "straight life" insurance and put the remainder in a savings bank at 2 or 3 per cent, or as formerly 4 per cent, compound interest, there might be more to his credit whether he lived or died. But when the loading is properly arranged, and with an annual distribution of surplus, the endowment policy performs a useful function as an encouragement of thrift. In fact, a very long-term endowment maturing at, say, age sixty-five, would best meet the needs of a great many persons. Many others, feeling that they lack the necessary determination to save regularly a portion of their incomes in the ordinary way, find the endowment policy a useful form of "compulsory saving." Yet even this advantage of the endowment form is vitiated by the large numbers of lapsed and surrendered policies.

Industrial insurance.

Industrial insurance was introduced into the United States towards the end of the nineteenth century. It was realized that, although the workman was in urgent need of insurance, he was not able to take advantage of ordinary insurance plans. It was suggested that insurance companies should provide ordinary insurance for workers by charging a weekly premium and sending a representative of the company to collect it. The plan was attempted by several companies, and the development of the scheme was rapid and thorough. In 1935, industrial insurance involved policies with a face value of about eighteen billions of dollars. The cost of industrial insurance is considerably higher than that of ordinary insurance, due principally to the expense of collecting the premium and the higher rate of mortality among industrial workers. It has been learned by experience that as far as wage earners are concerned premiums must be collected at frequent intervals by a personal representative of the insurance company. The size of the industrial policy averages less than $200. A popular type of this form of insurance is the child's endowment policy. Children are accepted in industrial insurance for a limited amount, the amount being increased as the child grows older. Special infantile actuarial tables have been drawn up for this purpose.

Group insurance.

A recent development has been the introduction of *Group Insurance.* By means of a single or blanket insurance policy a number of individuals are covered.

> "This type of contract, from its very nature, has been applied to the employees of industrial concerns, where the employer assumes the responsibility for the payment of the premium, it having been found impractical to grant insurance on a group without having some central responsibility." [1]

The first group insurance policy was written in 1911. Since that year this form of insurance has grown with remarkable rapidity, and its field has been considerably extended.

> "At first only insurance promising payment in case of death was written but now various types of policies, including limited-payment

[1] R. Riegel, *Insurance: Principles and Practice*, Prentice-Hall, Inc., New York, 1922, p. 132.

life and endowment policies, as well as accident and health insurance and old age annuities, are sold under the group contract. In other words, practically the entire field of life insurance is covered by group policies, although the contract most commonly used is the one-year renewable term." [1]

By the end of 1935 the total group life insurance in force throughout this country was nearly nine billions.

State insurance.

Insurance is well adapted to direct management by the State because the actual conduct of the business is of a relatively simple and routine character and because the State can offer greater security than is possible in the case of any private company. If the State had a monopoly of the business and compelled every one to insure, it could, perhaps, without any selection of risks, effect the insurance at a lower price than that asked by any private company. State insurance had not been developed to any great extent in the United States until the passage of the Federal Social Security Act in 1936, though it is quite common in Europe. In Switzerland, for example, insurance against fire is sold by 20 cantonal offices, 2 private mutual insurance societies, 23 joint stock companies, and 2 local funds. In 14 out of the 25 cantons, and in 4 half cantons, fire insurance of buildings is obligatory and the State has a monopoly of it. It is claimed that the cantonal system of insurance has led, in Switzerland, to "*an inexpensive distribution*, socially speaking, of insurance burdens." [2]

State regulation.

Following the example of Massachusetts in 1858, other states appointed insurance commissioners for the supervision of this business, and the insurance laws of any one of these states are now sufficient to make a good-sized volume. Insurance companies have found this variety of control irksome and have generally advocated federal control of insurance. Although something would be gained, it cannot be said that there is any great need of federal control of life insurance, not to mention the Constitutional difficulties, because it is not absolutely necessary,

[1] *Ibid.*

[2] "Cantonal Fire Insurance in Switzerland, 1805–1925," *Annals of Collective Economy*, Geneva, November-December, 1926, Vol. II, No. 4, pp. 343–382.

as in transport or fire insurance, that one life company do business in many states, and the people of each state should have the power to say what kind of insurance institutions they desire to have.

An enumeration of the requirements in the state of New York will illustrate the nature of state regulation: A certificate of authorization must be obtained from the Superintendent of Insurance and a deposit of securities must be made. A minimum capital stock is prescribed and regulations are made concerning the investment of stock and surplus. There are also provisions relating to standards of solvency, reinsurance, limitation of risks, admission of foreign companies, examination of accounts, and annual reports. The policy must contain the entire contract, and the statements are to be taken as representations and not warranties. No misleading estimates and deceptive statements are to be issued for the purpose of getting business. Life insurance companies are to do either a participating or non-participating business, and in the former case the surplus must be annually apportioned and paid to each policy. There are further provisions regarding the valuation of policies, surrender values, discrimination, election of directors, limitation of the amount of new business each year, limitations as to expenses and salaries of officers, and standard forms of policies are prescribed for both life and fire insurance.

Social Insurance

Social insurance defined.

Social insurance refers to those insurance or quasi-insurance institutions which are organized by the State to alleviate the distress which is likely to fall upon the poor classes as a result of accident, sickness, invalidity, old age, unemployment, and the premature death of the chief wage earner of the family. All insurance is obviously social in the sense that it implies co-operation on the part of many persons and is subject to extensive state regulation, but what is called social insurance implies the activity of the state far beyond mere regulation. Social insurance is to be distinguished from poor relief in that it recognizes that the normally thrifty wage earner cannot purchase adequate life and accident insurance from private commercial companies and that the responsibility rests on society to provide that which it is

impossible for the individual to provide. It endeavors by insurance methods to provide in advance for the coming of the evil day, so that the benefits paid will be received, not as a matter of charity, but as a matter of right.

Compensation for industrial accidents.

In the United States social insurance began its development in connection with the problem of industrial accidents. Under the common law, the employer is not responsible to an employee injured while at work if a reasonably safe place to work has been furnished. Even if the employer is at fault, there is no redress if there has been contributory negligence on the part of the employee or one of his fellow servants or if the accident happens without negligence that can be traced to any particular person. This law of negligence has generally been modified by legislation designed to increase the responsibility of the employer, as, for example, by the restriction or elimination of the fellow-servant doctrine. While employees have sometimes been able to secure damages amounting to small fortunes, the general result of this legal system is that in the vast majority of cases only small damages or none at all are secured, or, if secured, they are in large part offset by the cost of litigation. The liability of the employer, however, is a serious matter to him, and an expensive system of employers' liability insurance has grown up. The more severe the modifications in the law of negligence become, the higher are the rates imposed by the liability companies. Such is the expense of conducting this business that it is safe to say that less than one-half of the money paid for employers' liability insurance premiums ever reaches the injured employees in damages. While labor leaders were drafting bills designed to increase still further the liability of employers, attention was turned to laws enacted in Europe, where the view had come to prevail that it is useless to try to locate the responsibility for accidents, except for purposes of preventing them in the future, and that if a workman is injured in the course of his employment, he should be promptly assisted, even if he had been negligent. Accidents were looked upon as an industrial risk against which the workingman should be adequately insured.

The result was that in the years following 1910 a wave of workmen's compensation legislation swept over our northern and

western states, and practically all states have now enacted compensation for accident laws. The federal government had in 1908 established a system of compensation for accidents for the majority of its employees.

The provisions of the various state laws differ greatly in detail, but in general they provide for definite payments to injured workmen in hazardous employments, practically regardless of negligence and almost universally at the expense of the employer. In some states the law is compulsory, that is, the employer engaged in the industries covered must pay the compensation specified and must insure himself against the liability. In other states the law is nominally optional, the employer and employee being free to remain under the old law of negligence, but an inducement is given to them to choose the new compensation method by providing that if either does not accept it, he is put to certain disadvantages under the law of negligence. The purpose of this roundabout method (not always successful) of securing compliance is to overcome the difficulty that under our constitutional guarantees of freedom a direct compulsion might not be sanctioned by our courts, while the modification of the law of negligence is well established by precedent.

Four methods of insurance are practiced for the protection of employers against the legal liability imposed by the Workmen's Compensation Acts: Employers may insure in (1) a stock company, (2) a mutual or reciprocal organization, (3) a state fund, or (4) they may carry their own risks by setting aside money in a fund devoted to compensating workmen in case of accidents. In the last method of insurance, it is difficult for the state to watch over the employer's financial capacity to compensate workmen. The State Accident Insurance funds are frequently immune from taxation and receive certain other privileges. The rates for insurance are usually lower; and there is less likelihood of workmen losing compensation through the failure of the fund than is the case with private stock companies, several of which have, in the past, failed disastrously. It is argued, by some, that if the state compels an employer to insure, it should also secure for him a means of doing so as cheaply as possible; while others claim that state insurance funds are apt to be wasteful and inefficient.[1]

[1] Cf. R. Riegel, *op. cit.*, p. 171.

Sickness insurance.

Compulsory sickness insurance has been introduced in about one-half of the large countries of Europe and voluntary subsidized sickness insurance in others, but we have so far left practically everything in this direction to private effort, although there are state miners' hospitals in several states and the federal government conducts a hospital service for seamen. Many students of the subject believe that sickness insurance will never be made effective unless it is made compulsory. It is significant that Great Britain, where the traditions, as in the United States, are against compulsion, made sickness insurance compulsory by the act of 1911. The majority of workers, by virtue of being employed, are assured certain benefits in case of illness, the cost of the insurance being met partly by the government, partly by the employer, and partly by deduction from the employees' wages. In Germany, where a system of compulsory sickness insurance was established as early as 1883, one-third of the cost is borne by the employers and two-thirds by the employees. The sickness insurance benefits in that country cover also the care in whole or in part for the first thirteen weeks of those injured as the result of industrial accidents, after which time the accident benefits are paid wholly from accident insurance funds, and include maternity benefits, funeral benefits, and sometimes sick benefits for the members of the family other than the insured. Maternity benefits were added in England by an amendment in 1913. In the United States, protection of maternity and infancy through Federal-State co-operation has been adopted by Congress and has been accepted by the majority of the states.

Old-age insurance.

Old-age pensions, as a form of State Social Insurance, have been a matter of much discussion and disagreement. Many industrial and commercial concerns have provided pensions for their employees, but the failure of certain of these schemes "called attention to the ease with which their true costs can be overlooked." [1] In recent years the question of State old-age pensions has been frequently before the public. We were long familiar

[1] President's Conference on Unemployment (Herbert Hoover, Chairman), *Report of the Committee on Recent Economic Changes*, The McGraw-Hill Book Co., New York, 1929, Vol. II, p. 526.

in the United States with a pension system growing out of past wars and with local pensions for firemen and policemen. Some European countries have provided for the necessities of the aged poor by voluntary insurance, or by compulsory insurance. Invalidity and old-age insurance is one of the three great branches of the German insurance system. It covers the great majority of the wage earners of both sexes. There are contributions in equal amounts by the insured workmen and their employers and a yearly addition is made to each pension by the government. The English law of 1908, on the other hand, provided for a straight pension to persons 70 years of age or over whose incomes are below $153 a year and who have not certain disqualifications mentioned in the act. The British system resembles poor relief more closely than insurance. For years an attempt has been made to induce the United States government to adopt an old-age pension system for its employees, and in 1920 Congress passed a law covering classified federal civilian employees.

Unemployment insurance.

The solution of the problem of unemployment involves much more than insurance. The progress of industry should be made less irregular and men and opportunities for work should be brought together more readily. The question of labor exchanges is discussed in the following chapter. It is not to be expected, however, that unemployment can be eliminated. It is a misfortune which should be provided against by some form of insurance. Many European countries have, however, made experiments which have left much doubt as to the practicability of insurance as a general remedy for the evil of unemployment. The present unemployment problem in England, in spite of unemployment insurance, is admittedly most grave, and insurance has proved merely a palliative. The contributions of the Exchequer to the Unemployment Insurance Fund until 1934 amounted to nearly £105,780,000.[1] Laws have had to be enacted, since 1920, enabling unemployment benefits to be paid to persons who had not satisfied the usual requirements of prior contributions. Unemployment benefits in England, it must be remembered, amount to less than five dollars a week and to less than four dollars a week for women. Complaints have not been lacking on the part

[1] After 1934 the debt was funded and is now being paid off annually.

of the workmen themselves, who, in most cases, would prefer steady, well-paid employment to eking out a miserable living with the aid of the dole.

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CHAPTER XXXIV

LABOR PROBLEMS AND PRACTICE

Labor problems as we understand them today arose with the appearance of a distinct laboring class through the segregation of capital, management, and labor as separate factors of production in industrial evolution. The medieval gilds were organizations uniting employers and employed, who acted together in handling problems of production in their particular field, the control resting chiefly with the masters. Once this close working association gave way to a wide separation of interests, there were bound to be complex problems of conflict between employers and employees. Employees desired to obtain as much as possible in the way of wages and working amenities, and their employers were equally desirous of keeping their labor costs as low as possible.

The Industrial Revolution and, in the United States, the influx of foreign immigrants served to mass together large numbers of people so that, in addition to the direct contact between employer and employed, there arose serious problems of housing and general social conditions. These corollaries of the actual working conditions of the masses served as a strong influence in developments affecting the interests of the working class.

In 1786 Philadelphia experienced a printers' strike, which serves to indicate that open conflict between the employer and his employed began virtually with the creation of the republic. The first third of the nineteenth century witnessed a rapid growth of local unions among the artisans of the standard crafts. In 1834 the labor leaders attempted to weld together these associations in the National Trades' Union, only to meet defeat due to premature action and the panic of 1837. The organization of labor continued, however, and during the forties made substantial gains and exerted legislative and political influence. Had it not been

for the continued increase in the number of foreign immigrants and the sweep of westward expansion with its suction upon eastern artisans, American labor would probably have been solidly knit as a national body before the Civil War.

The National Labor Union appeared in 1866 but ceased to function in 1872. This was succeeded by the Noble Order of the Knights of Labor, originally a secret society of garment workers, formed in 1869. During the 1880's this organization attempted to unite all trades, races, and grades of labor, together with employers and intellectuals, but by such a catholic attempt brought on its own defeat and gradual disintegration after 1890. Out of these unsuccessful attempts at organization there arose the organization that was to bind the many unions into a federation. This was the American Federation of Labor, established in 1886 through the efforts of Adolph Strasser, Samuel Gompers, and other labor leaders as an outgrowth of the Federation of Trades and Labor Unions of the United States and Canada, which they had launched in 1881.

In 1877, the first great railway strike occurred, crippling transport from the eastern seaboard to Texas. This great conflagration of labor was followed by ceaseless turmoil as exemplified by the Chicago Haymarket demonstration (1886), a bloody strike in the steel mills at Homestead, Pennsylvania (1892), and the Pullman conflict in Chicago (1894). From this time on, strikes, often accompanied by property destruction and loss of life, became a definite weapon in the struggle between the employer and his employed. At the close of the century, however, labor organizations received increasing popular support and attained a position enabling them to secure not only industrial reforms but political and social reforms as well.

During the period of the World War a shortage of labor appeared because of the cessation of immigration and the heavy enlistment in the United States Army. Labor was not slow to take advantage of the situation. It demanded and secured better working conditions and successive increases in wages. The National War Labor Board was created to provide a balance between the demands of labor and industrialists. Following the war, labor continued to insist upon maintenance of the new standards established during the conflict, and even demanded higher money wages to meet the higher cost of living.

The next important phase of labor development appears with administrative efforts to cope with the depression of the 1930's. The prosperous years preceding 1929 did much to weaken the enthusiasm of the members of the unions, and the ensuing period of depression served to weaken the organizations of labor because of the inability of many members to pay dues. The codes arising from the National Industrial Recovery Act were predicated for success upon the mutual co-operation of business organizations, one with another, and with their own workingmen. The latter co-operation was provided for in the National Industrial Recovery Act in the following paragraph:

> Sec. 7 (*a*). Every code of fair competition, agreement, and license, approved, prescribed, or issued under this title shall contain the following conditions: (1) that employees 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; and (3) that employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment, approved or prescribed by the President.

Even before the end of the short life of the N. I. R. A. there was serious contention by both labor and employers that the provisions of this section were not making for settled conditions in their relations. One development arising out of the administrative attitude evidenced in Section 7(*a*) had been an increase in union membership, but a further splitting-up of wage earners into different organizations. While the principle of collective bargaining was openly recognized, the problem arose as to what groups might represent labor in the procedure. The solution of this problem has been attemped by the enactment of the National Labor Relations Act passed in 1935.

By the nature of our industrial and social organization, the workingman and his family account for the bulk of population, and without artificial assistance are in the weakest economic position from the standpoint of industrial management and control. Their existence is comparatively a hand-to-mouth affair,

which makes their welfare immediately dependent upon business conditions. While their employers are generally somewhat removed from immediate day-to-day reliance upon business conditions, the workingman is only able to weather short periods of inactivity, and looks to his employer to smooth out the forces that encroach so quickly upon his daily wage. This position of the employer creates a natural advantage in his favor, which is enhanced by his being one, or relatively few in comparison with the multiplicity of those employed. The employer, from his natural ability to dictate, decides upon a course to be followed not alone by himself but by all of his employees. Opposite to the oneness of management is the loose organization of the many workingmen.

Such is the natural advantage of the employers, and that natural advantage is strengthened by a more or less spontaneous co-operation among them. Adam Smith laid emphasis upon this tendency in his discussion of the conflict between the workmen and the master. "Masters are always and everywhere in a sort of tacit, but constant and uniform combination, not to raise wages of labor above its actual rate. To violate this combination is everywhere a most unpopular action, and a sort of reproach to a master among his neighbors and equals." [1]

This tendency not only still persists, but with the growth of organized labor to offset labor's weakness of disordered numbers, there has been a development of employers' associations to perfect this natural co-operation. In almost every respect they are the natural foil and counterpoise of the labor organization. They resemble the association of laborers even in structure. Thus there have been employers' associations recruited entirely from one industry, such as the Stove Founders' National Defense Association; associations of employers in distinct but related industries, such as the National Metal Trades Association; and mixed associations in which all kinds of employers are united, such as the National Manufacturer's Association. To complete the analogy, these associations frequently combined in city, state, and national federations, thus forming large confederacies, similar in scope and activity to the state and national federations of labor. Speaking generally, business associations show less permanence than trade unions in respect to the labor problem, and usually are active only for the period of some particular crisis.

[1] *Wealth of Nations* (Cannan's ed.), Bk. I, Chap. VIII, p. 68.

The same resemblances between employers' associations and labor organizations are observed when we examine the policies and aims of the former. Thus they make use of the lockout in contrast to the use of the strike by labor unions. The Stove Founders' National Association, for example, began its interesting career with a lockout of the iron molders in the employ of its members. Like the unions, also, employers' associations have their legislative committees or lobbies, and are as active in opposing measures to their disadvantage as are the labor organizations in their support. Some of these organizations also maintain so-called "labor bureaus," whose function is to secure accurate information about the workmen in the trade, so that troublesome agitators may be refused employment; the methods employed in this branch of work give rise to the "black-list," similar in some regards to the "unfair list" published by many national unions. Some of the more radical associations have stooped at times to violence and coercion, as was illustrated in 1904 by the employers' associations of the Cripple Creek, Colorado district, which boycotted business firms, forced public officials to resign by threats or violence, and filled the vacant places with their own adherents.

Some of the employers' associations are conservative in tone and policy, working fairly harmoniously with the labor organizations in the industry, and going no further than to endeavor by every legitimate measure to further the interests of the affiliated employers. Such associations are exceedingly helpful in establishing a stable form of peaceable collective bargaining to which most students of this subject look forward as the ultimate outcome of present-day tendencies. They are thus promoting industrial peace in an effective way. Another group, however, while temperate in tone and waging no warfare on the labor organizations as such, nevertheless maintains certain fundamental principles which are in direct conflict with the fundamental tenets of unionism. These associations, for instance, maintain that the method of wage payment — *i.e.*, whether wages shall be reckoned by the hour, the piece, or the premium system — is a matter which concerns the employer alone, and they refuse to submit such questions to collective bargaining or arbitration. Associations in this group do not needlessly foment strife with the unions, but they regard industrial peace as a consideration

secondary to the maintenance of their fundamental principles, and accordingly they have been involved in a number of protracted strikes and disputes. Finally, there is a third group of employers' associations which may be correctly described as "union smashers." Such associations have little regard for the establishment of sound principles of collective bargaining, and they are usually violently opposed to any recognition of organized labor; their aim is to weaken and harass their enemy, the labor organization, whenever possible. The extremely radical organizations on both sides, by reason of their violent utterances and tactics, secure far more attention than their importance justifies.

Labor Organizations

Types of labor organizations.

There are at least four distinct types of labor organizations: The *trade union*, representing a combination of wage earners in a single craft or trade, or two or more closely related trades; the *industrial union*, composed of all kinds of wage earners working in a given industry; the mixed *labor union*, made up of wage earners from many trades and many industries; and the *company union* which unites both managers and workers within each separate enterprise. Thus, the Brotherhood of Locomotive Engineers, strictly a trade union, makes no attempt to include other workers in the railway service; the United Mine Workers, an industrial union, attempts to combine all persons working in and around the mines; the Knights of Labor, a mixed labor union, in the period of its strength and prosperity, fused all sorts and conditions of workers in some of its district assemblies, and combined these assemblies in a closely-knit, highly centralized national labor union. "Company union" is a term applied to various forms of employee representation plans, the distinguishing feature of which is that all members of the organization are employed by a single plant or company.

The difference in the structure of labor organizations colors their policies and gives rise to important problems. The trade and industrial unions are much more homogeneous, and therefore much more efficient than the labor unions, but they are likely to be narrower in their aims and more selfish in their policies. The labor unions, on the other hand, have in the past proved

much less efficient, much more unwieldy, and much more disposed to make use of co-operation, political action, and other devices not suited to associations of wage earners, or at least not easily handled by them.

In recent years, we have seen the rapid rise of industrial unionism. The industrial union, or some adaptation of its principle, promises to supplant the trade or craft union in many industries. Industrial unionism is gaining rapidly for a number of reasons. The increasing subdivision of labor in many industries is destroying craft skills as the basis of trade unionism. The industrial union presents a way of overcoming jurisdictional disputes between trade unions in the same industry and makes possible a greater unity of action. Its great effectiveness in carrying on a strike is gaining favor, especially among the less skilled workers. Unionization in the mass-production industries is following this line as being the most effective plan for making the demands of the workers effective, thereby shelving the principle of craft autonomies.

For the larger and more general objectives, common to wage workers as a body, many of the American unions have combined in the large, loosely-knit confederacy mentioned above, the American Federation of Labor. The local unions of most of the important trades are organized into national or international unions. The American Federation of Labor is first of all a federation of national industrial and trade unions but also includes local trade unions and federal labor unions,[1] state federations of labor, city central bodies, and the "departments." The department is intended to make possible the closer alliance of trade and industrial unions in the same or closely related industrial fields. In this way it was thought possible to secure some of the advantages of the industrial union without giving up the trade or craft union basis of organization. The American Federation of Labor interferes as little as possible with the constituent unions, and confines its activity to securing favorable labor legislation, organizing federal trade or labor unions in districts of the country in which trade unions have heretofore failed to get a start, rendering assistance to unions which are hard-pressed in strikes or dis-

[1] A union without any national organization is termed a Federal Trade Local or a Federal Labor Union — a trade union if including workers of one craft, a labor union if having a mixed membership.

putes with employers, encouraging the use of union-label goods, and, in short, furthering all interests which labor organizations have in common. The city and state federations of labor are intended to serve similar purposes for the organized groups of the American Federation of Labor in the cities and states.

The American Federation of Labor includes both trade and industrial unions, but in its councils the trade unions have dominated, and an open conflict between these types of organization provided one of the most important labor developments in 1936. Both types of labor organizations have grown to great strength and it is possible that the A. F. of L. may be split permanently on this issue. John L. Lewis, with his United Mine Workers and eleven other national unions, has established a Committee for Industrial Organization whose main purpose is the organization, along industrial union lines, of the great "mass-production" industries, into which the trade unions have not been able to penetrate successfully. The remaining part of the A. F. of L. stands for the continued federation of both types of unions, which does not lend impetus to the industrial unionism desired by the C. I. O. Whatever the outcome of the jurisdictional struggle between the A. F. of L. and the C. I. O., we may anticipate an effective growth of industrial unions, particularly in the mass-production industries.

The membership of the American Federation of Labor fluctuates with changing economic conditions. In 1920 the number of members paying dues slightly exceeded four millions, but it declined to 2,878,297 in 1925. The trend thereafter was upward until the depression reduced the membership. In 1933 the average paid-up membership was 2,126,796, in 1934 2,608,011 and 3,045,347 in 1935. The Bureau of Labor Statistics estimated that there were some 4,500,000 union members in 1935 including members of independent unions. Much of the recent growth arose from the new organizations encouraged by the National Industrial Recovery Act, followed by the National Labor Relations Act, and by the admittance of the Amalgamated Clothing Workers.

Not all labor organizations are affiliated with the American Federation of Labor. Prominent among these which are not included are the Brotherhoods of Railway Conductors, Engineers, Firemen, and Trainmen. While it is true that organized labor

represents but a minority of the total labor group, these total figures do not show certain sources of strength in the organized labor movement which should be noted. In trade, clerical occupations, professional service, and public service, the proportion of labor organized is very small. However, in such essential and key activities as transport, mining, building trades, and clothing a high degree of organization has been attained. Within these important branches of economic activity certain indispensable trades are highly organized. Locomotive engineers, for example, are almost completely organized, and one out of every two brick and stone masons is a union man. Thus through a high degree of organization of key trades in basic and essential industries, unions attain a much greater degree of strength than is suggested by the figures of memberships.

The "company union," the term applied by trade-unionists to all forms of employee representation through shop committees, works councils, or industrial assemblies, is a fairly recent development in the relations between employer and employed in this country. Company unions are usually initiated by the employer rather than the employee, and the former shares in the expense of the scheme. The committees are frequently "joint," in the sense that they include employers' representatives, as well as employees' representatives. Only a few shop committees were in existence at the outbreak of the World War, one of the most important being the Philadelphia Rapid Transit Plan, established in 1911 for the adjustment of differences and the improvement of the service. The predecessor of the type of company union particularly denounced by trade-unionists is, however, to be found in the works committees set up during the War under the direction of the National War Labor Board. These joint committees were introduced with a view to speeding up production in war-time and in the interests of industrial peace. The employees' committee played a large part in increasing output during the War. Thus the plan was satisfactory to many employers, though not to most of the existing labor organizations, who feared the competition of the company union and its effect upon the standard union movement. When peace was resumed, the company unions, far from being abandoned, tended to increase in numbers. In 1919 there were approximately 145 shop committees, representing 403,765 workers; in 1926 the shop

committees numbered about 432, representing 1,369,078 workers.[1] The impetus given to the older types of labor organizations by the National Industrial Recovery Act and the National Labor Relations Act resulted also in an increase in company unions, which the standard labor groups view as jeopardizing true collective bargaining.

The functions of these committees are, primarily, the adjustment of grievances, the regulation of working conditions, and the promotion of factory efficiency. The development of this type of organization has been greatest in large-scale industry, more than half of the total number of the employees covered by the company union plan being employed in establishments with over 15,000 workers each. The ultimate effect of these organizations on the standard union movement in this country is still uncertain. There seems to be no doubt that they are covering a field that might otherwise fall to the older type of labor organization.

"Whatever the reasons or motives leading the workers into the company associations, there can be no doubt that they have had a marked effect upon the American labor movement. First, they have gained hundreds of thousands of members, as a matter of fact, about the same number of members as the regular trade unions have lost since the war-time peak. Secondly, they have raised obstacles to organization in the unorganized industries. For these company unions are made to settle just enough of the workers' secondary grievances to satisfy many of them in a superficial way, and render them less ready to listen to the appeal of the trade union. . . ." [2]

One of the most important effects of the company unions has been to influence the regular labor organizations in the direction of expanding their own welfare activities, in the face of this competition on the part of employers, and of depending less upon strikes as a means of improving labor conditions.

The economic justification of labor organizations.

The question is often asked why labor organizations are necessary, in view of the fact that wages are fixed, at least within

[1] President's Conference on Unemployment, *Report of the Committee on Recent Economic Changes*, McGraw-Hill, New York, 1929, Vol. II, p. 530.

[2] H. W. Laidler and Norman Thomas (ed.), *New Tactics in Social Conflict*, Vanguard Press, 1926, p. 108.

broad limits, by deep-lying economic and social forces which the labor organization cannot effectively control. If wages depend upon demand and supply and marginal productivity, it is said, what excuse for the troublesome and irritating labor union? The answer is in part that economic laws work themselves out through men and through organizations — they are not self-enforcing. We have had labor organizations of one kind or another ever since the wage system existed, and we shall unquestionably continue to have such organizations unless the wage system is superseded by something more satisfactory.

Even if we should grant that labor is essentially a commodity whose price is fixed by demand and supply, there would still be reason for the labor organization. The effective supply of labor is largely controlled, in the long run, by the standard of living; and one of the great functions of the labor organization is to strengthen and advance the standard of living. If a great horde of unorganized wage earners are continually bidding against one another in the labor market, each individual endeavoring to get a little more work by offering to take a little less pay, the standard of living will be subtly undermined or "nibbled away." The labor organization, by repressing the vicious effects of this competition, by compelling its members to offer the same terms and abide by common or standard rules, bulwarks the standard of life, and gives it increased precision, increased power and durability.

The most important legitimate function of the labor organization is to equalize its bargaining power with that of management and capital. The unorganized laborers, because of the nature of the labor supply and their individual lack of bargaining skill, are at a great disadvantage when they meet with the skilled manager of great combinations of capital. Economic doctrines recognize that the distribution of a considerable share of the product of industry is determined by the process of bargaining. In an advancing or progressive state of industry, there is generally a margin between what the employer could pay and what the laborer receives. By stout resistance and skillful bargaining it is often possible for the wage worker to get a part of that share of the product which would otherwise go to the employer as profits. Of course, that labor organization is likely to be most successful in the long run which increases the productivity of its members. But even if the organization does not increase the

productivity of its members, it has a chance to improve their wages by trenching upon the other distributive shares. More bargaining, therefore, despite the operation of more fundamental economic forces, is still exceedingly important. Wage workers, being poor bargainers as individuals, combine with their fellow-workmen, not only to maintain a more uniform price for their labor, but to procure the guidance and assistance of an expert bargainer — the business agent or walking delegate. The labor organization is thus a commercial institution for the sale of labor in large quantities; its primary function is collective bargaining.

Evils of labor organizations.

The labor organization as a wholesale jobber of labor is essentially a product of those familiar economic forces making for large-scale commercial dealing; it is brother to the trust, akin to the combination, and not untainted with monopoly. One of the most searching criticisms directed against the labor organization is that it exhibits all the evil tendencies of monopoly. The charge holds elements of truth. The ultimate aim of the average labor organization is to induce every worker in the industry to join the union, so that by monopolizing the supply of labor it may control the price. But in one of its implications the charge of monopoly is misleading, because the great majority of unions do not attempt to limit the number of their beneficiaries. They aim to increase wages, but they are willing and even anxious that every member of the craft should share the increase. It is rare for a labor organization to exclude from its ranks a number of workers and then persecute them by refusing to work with them or treating them as "scabs." Conflicts with non-union men are common, but in a very large majority of cases every effort has been made to get those men into the union. An organization that is constantly exhorting its competitors to come into the combination and share its benefits has thus far represented characteristics of an *inclusive monopoly*, and is not to be confused with the *exclusive monopolies* found in the field of business. However, if labor organizations were to secure rigid control of their subject matter, the end toward which they could push their monopoly might be as harsh and severe as any business monopoly of the past. It is not to be expected that such an end will ever be reached, especially in view

of the rapid trend toward government regulation which must be applied equally to business and labor. Public opinion will not permit the administrative encouragement given to labor organizations since 1933 to be carried to monopolistic ends.

In the following discussion of labor policies and practices the reader may pick out certain evils of labor organizations in line with the color of his particular approach to the problem, but it is well to point out an evil of labor organization administration that serves to injure the organization and its members as well as business and the public. This is the opportunity that exists in all mass organizations for unscrupulous promoters and organizers to secure control of administration and to use it for personal and selfish interests. The field of labor is particularly weak in this respect of *racketeering* because of an ever ready tension in relations with the employer, and the racketeer shows no regard for the workingman, let alone for the employer.

Rackets have always been with us, but the War and prohibition gave this predatory institution great inflation and labor organization racketeering came in for its share. It has been estimated that some half billion dollars is paid annually by laborers for union dues, assessments, etc. The use of these funds is not required fully to be accounted for and with unscrupulous organization control much of that amount can go for other than labor's benefit. In October, 1936, a drive was launched against a large restaurant racketeering ring in New York City. One of the allegations against those indicted was the seizing of control of two restaurant workers' unions and the misappropriation of one-third of the aggregate payments by union members. We see education arising from clear thought and understanding as a primary necessity for industrial co-operation. Labor leaders should rise from the ranks of labor itself but the ranks of labor should be capable of seeing that these leaders voice their position as it really is. There will always be sheep for leaders to lead, but the higher the capacity for critical thought and understanding that can be inculcated in those to be led the more powerful will be the entire organization. The usual results of mass psychology arise from the fire of a few who may or may not have the real interest of the mass at heart, and racketeering in the labor organization can only stand in the way of the real issues that might effectively be settled.

Labor Policies and Practices

The aims of labor organizations and the policies employed to achieve their ends vary in accordance with the conditions of the occupation or industry in which their members work. Some unions, for instance, have laid emphasis upon apprenticeship; and if they thus secured control of the supply of labor in the trade, they have found it necessary to place but little dependence upon strikes and boycotts. On the other hand, organizations like the Brotherhood of Locomotive Engineers have found this question settled for them; no one can perform the work of a locomotive engineer without preliminary training, and this natural limitation of the number of trained locomotive engineers makes it possible for their union to get along without maintaining either apprenticeship regulations or the policy of the closed shop.[1] And it rarely places dependence upon the strike. An admirable system of mutual insurance and simple collective bargaining is usually sufficient to keep the membership loyal and obtain from employers fair rates of pay.

In the unskilled trades, on the other hand, where a period of apprenticeship is wholly superfluous, some more artificial protection of the standard of life is employed, like the "policy of the closed shop"; and this naturally forces the union, in turn, to place great dependence upon the strike and boycott. Before condemning a union for employing some of these policies, therefore, or contrasting it unfavorably with the practices of highly conservative unions, like the railway brotherhoods, it is necessary to inquire whether or not, like the railway brotherhoods, it is protected by some natural condition of the business which makes peaceable collective bargaining comparatively easy.

Labor unions have recently in some cases, however, exhibited their capacity to act as a monopoly and to coerce both employers and consumers into paying a monopoly price. The public welfare is entirely dependent upon certain industries in which the labor supply is not replaceable. For the railway employer, union members constitute the only available supply of labor. The

[1] The familiar union rule prohibiting members of the union from working with non-union men is known as the "closed shop." The policy is very elastic. No objection is made to working with members of an occupation not yet organized; some unions apply the ban only to non-union men in the same trade or craft; while others practically refuse to work for an employer who hires any non-union men at all (not applying the term "non-union men" to laborers, porters, and other unorganized workers).

public has few alternatives to the use of the railway service and so will pay an exorbitant price rather than go without the service. When these conditions are present, the labor union has the force, if not the form, of monopoly.

Neither does the fact that a union is inclusive entirely absolve it. The significant fact is that an inability to limit its numbers does not prevent a union from exerting monopoly power. The benefits of monopoly power can be distributed in the form of shorter hours, fewer necessary days of employment in the year, and general methods of limiting output.

The policy of collective bargaining.

The organized laborers who can demand that the employer bargain with their elected representatives for the determination of standard rates of pay or conditions of work have succeeded in the first essential to successful organized activity. For until the employer agrees to recognize the union and meet his employees through their representatives, organization is largely ineffective.

Collective bargaining is strong where individual bargaining is weak. The services of a single disgruntled laborer can easily be dispensed with by the employer, but the presentation of united demands through an efficient representative commands his attention. The recognition of the union, always closely related to the introduction of collective bargaining, opens the way for the successful carrying out of other union policies. Under company union policy, collective bargaining becomes *collective dealing*, which has the form, but not the substance, of collective bargaining.

The strike.

The strike is regarded by trade unionists as a "part of the wage system just as much as the brake is a part of the necessary equipment of a railroad train." [1] Trade unionists have frequently expressed the opinion that almost all improvements in the economic condition of the workers have come about as the result of "the industrial struggles of organized labor."

"Every strike means a struggle to hold or advance the toilers' standards of living, greater economic security, better and happier

[1] George E. McNeill, *Philosophy of the Labor Movement*, A. F. of L. pamphlet. Excerpt in D. Saposs, *Readings in Trade Unionism*, G. H. Doran Co., New York, 1936, p. 181.

homes, education for their children, improved and more humane working conditions, in fact, a better world to live in." [1]

The strike is, however, looked upon as a measure of last resort, to be used after the chances of success or defeat have been carefully calculated, and after both sides have failed in their attempt to settle the difficulty by all other means such as conferences, conciliation, and arbitration. It should be noticed that, while many trade unionists still cling to the theory that the strike is the most powerful factor in bringing about better conditions for the workers, labor leaders themselves are now tending more and more to frown upon indiscriminate striking, and to rely more and more upon efficient business tactics in bargaining with employers.

A rapid spread of unionism tends to increase strikes. New unions are prone to strike. The sudden realization of their new power and the accumulation of strike funds tempt them to try their strength. There is much reason to believe that in the long run organization exerts a conservative and steadying influence. National machinery is created which curbs the capricious impulses of the local unions; experienced men are usually elected to the more important national offices, and when called upon to settle a local quarrel they arrive upon the scene of action without personal resentment against the employers involved. In the past these facts created a confident belief among many of those who had studied the labor question, that when practically all American trades were organized, strikes would steadily decrease, as they had in England, where a much larger part of the wage-earning population was organized than in this country. As we have already indicated, however, the post-war strikes in England and in the United States did not justify such optimism. In 1919 over 4 million men were involved in strikes in the United States. Between 1922 and the depression, however, the number of workers annually involved in strikes decreased steadily from 1,612,562 in 1922 to 329,939, and to a low of 182,975 in 1930. In 1931 the number of workers involved in strikes increased to 341,817; in 1932 it fell slightly to 324,210. The following year showed a marked increase which continued in 1934 when the number reached 1,466,695. In 1935 the number fell again and reached 788,648 in 1936. 1937, however, will undoubtedly show

[1] J. H. Maurer, "Wages Lost in Strikes," *Illinois Miner*, January 6, 1923. Excerpt in D. Saposs, *Readings in Trade*, p. 188.

a sharp rise, since in June 1937, the number of workers who had participated in strikes during the first half of the year was 943,700.

Labor leaders have maintained that strikes strengthen the solidarity of the unions and encourage their members to make personal sacrifices for the common good, while they force employers to respect the strength of organized labor, and are not, in the long run, particularly costly. The time lost in strikes, it has been said, largely takes the place of enforced vacations — seasonal stoppages and other kinds of unemployment with which the average wage earner is normally visited during the course of the year's work. No dialectic, however, can argue out of existence the injury and destruction resulting from strikes. Many strikes are gravely injurious to the wage earners themselves; and almost all strikes injure employers and the consuming public. *From the social standpoint the strike is an evil, and all justifiable means should be employed to prevent its occurrence.*

We must not conclude, however, that workingmen and labor organizations are wholly responsible for strikes. If a body of men agree not to work for a given employer unless that employer complies with certain conditions, whose fault is it if the employer refuses to comply and a strike follows? Very evidently the fault may lie with either the employer or the men, or with both. The fault lies with the men if the conditions which they demand are, in view of all the circumstances, unreasonable and extortionate. The fault lies with the employer if he refuses to grant reasonable conditions of employment.

One of the greatest evils attendant upon the strike is violence emanating from both sides. A study of labor disputes in the early period of the modern labor movement seems to show that the average strike of that period was attended with much more violence than the average strike of today. Most labor leaders have thoroughly learned the lesson that violence does not pay, and they exert every effort to suppress it. But at the same time the average strike of the present time is attended with some violence or coercion.

Historically, also, a marked change has shown itself in the character of the violence employed. In the past, labor lawlessness was more or less sporadic; brutal, it is true, but frank and unpremeditated. The lawlessness of today, however, has taken

on a far more sinister form; it has become deliberate, premeditated, in many cases official. The outrages perpetrated by the officers of the International Union of Bridge and Structural Ironworkers (the "dynamite conspiracy") and the whole labor history of the mining industry in Colorado and Idaho make it plain that there has been a certain amount of carefully planned violence perpetrated with the passive consent, if not the active encouragement, of union officials and members. There can be no doubt, also, that individual employers and employers' associations have stooped to equally reprehensible practices. They have employed as watchmen, detectives, or strike breakers, ex-convicts, thugs, and professional bad men, who unquestionably have not refrained at times from perpetrating violence in order to cast discredit upon the unions.[1] In Colorado in 1914, and in West Virginia in 1921, the struggle between the organized miners and their employers assumed the aspect of a veritable civil war. It is impossible to conclude which side is the more to blame. The lesson to be drawn is the public necessity of suppressing and punishing violence or intimidation when practiced by either side of the controversy.

The problem of the closed-shop policy.

It is impossible to pass any general verdict upon the justice of the closed-shop policy.[2] Most Americans are inclined to condemn it offhand as an attempt to deprive the non-union man of his "sacred right to work." They forget that the union man enforces the closed-shop policy by an exercise of his "sacred right of quitting work." Except where violence is employed, the union which is attempting to enforce a closed-shop policy threatens to do nothing more than direct its members to quit the employment of the proprietor of the open shop in question. Two equally "sacred and inalienable rights" clash in this contest, and it is plain that no decision concerning the legitimacy of the closed-shop policy can be determined offhand by applying the

[1] See Sidney C. Howard, *The Labor Spy*, Republic Publishing Co., 1924.

[2] Two forms of the closed shop are common, — the closed shop with a closed union and the closed shop with an open union. Under the latter arrangement the employer may hire whom he will, but the employee must join the union. In the case of the closed union, the employer can hire only members of the union. In some industries, where employment fluctuates considerably and reserves are largely non-union, the hybrid "preferential union shop" is common, *i.e.*, the union men are given first chance for all employment openings, but non-union workers will be tolerated by the union where union workers are not available.

touchstone of individual rights. If we would know whether a strike against non-union men is justifiable or unjustifiable, we must inquire into all the surrounding circumstances and the manner in which the strike is conducted. If the strike is conducted peaceably, and if the union in question is an open union, cordially inviting the "scabs" to enter and share its benefits; if the rate of wages and other conditions of employment demanded by the union men are reasonable in view of the cost of living and other similar conditions; if the "scabs" involved by accepting less than a living wage or other harmful conditions of employment, are working — even though of necessity — to undermine a decent standard of living; then we have no hesitation in saying that the employment of the closed-shop policy on the part of the union, is thoroughly justifiable. Section 7(*a*) of the National Industrial Recovery Act for a time established the legal rights of workers to join a union and bargain collectively with an employer and this in turn has been protected by the still more recent National Labor Relations Act. But from the standpoint of equity and morals employers frequently discharge men for indefensible reasons, and unions frequently attempt to enforce the closed-shop rule for purposes or by methods which deserve to be condemned.

We must not confine our attention wholly to the injury done to the non-union man. The price cutter in the labor market is not ordinarily a social benefactor. The weakest, dullest, and least enterprising laborer exerts an influence upon the general level of wages out of all proportion to his importance or his deserts. If this be true, the man who cuts the standard rate of wages may do a grave social injury, and there is justification for those who peaceably combine to prevent him from doing his destructive work. It must be remembered, however, that these conclusions are based upon the assumption that the union is an open union and that the strike is conducted without intimidation of or coercive interference with the non-union men.

Limitation of output.

The policy of limiting output is looked upon as an aid to the maintenance of higher wages and better working conditions. It is generally felt by workers that "whether you work by the piece or work by the day, decreasing the hours increases the pay." The output of the worker is limited in many ways besides the

reduction of the hours of labor. The limitation of wages which some unions working by the piece system enforce, the prohibition or penalization of overtime, operate to check the activity or reduce the output of the particular workman.

The trade unionists' justification for the restriction of output very often takes the form of the lump-of-work argument. The quantity of work to be done is assumed to be fixed; consequently, the less each employee does, the longer the work will last and the greater the number that can be employed. While the short-time effect of such a policy may be to maintain or increase wages, the argument is based on an economic fallacy and the long-time effects cannot but result in a reduction of real wages. There is no fixed amount of any product demanded by the market. While the lump of work to be completed may at any particular time be fixed, yet certainly over any extended period the amount of any product demanded will vary with the cost of production. With decreased production there will come lower wages or greater unemployment.

Limitation of output has been generally condemned, but in some cases unjustly and without adequate reason. It is unsafe to render any general verdict upon the legitimacy of the policy. In some industries in which the piece system is employed, the rate per piece has unquestionably been forced down and the workers spurred to excessive exertion by the pressure and influence of pacemakers or taskmasters, paid by the employers to urge the workers to the utmost speed. Where such conditions prevail, no one can successfully question the justice of the feeling which leads the union to object to the presence of pacemakers and to prescribe a maximum wage — usually above that secured by the average workman — which union members are not permitted to exceed. In general, it is plain that an individual laborer may underbid a competitor by working more intensely, as well as by offering to work longer hours or at lower pay. On this account alone, trade unions are justified in defining and maintaining some regular pace or standard intensity of work. Without such definition, collective bargaining would be impossible. This last observation, it will be noted, applies only to trades working by the day. But even where the piece system is used, the workers may be justified in fixing a liberal limit to the amount of piecework which the wage earner shall be permitted to do in a day. For there can be no question that unregulated

piecework does stimulate the worker to excessive exertion, and that as daily earnings under the piece system tend to rise, the employer is tempted to reduce the rates.

Some methods of restriction, however, are wholly vicious. The Journeyman Stone Cutters' Union, for instance, stoutly resisted for years the application of machinery to their work, and actually attempted to prevent the shipment of machine-planed stone into any city where the union had succeeded in preventing the introduction of planers. In some unions there is tacit approval of the "go-easy" system, the system of "soldiering," or "adulterating labor," as it has been aptly termed. Such a method of restricting output not only corrupts the character of the individual workman who practices it, but makes it impossible for the employer to deal with the union as a seller of honest goods, and in this way tends to undermine the whole foundation of trade unionism, which is, as has been said, collective bargaining. On the other hand, there is no particular reason to believe that union labor is especially given to "go-easy" habits of work. The habit of stealthy loafing is found at its worst in certain unorganized trades or occupations, so that when it appears among union workmen it cannot logically be attributed to organization alone.

Educational and fraternal activities.

Practically all unions have important educational and social activities. Debate upon economic topics is common in union meetings, particularly at the conventions of the state and national organizations. It has even been said by observers in close contact with the facts that foreign-born wage earners receive their most helpful and vital education in American public questions through the agency of the union. The magazines issued by many labor unions are of educational value both to the immigrant and to the American-born wage earner, and some of these publications have shown a tendency to improve in quality. This broad education, which is a most important factor in elevating the standard of life, is supplemented by the social activities of the labor organization. Many unions maintain a so-called "Ladies' Auxiliary," in which the wives of the members participate, which gives concerts, dances, and other social entertainments, maintain charitable activities, and by general social inter-

course operate to unify and solidify the standard of life of the wage-earning group concerned.

Closely allied with these educational and social features is the system of insurance benefits, which has played a very prominent part in the development of labor organizations. In Great Britain fully three times as much money is expended by the unions upon mutual insurance of various kinds as upon administrative activities, or for the support and encouragement of strikes. Union insurance is helpful, not only in stimulating thrift among the individual members, but in making the union more careful and conservative in its policies. Moreover, it serves to keep in the union a large number of members, who, if they had no financial stake in continued membership, would drop out of the union in times when no apparent advantage was to be derived from the union. On the whole, the American unions have made relatively little use of the insurance benefit, though this function of the union has developed in recent years. Most of them pay strike benefits, — that is, part of their fighting policy, — some of them pay funeral benefits and sick benefits. The employment of the superannuation, accident, traveling, or "out-of-work" benefit, while still comparatively rare, is increasing in importance. In the clothing or needle trades, with the active financial support of the employers, unemployment insurance funds have been started. These experiments may prove of great importance. About 1920 a few of the more powerful organizations went into the banking business; the American Federation of Labor and the Electrical Workers' Union organized life insurance companies, and other experiments have been made with investment trust but very generally with most disastrous results.

Legislative and Judicial Recognition

The conditions of employment may be fixed by individual bargaining between the employer and employee, by collective bargaining between the employer and groups of employees, or by the state itself through legislative enactment. Collective bargaining, as a legally recognized institution, is of comparatively recent origin. At the beginning of the nineteenth century, combinations of workmen to improve their conditions of employment were unlawful in England and France. In the United States no statutory law forbade combinations to raise wages, but juries

were occasionally instructed that all such organization was illegal. After 1836 the doctrine that all types of workers' combinations were illegal was "allowed to die by common consent." [1] The legality of collective bargaining was recognized by the courts, and as shown above, it has recently received the impetus of administrative and legislative sanction, more positive than ever before. But certain classes, particularly women and child wage workers, have found it extremely difficult to organize for collective bargaining. In their case the state has entered upon a program of positive protection, acting so far as children are concerned in *loco parentis*. Adult men, with their trade-unions, have been left very largely to take care of themselves; but trade-unions, occupied with the absorbing questions of wages and hours of labor, frequently show marked indifference towards certain conditions of employment, such as safety and sanitation, which from the public standpoint are highly important. Of these conditions the public in its own interest has been forced to take cognizance. Legislative enactments have also been used both to foster thrift, thus placing the workman in a better position to protect his own interests, and to maintain uniform conditions of employment, so that industry shall be conducted under uniform rules. To most employers, for instance, it makes very little difference whether they are permitted to hire children under fourteen years of age or not; but it is very important to them that they should not be bound by more onerous restrictions than are imposed upon their competitors. From this and some other standpoints, the universality and rigidity of the labor law are virtues: the stricter its enforcement and the wider the area to which it applies, the better.

Freedom of combination, conspiracy, and injunctions.

An account of the slow steps by which unions in England finally came to be recognized as lawful combinations has been given in Chapter III. Long after 1824, when the statutes directed against such combinations were repealed, the unions had to meet and overcome one legal obstacle after another. Different factors contributed to their final success. The political power of workingmen had grown rapidly. There was a better understanding

[1] E. E. Witte, "Early American Labor Cases," *Yale Law Journal* (May, 1926), Vol. XXXV, p. 827

of the problems of labor and more sympathy with the aims of labor organizations. Furthermore, hostile laws and adverse judicial decisions had been found powerless to halt the advance of the union movement.

In the United States, striking unionists were prosecuted for criminal conspiracy as early as the first decade of the nineteenth century, and a majority of the cases were decided against the strikers. Public opinion was divided. In some places the issue was carried into politics and figured in the elections of judges. In the eighteen thirties, when the labor-union movement was making rapid strides, there were again a number of prosecutions for conspiracy, with results favorable to the workers in some cases and unfavorable to them in others. There was little doubt respecting the laborers' right to combine, but the legality of some of their methods and purposes remained in dispute.

Before the middle of the nineteenth century our higher courts had established the doctrine that workingmen might peaceably combine to secure wage increases, reduce hours, or improve shop and other conditions of employment immediately affecting themselves. The legal status of the union was no longer doubtful. But it must not be supposed that in the United States this freedom was or is complete. Workmen might combine to secure higher wages, and might enforce their demands by striking, but in most jurisdictions they could not lawfully combine to secure the discharge of a non-union man, or could they threaten in concert to quit dealings with a merchant unless he should refuse to buy goods from some manufacturer against whom these workmen or their friends were striking. Moreover, the movement towards complete freedom was blocked or delayed in the last quarter of the nineteenth century by the widespread adoption of anti-trust laws, prohibiting combinations in restraint of trade. Many of the customary activities of unions, such as strikes to enforce the closed-shop rules, publication of "unfair lists," and the like, are regarded in some jurisdictions as restraints of trade. The anti-trust laws thus threw a cloud upon the entire labor-union movement. Finally the whole situation was complicated and embittered by a doubtful use of the injunction and by the uncertainty of the law itself. Statutes differ, and the interpretations of similar statutes by different courts are in hopeless

conflict. This confusion constitutes in itself a grave social problem.

The first half of the nineteen thirties has witnessed broad steps in the direction of regulating the use of the injunction. In 1931 an outstanding legislative development came through the enactment of the Wisconsin labor code — declared to be the first labor Bill of Rights in the United States. In this act, the freedom of collective bargaining was declared the policy of the state, and among other things the injustices of unrestricted use of injunctions in labor disputes were set forth and their content and use greatly limited. In the same year a similar act in Pennsylvania provided for open court hearings as necessary to the issuance of injunctions, and further, that injunctions should stipulate designated persons and specific acts. The Pennsylvania act also provided for jury trials in case of contempt of a court injunction. In all, the regulation of the issuance of injunctions in labor disputes had spread to eighteen states by the close of 1934.

This state legislation directed against anti-labor use of the injunction was strongly influenced by the federal Norris-La Guardia Act of 1932, which regulates strictly the issuance of injunctions in labor disputes, but is operative in Federal Courts alone. The Norris-La Guardia Act also outlawed anti-union or so-called "yellow dog" contracts under which laborers had been placed under agreement not to join a union. The same prohibition has been included in the anti-injunction legislation of many of the states. This latter problem of coercive employment contracts, of course, was temporarily regulated by Section 7(*a*) of the National Industrial Recovery Act, and now through the National Labor Relations Act.

We have already recorded the simple solution of this problem reached in England: in labor disputes workmen or employers may lawfully do in combination whatever any employee or employer may lawfully do alone, and a labor-union may not be sued for a civil wrong independent of a contract, although it may be sued for breach of contract. In this country legislative attempts to adopt the British solution have been checked by the courts except in a few states. A Massachusetts statute similar to the British law was declared unconstitutional on the significant grounds, among other things, that state and federal constitutions prevent any person from being deprived of property

without compensation or due process of law, that combinations of workmen are frequently used to prevent persons from obtaining work, and that no such combination can be legalized by mere statute law. The federal law on the subject, as expressed in the Clayton Anti-trust Act, is curiously equivocal. It contains a number of provisions which, construed simply and naturally, appear to declare that neither labor organization nor their members shall be "held or construed to be illegal combinations or conspiracies in restraint of trade under the anti-trust laws," and that in any case between employers and employees growing out of a dispute concerning terms or conditions of employment, a number of persons may lawfully do "any act or thing which might lawfully be done in the absence of such dispute by any party thereto."

These provisions of the Clayton Act were hailed by many representatives of labor on their adoption as the "Magna Carta of the American labor movement." On the other hand, the sponsors of this legislation plainly declared, when it was introduced and explained in the Congress, that it did not legalize the secondary boycott or go as far as the British law on the subject. The Supreme Court of the United States has taken the latter view, holding that under the Clayton Act the union as such is liable for its acts and "that funds accumulated to be expended in conducting strikes are subject to execution in suits for torts committed by such unions in strikes";[1] that sympathetic strikes and compound boycotts (possibly also primary boycotts) are contrary to federal law, that peaceful picketing is "a contradiction in terms"; "but that, subject to the primary right of the employer and his employees and would-be employees to free access to his premises without obstruction by violence, intimidation, annoyance, importunity, or dogging, it was lawful for ex-employees on a strike and their fellows in a labor union to have a single representative at each entrance to the plant of the employer to announce the strike and peaceably to persuade the employees and would-be employees to join them in it."[2]

The expediency of adopting in this country what has been called the "British solution" raises issues which are as interesting

[1] *United Mine Workers et al.* v. *Coronado Coal Co.*, 259 U. S. 344, 42 Sup. Ct., decided June 5, 1922.

[2] *Truax et al.* v. *Corrigan et al.*, 257 U. S. 312, 42 Sup. Ct. 124, decided Dec. 19, 1921.

as they are grave. There is much to be said in its favor. The law of conspiracy as applied in American labor disputes is full of frail distinctions and practical contradictions. The British law is much simpler, yet due perhaps to better police administration, the British labor movement has been more free from violence, intimidation, and coercion than the similar movement in this country. And as between employers and employees the American law has been considered by labor to be heavily biased against them. The closed shop has been condemned as coercion of non-unionists. Thus in the Hitchman case, the United States Supreme Court held that, where workmen had signed an agreement to the effect that they would not belong to a labor union, any subsequent effort made with the object of inducing them to join a union is illegal. In the Coppage case, however, the United States Supreme Court held unconstitutional a statute authorizing criminal penalties upon an employer who required employees to renounce union membership as a condition of employment. The constitutionality of the Norris-La Guardia Act in regard to the "yellow dog" contract has as yet been upheld only by the Supreme Court of the District of Columbia. However, even before the passage of this act, a New York court refused [1] in 1928, to protect certain employers in exacting promises from their workers to refrain from joining a union, while in 1931, a New York Supreme Court issued an injunction against employers in the steel-contracting industry restricting them from violating an agreement not to operate an open shop. A similar decision was rendered by the Superior Court of Massachusetts in 1932.

A combination of workmen to boycott a third party (the so-called secondary boycott) [2] or to secure the discharge of a non-union employee is in most jurisdictions declared to be unlawful, whereas an opposing corporation, representing in fact the combination of perhaps a larger number of stockholders and much capital, is regarded as a single entity and thus beyond the penalties of the law of conspiracy. The law should treat equally the combinations of "capital" and of "labor."

On the other hand, there is little truth in the specious contention that a combination of workmen or employers has a right

[1] *Interborough Transit Co.* v. *William Green et al.*, 227 N. Y. Supp. 258.
[2] *Duplex Printing Press Co.* v. *Deering*, 254 U. S. 443, Supreme Court, 1921.

to do in concert what any individual may lawfully do. There is no such right, moral or legal, in this country. An individual not under contract may quit working for an employer or dealing with a merchant for any reason or no reason. Why, it is confidently asked, may groups of men not do the same? As a railway engineer may quit work practically when he likes, why should not the Brotherhood of Locomotive Engineers quit work in a body when it pleases the organization, and thus tie up the entire railway traffic of the country, for the purpose, say, of assisting the railway conductors of one district in refusing traffic from another district in which a strike has been declared?

These questions carry their own answers. Many acts which are either harmless or trivial when performed by an individual become highly injurious when swollen by concert and combination. A general strike or boycott for trivial or malicious ends cannot be other than impolitic and wrong. In recent years in England, the general strike has been completely outlawed. All this appears plain when we reverse the case and pass judgment upon what are practically the same acts when performed by employers. A sympathetic lockout, ordered against one innocent union, say of freight handlers, in order to prevent them from voting funds to assist the strike of a union of railway telegraphers, for instance, would bring general criticism against the employers who ordered it; but it is essentially the same in principle as the sympathetic strike. The black-list — which has almost no avowed friends — is in essence similar to the indirect boycott or strike to secure the discharge of a non-union man. The simple truth is that many things are dangerous and injurious to the public interest when participated in by great numbers which are not so when performed by individuals.

A good deal may be said in favor of the reluctance of American courts and legislatures to sanction all kinds of even peaceable labor combinations, regardless of motive or purpose. Many peaceable strikes and boycotts are in fact capricious, unjustifiable, and socially destructive, even in the judgment of disinterested persons sympathetic with the main purposes and tenets of organized labor. To legalize such strikes and boycotts would to many minds legitimize them socially and morally; and it is probably expedient to keep the law consistent with the practical morality of the situation.

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CHAPTER XXXV

LABOR PROBLEMS AND PRACTICE (*Continued*)

LEGISLATIVE AND JUDICIAL RECOGNITION (*Continued*)

Child labor laws.

The class of laws which we have been considering has been designed to relieve the laborer from legal disabilities, so that he may be enabled in combination with his fellows to help himself. Most modern labor laws, however, are of a different type. They assume that the welfare of labor is of peculiar importance to society and that the state is therefore warranted in protecting the wage-earning classes, openly and frankly. Perhaps the earliest and most typical legislation enacted in this spirit is the child labor law.

The problem of child labor is frequently misconstrued. The principal reason why children work today is not found in the needy widow, the abandoned wife, or the stony-hearted employer, although these and analogous reasons represent important causes of child labor. Important causes of child labor were, in the past, the restlessness of the child, the failure of ordinary school training to hold his attention and arouse his ambition, and the ignorance or selfishness of parents. Today, it occurs mainly because the low wage of the parent must be supplemented so as to support a large family. The evil consists, principally, in the fact that the child who goes to work early usually gets into a "blind alley" occupation, and is thus prevented from developing his full potential earning power. His ability to serve both himself and society is curtailed by his excessively early start. "The better occupation either will not receive the young child at all, or wants him with more schooling, or offers such a low initial wage that both child and parent turn to the mill, with its greater present wage opportunities." [1] The wage in the low-grade occupation is at

[1] Susan M. Kingsbury, "The Relation of Children to the Industries," in *Report of Massachusetts Commission on Industrial and Technical Education*, p. 44.

first relatively high, but in three or four years the boy has reached his maximum earning capacity, and early marriage fastens him to the job. The boy who begins at sixteen years or later soon catches up to his less fortunate brother, and in a comparatively few years is earning a superior wage. As a foundation for real promotion and advancement, the work done by children between fourteen and sixteen years of age has usually little value.

It is thus plain that the problem of child labor is positive and constructive, not merely negative. It avails little only to prohibit children from working at this or that; agencies must be provided helpfully to guide their activities. Already the most advanced states have incorporated in their laws a provision requiring employers of child labor to give the children a specified amount of vocational training, or time to secure such training, in institutions provided by the state. More important still, agencies have been established to determine by physical and psychological tests whether children who have completed the required schooling are really fitted to enter industry, and what kinds of work they are best fitted to undertake. The beginnings are tentative and the work difficult. But the period draws to an end in which ignorant children drift or are pushed by ignorant parents into the work which lies nearest at hand. Rapid steps are being taken to promote and popularize the principle of vocational guidance in public schools, over the radio, and in the daily press.

Child labor laws differ materially in the different states, thus placing at a competitive disadvantage employers resident in the states adopting the higher standards. Congress has made two attempts to equalize the situation. In 1916 a federal statute was passed debarring from interstate commerce goods produced in factories which employed children under fourteen years of age, or which employed children between fourteen and sixteen years of age, more than eight hours in any day, or more than six days in any week, or after the hour of 7 P.M., or before the hour of 8 A.M. In 1919 a federal excise tax of 10 per cent was laid upon the income of any manufacturer who employed child labor under conditions or limitations similar to those named in the earlier statute. The Supreme Court of the United States, however, has declared both acts void as "dealing with subjects not intrusted to Congress but left or committed by the supreme law of the land to the control of the States." "We cannot avoid the duty

[of declaring such attempts void]" the Court continued, "even though it requires us to refuse to give effect to legislation designed to promote the highest good. The good sought in unconstitutional legislation is an insidious feature because it leads citizens and legislators of good purpose to promote it without thought of the serious breach it will make on the ark of our covenant or the harm which will come from breaking down recognized standards. In the maintenance of local self-government, on the one hand, and the national power, on the other, our country has been able to endure and prosper for near a century and a half." [1]

The Child Labor amendment to the federal Constitution submitted for state ratification in 1924 had been ratified by twenty-eight states at the close of 1936. The industrial codes written under the National Industrial Recovery Act did much to establish temporarily a nation-wide standard for child employment,[2] and during 1934 there was considerable confusion concerning the need for the federal amendment because of the codes. However, there soon came a clearer understanding of the temporary and emergency nature of the code provisions. The federal Amendment has had sincere and ardent foes as well as sponsors. The conflict is not one concerning principles of child labor, but one of principles of administration and objections to the creation of federal control over some 45,000,000 persons — those under 18 years of age. The problems of child labor have not been met, and if the solution is to remain for the regulation of the several states there is an urgent need for uniform standards and the improvement of many of the existing laws. In New Hampshire, for example, the law merely prohibits the employment of minors under the age of 16, in any gainful occupation, for more than ten and a quarter hours a day.[3] Such a law would appear to allow an employer as much latitude as he could wish for.

A good state child labor law, it is now generally conceded, should prohibit the employment of all children under sixteen, and of all children under a higher age limit who are undersized, or

[1] *Bailey* v. *The Drexel Furniture Co.*, 259 U. S. 20, Sup. Ct. 449, decided May 15, 1922. For the earlier decision, see *Hammer* v. *Dagenhart*, 247 U. S. 251.

[2] In a survey made by the American Federation of Labor, published in the New York *Times*, July 9, 1936, Mr. William Green declared that the standards for child employment set up by the N. I. R. A. were relaxed immediately after the decision outlawing the act in 1935.

[3] *Monthly Labor Review* (February, 1929), Vol. 28, No. 2, pp. 73–75.

weakly, or illiterate. Young persons who are deficient in the fundamental requirements of an American education should be compelled, where possible, to attend a continuation school. Work in immoral or dangerous occupations, or at night, or in excess of eight hours per day should be forbidden for all children under the higher age limit.

The successful enforcement of child labor laws has been found difficult. Birth or baptismal certificates, or other similar evidences of age, have to be procured from parents, certificates of attendance and proficiency from school authorities; examinations of health and educational requirements must be made; and employers cannot be required to demand, file, and return employment certificates. The community must maintain, and properly support, factory inspectors and health and school attendance officers in adequate numbers, with power to prosecute violations of the law and with secure tenure of office. The community should further provide for dependent families which need the earnings of their children, keep birth records, and maintain schools fitted to hold the attention of the child and to train him properly for his life work. "The best child labor law is a compulsory school law covering forty weeks in the year and requiring the attendance of all children under fourteen years of age." [1]

The labor of women.

The employment of women is not in itself a problem calling for legislation. The evil consists in working under conditions which undermine health and morals, or for inadequate wages. It is impossible to describe here in detail the various laws which have been passed relating to the conditions of labor of women. Women are subject to the factory act relating to sanitation, safety, and occupational diseases, and to general statutes regulating production in tenement houses and the time, frequency, and character of wage payments. In the more advanced states also, the labor of women in manufacturing, mechanical, and mercantile establishments is likely to be safeguarded by laws limiting the hours of labor, prohibiting night work, and continuous employment for more than six hours, for example, without an interval for meals; providing and permitting the use of suitable seats;

[1] Cf. Florence Kelley, *Some Ethical Gains through Labor Legislation*, Macmillan, New York, 1905, pp. 98, 99, and *passim*.

requiring separate and sanitary toilet facilities; prohibiting the employment (knowingly) of women within two weeks before or four weeks after childbirth; and — in Massachusetts for example — directing local authorities to furnish responsible mothers having dependent children sufficient aid "to enable the mothers to bring up their children properly, in their own homes."

Until recent years, regulations similar to the above represented the extreme limit to which any American state had gone in the protection of women. And even the constitutionality of such regulation was in grave doubt, for an important statute limiting the hours of labor had been declared unconstitutional by the highest court in Illinois, and in New York a statute prohibiting night work had been similarly annulled, on the general grounds that they infringed the freedom of contract and were "unduly discriminatory between citizens," the court remarking (in the New York decision) "that woman is no more the ward of the state than is man." But under the leadership of the Supreme Court of the United States, both of the state courts in question reversed these decisions in regard to hours of labor and night work and sanctioned similar laws as reasonable health regulations, looking not only to the protection of the individual woman but to the "strength and vigor of the race." [1] Consequently, today there is no question of the state's power to regulate reasonably the conditions of the labor of women.

The regulation of the labor of women by the state comes through provisions mentioned above for the guarding of health and enactments covering the hours of and wages for their work. The earlier regulatory measures were concerned with the hours of labor and now stand tested from the standpoint of constitutionality. Steps in this direction were made by five states shortly before 1850, but really effective legislation did not follow until the last quarter of the nineteenth century. At the present time almost all of the states have some form of regulation.[2] The National Industrial Recovery Act did much in the way of establishing temporary standards for female employment through its general provisions for all workers which exceeded in over-all protection most of the existing state laws for female protection.

[1] *Monthly Labor Review*, Vol. 28, p. 62.

[2] *Labor Laws for Women in the States and Territories*, Bulletin of the Women's Bureau No. 98, Government Printing Office, Washington, D. C., 1932.

However, as pointed out in regard to child labor, the protection of the industrial codes written under the National Industrial Recovery Act stood as a temporary and emergency measure which was lost on May 27, 1935, when the Supreme Court outlawed the N. I. R. A.

A more recent movement in the direction of regulating the work of women is found in the effort of the states to establish minimum-wage laws for women, with the general object of requiring that wages paid in certain occupations shall not be so low that women "cannot support themselves in a proper and healthful manner." [1]

Outright minimum-wage laws were first adopted by the Australian state of Victoria in 1896 to regulate wages and other conditions of labor in the "sweated trades." Trades or industries in which wages are particularly low are usually singled out by legislation, though in Victoria the government may apply the system to additional trades by administrative order. These wage boards are designed to induce compulsory collective bargaining, in which the state participates by compelling employers and employees to fix standard conditions of employment. In England and this country the legislation is as yet much more tentative and restricted. "The outstanding characteristics of the American minimum wage legislation compared with that of England, Australia, and New Zealand are these: The first is its omission of men; the second is its reference to the welfare of the people as a whole; the third, which is responsible for both the others, is its subordination to the courts on the grounds of constitutionality, entailing the practice of placing upon American states the burden of proof that they are acting within their police powers when they create such wage commissions and wage boards or conferences." [2] Some of the American laws, it may be added, make no provisions for joint wage boards of the Australasian type, but provide that the minimum wage shall be fixed directly by a state labor or industrial commission.

The movement for instituting a minimum wage for women found practical expression in this country in 1912 and 1913, when Massachusetts and Michigan appropriated money for a special

[1] *The Development of Minimum-Wage Laws in the United States, 1912–1927*, Bulletin of the Women's Bureau, No. 61, Government Printing Office, Washington, D. C., 1928, p. 7.
[2] Article by Florence Kelley in *The Survey*, Vol. XXXIII, p. 487.

investigation of the conditions under which women wage earners worked and lived. The results of the investigations were such that Massachusetts, without delay, passed a minimum-wage law for women. Other states followed the example, but the question of constitutionality was soon raised. Laws applicable to the District of Columbia, Arkansas, and Arizona were declared unconstitutional by the Supreme Court; and the supreme courts of Kansas and Puerto Rico took a similar position with regard to minimum-wage laws applicable to those jurisdictions. An early wage law enacted in Oregon was sustained by the United States Supreme Court, and the Minnesota Supreme Court has upheld child wage legislation, but as far as adult males and females are concerned the future of wage regulation is an uncertainty. A Colorado law has never been put into operation, the issuance of a decree being a necessary preliminary and one never fulfilled. In Nebraska and Texas the laws have been repealed by the legislature. It must be admitted that the difficulties surrounding the experiment have not yet been overcome.

The Supreme Court of the United States on March 29, 1937, declared that the minimum-wage law for women and minors in the State of Washington was a valid and proper exercise of power by the legislature of the State.[1] By a five to four ruling the Court reversed a previous ruling on the question of the constitutionality of minimum-wage laws. In June, 1936, the Court, by the same division, had declared unconstitutional the minimum-wage law of New York. This decision was based on the one made in the Adkins case in 1923,[2] when the minimum-wage law of the District of Columbia was declared unconstitutional on the grounds that it represented unwarranted interference with individual right of freedom of contract. The Washington State minimum-wage law, adopted in 1913, was upheld twice by the supreme court of the State. Justification of that legislation had been based by the legislature on the necessity of protecting women and minors "from conditions of labor which have a pernicious effect on their health and morals." Supreme Court Justice Hughes, in the majority decision in the case of *The West Coast Hotel* v. *Parrish* said, "We are of the opinion that this ruling of the State court demands on our part a re-examination

[1] *The West Coast Hotel Co.* v. *Parrish*, 57 Sup. Ct. 578.
[2] *Adkins* v. *Children's Hospital*, 261 Sup. Ct. 525.

of the Adkins case." The conclusion of the majority was that the state legislatures have the power to enact reasonable minimum-wage legislation to correct a recognized evil in the industrial life of the nation.

The economic argument for the minimum wage starts with the statement that in many trades the majority of women workers do not receive enough wages to maintain their physical efficiency. Of these sub-standard workers a large number are partially supported by other members of the family, a considerable number are assisted by charity, a few eke out their living by intermittent or regular prostitution, and some "actually die of under-nutrition and worry." [1] The work as a rule is simple and the supply of labor excessive. Usually there is no labor organization. The workers are weak in bargaining power. The tendency towards a uniform or standard wage in many of these trades seems to have been checked by the absence of labor organization, and competing establishments in the same industry frequently pay very different wages for the same grade of labor.

The proposal is to establish for wages a minimum standard analogous to the standards of safety and sanitation now generally imposed upon industry by law. If a minimum standard of safety and sanitation is imposed upon industry by law, why should not legislation prohibit the payment of wages so inadequate as to lead indirectly to even worse evils than exposure to accident or disease? That the establishment of a minimum wage might force a certain number of incompetent workers out of employment is recognized. But that society should be forced openly and frankly to deal with its incompetent workers is regarded as an advantage. It is further expected that such legislation in some instances will result in increased prices. But the consumer is expected to bear his fair share in supporting those who supply his needs; and both *a priori* analysis and experience make it probable that the rise in wages would not be accompanied by a *corresponding* rise in prices. It is recognized also that such legislation may increase expenses of production in some industries. But it is held that trades which pay less than a living real wage are "parasitic"; that they constitute a positive drain upon society at large; and that any measures necessary to place these trades

[1] H. R. Seager, "The Theory of the Minimum Wage," *American Labor Legislation Review* (February, 1913), Vol. III, No. 1, p. 84.

on a self-supporting basis are both justifiable and economically helpful. However, it is believed that in most such trades the necessity of paying standard wages would not "scrap the industry," but would bring about a larger use of machinery, and by focusing competition upon the equality and efficiency of the workers would eventually result in lower rather than higher expenses of production.

Most of these arguments can be applied to men as well as to women. For this reason, among several others, the Woman's Party in America strenuously opposes any special labor legislation for women.[1] Such a position, however, is not generally accepted by those interested in the welfare of the public.

It is claimed by those opposed to the minimum-wage idea that it discriminates against the more competent workers in that increases in pay to the unskilled to bring their wages up to the required minimum levels are made at the expense of the skilled workers; that it protects those who least need the protection; that it is "flatly inconsistent with the facts of daily life, and preparation for any occupation. At what age or point is a beginner, or apprentice, to receive the full legal wage?"[2]; that it interferes with sound business management and removes the incentive to workers; and that it penalizes marginal firms employing workers who are relatively poor producers.

The minimum-wage law has now been tested long enough and on a scale sufficiently extensive to warrant the conclusion that it is, or may be if slowly introduced and carefully administered, a practical success. In Victoria, the legislation, which was at first doubtfully applied to six trades, has now been made applicable to nearly all of the important occupations in trade and industry, including certain classes of agricultural workers. Vigorously opposed by the employers on its introduction, it seems, from reports of disinterested investigators, to have established itself on a firm foundation. There is opposition to details of the law and vigorous criticism of the way in which it is administered; but from all that can be learned, those who desire to do away with this system of regulation constitute a small minority. In England and in the United States the results are, on the whole,

[1] See E. E. Witte, "The Effects of Special Labor Legislation for Women," *Quarterly Journal of Economics* (November, 1927), Vol. XLII, pp. 153–164.

[2] W. H. Hamilton, *Current Economic Problems*, University of Chicago Press, Chicago, 1921, p. 596.

favorable. Nothing revolutionary has been accomplished, but the system has demonstrated that it is practicable, even in highly complicated trades; that while the legal minima have been evaded in a few instances, it has on the whole appreciably raised wages without seriously disturbing prices; that it does not undermine trade-unionism, but mildly stimulates organization among workers who need organized effort to better themselves; that it compels serious study and public investigation of trades which need both; that it does not drive industry out of existence, nor deaden incentive. The minimum wage has not become the maximum, nor has the operation of the system resulted "in wholesale dismissals of old and slow workers," although there is evidence that in England, at least, it has tended to increase the amount of unemployment accompanying a period of declining prices and business depression. In short, while it may have accomplished less good than its more sanguine advocates expected, it has done less harm than its opponents prophesied.

So far as economic theory is concerned, there is no reason to believe the minimum-wage proposition wholly unsound. Without regulation much of the competitive fight centers about the mere money wage. A poor workman may be more profitable to the employer than a skilled workman, provided the poor workman can be secured for a small enough fraction of the wage it would be necessary to pay to the skilled workman. Establish a dead line — or better, a health line — and the emphasis will be placed upon efficiency instead of cheapness. Wage earners will have to meet higher and better standards. The competitive struggle will thus operate to evoke efficient rather than low-paid workmen. The higher cost of labor will help to force the introduction of better machinery and better methods of organization and employment.

Obviously, not all the claims made for this system will bear scientific scrutiny. There is, for instance, probably more error than truth in the contention that every industry which pays its women and minor workers less than a living wage is a detriment rather than a help, an industrial parasite sapping the economic strength of a community. Until a far better distribution of the labor force has been secured, there will continue to be in all probability a surplus of workers who cannot earn a living wage and yet had better earn a supplementary wage than be idle. In this country, for instance, there were in 1930 almost one and

one-half million girls between the ages of sixteen and nineteen, inclusive, engaged in gainful occupations. Young women might possibly better spend these years in training for their life work, including housekeeping, and the difficult vocation of marriage. But until adequate provision for such training is made, young women of this age had better be employed at wages which will tend to make the family income more adequate than not to be employed at all. And if a universal minimum-wage law, applicable to men, women, and children, were suddenly introduced, it would almost certainly break down. After all, however, such considerations do not invalidate the theory upon which the minimum-wage program rests.

Factory acts.

Constitutional guarantees, particularly that of free contract, prevent in this country the general regulation of the labor of adult men, but under the police power the states have the right, indeed in the language of the Supreme Court, "it is among their plain duties," to regulate the physical conditions of employment so that accidents and occupational diseases may be minimized, and sanitation and morality may be maintained at a maximum. These regulations, frequently referred to as Factory Acts, are typified by the familiar laws requiring proper fire escapes, the removal of dust or noxious vapors by fans, the placing of guards about dangerous machinery, the installation of mechanical belt shifters, connection by bells or tubes between rooms in which machinery is used and the engine room, adequate toilet facilities for both sexes, wash rooms, proper lunch rooms, rest rooms for women, first aid facilities, and the prohibition of women and minors in certain dangerous or arduous occupations. Even the maximum hours legislation for men employed in dangerous occupations has been upheld as a legitimate exercise of state police powers. Such laws have now been adopted in most of the states, but their enforcement in many states has been very ineffective. Even where factory inspection is provided, it has too frequently been half-hearted, inexpert, and emasculated by political interference. In one state, "where the chief factory inspector divides his time between conducting a livery stable he owns and the business of caring for some 30,000 factory wage earners, I found him contributing a remarkably concise annual report

of exactly fourteen words. It reads, under date of July 1, as follows: 'I have visited the same factories as last year and find conditions the same.'" [1]

While politics and administrative ineptitude have seriously crippled factory regulation in this country, the truth is that until recent years there were few real experts procurable in this field. In the last few years, however, great improvement has been made both in the laws and in their administration. Wisconsin, Massachusetts, New York, and other states have gone far towards solving the administrative problem by placing appointments on the civil-service basis and consolidating powers previously lodged with police, factory inspectors, and health commissioners into one industrial or labor commission, with general power to enforce the rules necessary to provide reasonable sanitation and safety. In this way the necessary elasticity of rule and standard has been secured. In adopting rules or standards the co-operation of employers and labor organizations has been secured, thus insuring more practical rules and the good will of those to whom these rules apply. Regulation by the state can never become effective until the responsible administrative head is given sufficient discretion nicely to adapt regulations to the subtle complexities of modern industry. With employers, employees, and factory inspectors working together under practicable regulations in whose formulation all three have co-operated, rapid progress has recently been made not only in factory and mercantile inspection, but in the methods of compensating for industrial accidents.

Employers' liability — workmen's compensation.

Under the common law of employers' liability, the employer is under obligation to provide his workmen with a reasonably safe place in which to work, with reasonably safe machinery, and with reasonably prudent and competent fellow workmen; and the employer is liable in damages for any accident to his workmen resulting from failure to display this ordinary prudence and care, as well as from similar failure or negligence of any superintendent, overseer, or vice principal authorized to issue orders in his name.

[1] E. F. Brown, "The Efficiency of Present Factory Inspection Machinery in the United States," *American Labor Legislation Review* (February, 1913), Vol. III, No. 1, pp. 27–28.

When the employer has observed the ordinary precautions of a reasonably prudent man, however, the employee assumes all the hazards incident to the employment or arising from the negligence of fellow servants; and even though the employer is negligent, the employee cannot recover damages for an accident if the employee was aware of the employer's negligence and voluntarily accepted the risk, or if the employee has been guilty of additional or contributory negligence.

This, in bare outline, is the common-law foundation of the doctrine of employers' liability. It has been modified incessantly by statute law and by changing interpretation of the courts; it is vague, uncertain, and legalistic in the worst sense. Under it not more than 10 per cent of the victims of industrial accidents received any compensation, and of the damages paid by employers the victims received on the average probably less than 50 per cent. The rest went for court costs and lawyers' and doctors' fees. A class of professional accident attorneys, "ambulance chasers," and shyster doctors who exploited industrial accidents for their own rather than the victims' benefit, appeared in most industrial centers; ignorant juries decided on the difficult facts in the most capricious ways, now refusing relief in deserving cases, and again voting excessive damages for trivial or perhaps simulated injuries; the cases filled the courts; decisions turned upon hair-splitting distinctions and metaphysical niceties; the humane employer, the conscientious lawyer, the far-sighted judge, workingmen, and the general public became, it is hardly too much to say, disgusted with the inapplicability and bungling unsuitability of the doctrine of employers' liability properly to deal with the grave social problem arising from industrial accidents.

Attempts to solve this problem, as stated above, first took the form of incessant amendment of the old law. The fellow-servant doctrine (that the employer was not responsible for accidents arising from the negligence of co-employees as distinguished from vice principals) was curtailed by some states by confining "fellow servants" to those employed in co-ordinate occupations immediately associated with the victim. The employer's defenses of "assumption of risk" and "contributory negligence" were limited and in some jurisdictions almost abolished. But the truth is that the whole social philosophy underlying the law of employers' liability was mistaken; "not so much

unjust as wholly inapplicable." It misconceived the nature of the social problem involved and offered remedies that were wholly ineffectual. It attempted — so far as one can discover any real rational philosophy behind it — to single out those accidents for which the employer was to blame and to compensate workmen in accordance with the damage resulting from the employer's negligence. Investigation shows, however, that the employer is responsible for only a minority of the accidents which occur. The victim himself, his fellow workers, and most important of all, *the occupational risk itself are responsible for the great majority of accidents.* But the victim's need and that of his family are just as great when the accident results from the victim's negligence as when it results from the employer's negligence. It is not a question of individual fault and punishment for that fault; it is a question of industrial or social loss and insurance against that loss. The government should of course compel both employers and employees to take every reasonable precaution against accident, by unequivocal law or administrative order. But even if this were accomplished, there would still remain a large number of industrial accidents, which if not compensated for, would lead to poverty, unemployment, and the suffering of innocent women and children.

That the burden of industrial accidents should be borne by the industry itself or the consumer and not wholly by the laborer or his family is now very generally recognized. By 1935, forty-six states had adopted Workmen's Compensation Laws, the states not having accepted such legislation being Mississippi and Arkansas. Except for the recent passage of acts in 1935 in South Carolina and Florida, the latest act to be in operation long enough to provide experience is that of North Carolina passed in 1929. This new legislation has worked well; not perfectly, but with much more certainty and with far less operating cost than the old laws. Defects naturally exist in the new system. The usual compensation is too low to indemnify the victim and his family adequately for the loss resulting from the accident; the limitation of payments for permanent disability to a given period of time has been recognized as illogical and abandoned in several states, including North Dakota and Ohio, though many of the laws still contain provisions limiting payments for total permanent disability to periods ranging from 260 to 1,000 weeks.

Unemployment.

An apparent concomitant of modern industry is a large labor reserve of unemployed. How large this surplus is we do not know with certainty, but at the outset it should be pointed out that the extreme burden encountered during the first half of the nineteen thirties is but a swelling of a thinner stratum that existed during normal or even very prosperous periods. Whatever the extent of this evil, students of social conditions are agreed that unemployment is demoralizing. Inability to find work too frequently does not spur the sufferer to greater activity or arouse in him a resolve to make himself more efficient; it disheartens him and cultivates the habit of idleness. It involves a loss to employers, the magnitude of which has only recently been appreciated.

As indicated above, unemployment is not just an attribute of the depression but rests fundamentally upon mechanized efficiency in the fields of production and distribution. Following the World War but preceding the world depression, the unemployment in the United States ranged from 1,400,000 to 4,250,000, with chronic unemployment being the lot of some 1,500,000 wage earners. Unemployment statistics in the United States represent a chaos of conflicting evidence, but for illustrative purposes rather than exact evidence, a peak of unemployment representing about 12,000,000 persons was reached in the winter of 1932–1933. The American Federation of Labor estimates indicated an unemployment of 13,689,000 in March, 1933, while estimates from various sources ranged from 4 million[1] to 11 million[2] for the closing months of 1936. In addition to such indexes of outright unemployment, the larger problem holds as well for the situation of intermittent labor, whereby workers are employed, but for fewer days a week or fewer weeks per month, and also for the seasonal fluctuations found in many trades.

When the persistent drizzle of unemployment before 1929 broke into such an engulfing storm during the next few years, private industry and public agencies were completely unprepared and unequipped to cope with the problem. During 1930 an attempt to provide a governmental policy and organization for dealing with unemployment was embodied in three bills introduced by

[1] Estimated by U. S. Chamber of Commerce, Nov. 16, 1936.
[2] Unofficial estimate of U. S. Dept. of Commerce, Nov. 11, 1936.

Senator Wagner. One concerned the national collection of statistics of unemployment, which was passed. Another was based upon the possibility of so planning public construction that it would complement private industrial activity, and called for a reserve of $150,000,000 for such forward planned activity. A bill greatly modified from the original was passed. The third bill calling for public employment offices was bitterly opposed and defeated. Soon thereafter the impact of the business depression, the increased use of labor-saving devices, and the mortality of business firms or their mergers was such as to create a social problem of unknown proportions. The federal government took the lead in the attack with a fusillade of pleas and then experimental activity when it was recognized that private industry was too broken to create the necessary jobs and private and local relief agencies fell far short of meeting the situation.

It is impossible to review completely the intense activity directed at unemployment from 1933 through 1935. A brief statement of certain acts and expenditures involved will serve to indicate the magnitude of the problem. Between May, 1933, and December, 1935, the Federal Emergency Relief Administration expended $3,041,647,691. Up to November, 1933, this agency had matched one-third of the expenditures of states or local governments, but thereafter relief grants were made on the basis of need. A Federal Public Works program originated with the National Industrial Recovery Act, with an appropriation of $3,300,000,000 being made for the purpose. The program included federal, state, and local projects and even encompassed low cost housing developments and slum clearance. This public works program got under way so slowly that more immediate employment was created through the Civil Works Administration, which program has been seriously charged to have been but a camouflaged dole. From the point of view of the government, jobs were essential and time did not permit of adequate plans or direction. From the point of view of the critics, beautiful meandering streams were turned into straight-backed ditches, and untold errors were written into aggrandized research projects because of careless clerks and uninformed directors. The same projects were to provide a basis for future planning. Another federal approach to the distress of unemployment was the Civilian Conservation Corps, wherein unemployed young men were put

to work in the improvement of forests and parks under quasi-army conditions. The federal government launched a second major attack upon the depression in March, 1935, by setting up a new appropriation of $4,880,000,000 to "provide relief, work relief, and to increase employment by means of useful works projects." Of this sum, four billion dollars was to be spent by June 30, 1937, on works projects.

In the summer of 1935, the federal government changed its program and gradually withdrew from participation in the financing of locally administered relief and initiated, through the Works Progress Administration, a program of work for persons on relief, administered and financed directly by the federal government. At the end of 1935 the federal grants to the states for home relief ceased and the federal government also discontinued its transient relief program except for the operation of camps for transients through the W. P. A. During 1936, local governments had complete responsibility for administration and financing of home relief and for care of transients other than that provided in the W. P. A. camps.

The administrative problems that are being encountered by the federal government in its attack upon the unemployment problem serve to keep the labor situation continually in the foreground of public attention. In fact, the stress which is now laid upon the current problem is such as to unbalance the attack upon the larger situation which faces us. The complex nature of the present affair together with the extraneous matters that have become attached to the problem rule out any further examination in this treatment, but it may be said that the experience of the first half of the decade of the nineteen thirties has served to indicate that definite and permanent safeguards must be set up for this recognized situation.

It is futile to expect unemployment to be legislated out of existence. The problem must be attacked piecemeal and as *a part of the larger whole of economic unbalance.* First of all, the unemployed man must be brought into contact with the unfilled job. To establish this connection, employment agencies have been instituted in many cities by charitable organizations, trade-unions, or employers. Next it was realized that the private employment agencies are inadequate and frequently attended in their operation by a number of distinct abuses: conditions of

work are misrepresented; extortionate fees are charged; and foremen are occasionally induced to discharge employees in order that additional fees may be secured from new applicants for the vacant jobs. To cure these evils, restrictive laws have been passed in a majority of the states, which usually require a license and the posting of a bond in order that the work of these private agencies may be kept under public control. The constitutional validity of the public control of private employment agencies had seldom been questioned before May, 1928, when the United States Supreme Court declared unconstitutional the fee fixing provision of the New Jersey private employment agency law.[1]

It became apparent, too, that the problem of employment agencies is a positive one, not to be wholly solved by restricting or regulating private agencies, and now almost all of the states and a number of cities have established public employment offices, frequently with a number of branches. In 1915 the federal government expanded a service originally introduced in 1907 to place immigrants on farms, into a National Employment Service. During the War this service developed with great rapidity, and between January, 1918, and March, 1919, it received "applications for no fewer than 10,164,000 workers, registered 5,323,509 persons, referred 4,906,556 to positions, and reported 3,776,750 positions filled. Far-reaching dependence of employers on the service began on August 1, 1918, when by presidential proclamation all employers engaged in war work who employed more than 100 persons were required to hire their unskilled laborers through the service."[2] After the War, the National Employment Service was in large part discontinued for lack of appropriations. It functioned up to the present decade chiefly as "a co-ordinating and promotive agency for the various state and municipal offices."[3] The recent depression has served to bring about an extension of this service, and in 1933 the old agency was supplanted by the United States Employment Service which co-operates with the state employment systems. During the first year of the operation of this placement machinery, 12,634,974 persons were registered and classified and 6,951,505 placed in private or government

[1] *Ribnik* v. *McBride*, 48 Sup. Ct. 545. See also the *American Labor Legislation Review* (September, 1928), Vol. XVIII, No. 3, p. 279.

[2] J. R. Commons and J. B. Andrews, *Principles of Labor Legislation*, Harper and Brothers, 1927, rev. ed., p. 329.

[3] Commons and Andrews, *op. cit.*, p. 330. "The service, in its expanded form, was entirely a creation of the war emergency."

jobs. Great Britain maintains an elaborate network of public employment offices and similar systems exist in Germany, Italy, Belgium, Switzerland, Denmark, Norway, Sweden, and France.

Outside of depression years such chains of public employment agencies, co-operating with charitable organizations, private agencies, and industry itself, may provide the necessary foundation for an attack upon unemployment. At the present time, however, there are more fundamental problems involved and the safeguards that are being thrown up follow two general channels. On the one hand *we are faced with the attainment of stability in the inter-relation of production and consumption* and the lifting of their level to a point where the productive forces of the nation may be fully utilized, *i.e.*, to a point where employables may be employed. The full measures in this direction encompass the broad problems of economic rehabilitation and include the long-range planning of public works, early ordering, manufacturing ahead, addition of supplementary lines, adoption of devices to protect against weather, and other methods of regularization in private industry; the dovetailing of one seasonal trade with another of a different season; and, in short, the use of all feasible methods of eliminating seasonal and cyclical fluctuations.

Since there is some question of our reaching such a utopian goal of balanced production and consumption, we must turn our attention to the current thought concerning another route for attack upon the problem. Here we meet the attempts that are being made to care for the risks that impinge upon the laborer because of a breakdown of economic balance either because of imperfection or because unemployment *is* a part of our economic system. The measures that are being considered or advanced in this direction take the form of insurance or quasi-insurance. As early as 1901 there appeared a system of unemployment insurance in Ghent, Belgium, which was a combination of public support with trade union benefits. From this beginning there arose many national unemployment insurance plans in Europe. Before the War, we find Great Britain installing a system of compulsory unemployment insurance. The system as it remains today is a combination of insurance and poor relief, so that any practical insurance benefits are colored by the stigma of the "dole."

Here in the United States there have been a few steps taken in the direction of job insurance without the compulsion of legislative

enactment. In 1923 the Procter and Gamble Company began a plan for balanced production and assurance of work for its employees without direct contributions on their part therefor. In 1930 the General Electric Company announced an unemployment pension plan calling for contributions from the workers. The plan immediately ran into the heavy emergency created by the depression so that reserves did not accumulate to an extent necessary for such demands and unexpected adjustments were made. There are a number of unemployment benefit plans being carried on by union organizations and in many cases contributions are made by employers to match or even exceed the contributions of union members.

The first state to enact unemployment insurance legislation was Wisconsin. In 1932 this state passed its Unemployment Reserves Act, which was to go into effect July 1, 1933, but was later postponed until July 1, 1934. The plan calls for compulsory reserves to be established by all employers of ten or more persons receiving less than $1,500 per year unless the employers install plans of their own which meet with the approval of the State Industrial Commission, the administrator of the state plan. The contributions are made as a payroll tax and are held in trust by the Commission and segregated so that no employer will pay for the unemployment of another. The ultimate reserve to be maintained per employee is set at $75 and this will furnish the source for benefits of a weekly wage of 50 per cent of a worker's average weekly wage or $10 per week, the smaller amount ruling. Benefit payments are made for ten weeks in any calendar year, and employees are eligible therefor after two weeks' employment by a particular employer when they become unemployed because of reasons other than their own making or the usual "acts of God."

The delayed operation of the Wisconsin Act has been followed by the signing by the President of the Federal Social Security Act in August, 1935.[1] The provisions of this act call for a tax

[1] Besides the unemployment compensation, old-age assistance, and old-age annuity systems provided for by the Social Security Act of 1935, the act contains other provisions of a welfare nature. These features are given in the following summary:

1. In order to furnish assistance to needy *dependent children*, states having approved plans may receive Federal assistance. Eligibility for aid depends upon the law of the particular state, but no plan will be approved if it has a more stringent residence requirement than residence in the state for 1 year immediately preceding the application for aid or residence by the mother for 1 year immediately preceding the birth of such a child. The age limit is 16 years.

2. Grants are made to states for *maternal and child-health* services for the purpose of

exclusively upon employers to finance job insurance. Employers of more than eight persons other than farm hands, domestic help, and governmental employees will be taxed at the rate of 1 per cent of their 1936 payroll, payable in 1937. In 1938 it will be 2 per cent and then 3 per cent in 1939 and thereafter. Aside from the collection of this tax by the federal government, the job insurance must be a state matter, for if the states do not have a system of unemployment insurance of their own with which the federal plan may co-operate, the entire tax collected within such states will go into the Federal Treasury for general governmental expenses. The Social Security Act does not itself set up a system of unemployment insurance but instead aims to make it easier for the states to set up such systems for themselves. The Federal tax is designed, therefore, to stimulate the states in this matter. For the states having such systems 90 per cent of the taxes paid to the federal government will be credited for the state insurance tax. During 1935, unemployment compensation acts were passed by eight states and the District of Columbia. The degree of success that may be enjoyed by such state and federal job insurance plans cannot be forecast, but from the standpoint of the principles of insurance it can be said that the fundamental basis of insurance resting in experience and mortality tables is lacking.

Another attribute of the employment problem which is carried in the above Social Security Act, is that of old-age pensions.[1] This is not the place to discuss the exact provisions of the act in this direction, but in co-operation with the thirty-nine states having some form of pension or old-age insurance (at the close of 1935) it provides for the optional retirement of workers reaching the age of sixty-five. It is estimated that some 25,800,000 workers will fall

enabling each state to take proper steps for the promotion of the health of mothers and children. This service is to include proper medical and other care for crippled children.

3. The vocational *rehabilitation of the physically disabled* is provided for in co-operation with the states and Hawaii.

4. Adequate *public health* services shall be maintained, a fixed sum being appropriated for division among the states by the Surgeon General of the Public Health Service. The amount allotted to the states shall be determined on the basis of need and the special health problems. Provision is also made for investigation of diseases and problems of sanitation.

5. State plans for the assistance of needy individuals who are *permanently blind* will receive Federal assistance. Persons who are receiving old-age assistance are not eligible for aid.

[1] The Social Security Act provides two types of protection for the aged, namely, Federal aid to the states for old-age pensions or old-age assistance and compulsory old-age insurance to the wage earners and salaried employees in all but certain excluded industries and occupations.

under this compulsory system, and as they reach the age of sixty-five, they may at their option or at any time thereafter retire. The provisions of the act call for a tax on employees and employers. This is in contradistinction to the taxes imposed in order to stimulate state action in the field of unemployment insurance.[1] Without the compulsion advocated in the Townsend Plan there will be a tendency for workers reaching sixty-five to step out of the way of those below. This is not the place to discuss the social expediency of such an artificial force for retirement.

Agencies of Industrial Peace

In our earlier examination of labor organizations, their policies and practices, we found the policy of collective bargaining to be a cardinal principle. Although collective bargaining does not necessarily and in every instance operate to discourage strikes, its net influence is unquestionably favorable to the maintenance of industrial peace. Where a powerful trade union exists, and the employers definitely refuse to deal with it, strikes are frequent. Where the opposite policy is pursued, and the employers frankly recognize the union, strikes are infrequent. Among steam railway employees in the train service, in the needle trades of Chicago, and in many of the industries of England, strong organizations of employers and employees have shown through collective bargaining the power to maintain industrial peace for long periods of time. An outstanding instance of industrial peace based on collective bargaining is found in the stove industry, in which a trade agreement entered into between the iron molders' union and the National Stove Founders' Defense Association in 1890 has assured an unbroken peace to date. Labor difficulties prior to 1920 and since 1930 have attracted so much attention that many important plans or methods of preserving industrial peace were developed.

Before generalizing and classifying the measures which are taken to maintain industrial peace, it must be pointed out that strikes are much more destructive and dangerous in some industries than in others, and that here, as in most other economic problems, it is dangerous to proceed wholly on the basis of general principles. In most industries, in our opinion, the strike question may safely

[1] Incidentally, the tax for unemployment insurance started in 1936, while the levy for old age insurance began in 1937.

be left to the enlightened self-interest of the parties concerned, trusting to collective bargaining and the work of voluntary arbitration to prevent an excessive amount of industrial war. In small competitive industries the peaceful strike is not necessarily an alarming phenomenon. Slowly but surely the opinion is gathering force that for those industries which vitally touch the public welfare the public should, and by an exercise of legal ingenuity might, find means to preserve peace whether the two parties concerned desire peace or not. Twice within the year 1935 the mayor of the City of New York, admittedly pro-labor, was forced to wield his administrative power in controlling labor organizations which threatened to disrupt services of public welfare. One such action was forced when a union of building service employees attempted to break an arbitration award handed down by a special board, and the other arose with a threatened strike in an electric light and power company.[1]

The General Strike

The general strike involves the cessation of work in all industries including all the organized workers of an area — whether it is a town, a section, or an entire country.[2] General strikes have been mainly *economic* in character, demanding blanket changes in working conditions or wages.[3] There have been also general strikes of a *political* nature like the Belgian general strikes before the World War, when the issue was universal manhood suffrage,[4] as well as *revolutionary* general strikes designed to overthrow the existing government or to change the prevailing social order. Strictly, for a general strike to succeed it would have to at least supersede for a time the ordinary functions of government. Since a successful general strike involves control of food distribution and general social services, employers and governments

[1] President Wilson struck an American key-note in this regard during a police strike in 1919. "I want to say this, that a strike of the policemen of a great city, leaving that city at the mercy of an army of thugs, is a crime against civilization.

"In my judgment, the obligation of a policeman is as sacred and direct as the obligation of a soldier. He is a public servant, not a private employee, and the whole honor of the community is in his hand. He has no right to prefer any private advantages to the public safety." — Excerpt from speech made at Helena, Montana, September 11, 1919.

[2] In the sense that it is an expression of the solidarity of organized workers with fellow unionists, it is a form of "sympathetic" strike, only on a wider front.

[3] Paradoxically, Sweden, with its tradition for democracy and order, has had more general strikes for economic reasons than any other country.

[4] The most recent strike of a political nature occurred in Germany in 1922 in defense of the recently created Republic which the Monarchists sought to overthrow.

vigorously oppose the idea of a general strike even when it is not revolutionary in purpose.

In American experience, the last general strike, which was even partially effective, was that for the eight-hour day in 1886. There have been only a few local general strikes since that time, the most notable being the Seattle general strike in 1919 and the most recent the San Francisco general strike in 1934. Both of these were unsuccessful; the former disintegrating from within, and the latter through resistance by the conservative elements of the community. Since the World War, general strikes have occurred in both France and England. These strikes were partly "sympathetic" and partly for specific demands that would affect all workers. The English general strike of 1926 led the conservative forces of the country to fear in unrestrained trade union action a potential threat to the state itself. The strike was followed by the Trade Disputes and Trade Unions Act of 1927 which besides restricting picketing methods contained the following limitations:

1. Any individual engaging in a trade dispute is liable to criminal proceedings if, because of his breaking a contract of employment, injury or danger or grave inconvenience to the community is likely to result.
2. A strike is illegal which has any object other than, or in addition to, the furtherance of a trade dispute within the trade or industry in which the strikers are engaged. Sympathetic strikes are illegal beyond a certain point.
3. A strike is illegal if it is designed or calculated to coerce the government either directly or because it would be reasonably likely to inflict hardship upon the community.

In the United States the possibility of successful general strikes is not sufficient to warrant special legislation. Except for certain areas and industries in which labor organization is strong, union membership is limited to a very small fraction of those employed. Moreover, events in 1936 reveal the absence of a completely centralized labor union authority and the tendency for American labor to divide into camps of conservatism and radicalism. While the general public has given lukewarm support to the more militant factions of labor which might attempt the general strike, the vast majority of Americans are a conservative people whose respect for "law and order" is stronger than their sympathy toward union aims.

Turning to the schemes that have been developed for the preservation of industrial peace, we must classify them generally rather than attempt any specific analysis of the intense activity since 1933. In July, 1935, The Brookings Institution published a study of *Labor Relations Boards* and in this report there may be found reference to a dozen national boards which operated in connection with the labor situation from 1933 through 1935. The more important schemes that have been developed within more or less recent years may be classified as mediation or conciliation, voluntary arbitration, compulsory investigation, and compulsory arbitration.

Methods of Settling Disputes

Mediation.

Many of the earliest attempts at settling industrial disputes took the form of mediation or conciliation. Mediation implies that some public or private agency succeeds in getting the contending parties together for peaceful settlement through discussion and agreement. The findings and decisions of a mediation committee may or may not be accepted, agreement need not in fact ensue. The essential to successful mediation is willingness on the part of all to come to an agreement and abide thereby. While mediation is the weakest of the agencies for industrial peace, it serves to bring the parties together for discussion and leads to a better understanding of each other's point of view. As an example of a public agency rendering this service we have the Industrial Commission of Wisconsin, which is authorized to offer its services as mediator in labor disputes in that state. The first accomplishment of the National Labor Board was the mediation of a serious strike in the hosiery mills about Reading, Pennsylvania, in 1933. The "Reading Formula" called for resumption of work, reinstatement of workers, collective bargaining, representative election, and submission of employer-employee differences within the agreement for the decision of the National Labor Board. Mediation of some sort was continually in operation during the turbulent life of Section 7*a* of the National Industrial Recovery Act.

The Federal government has provided a Conciliation Service through the Department of Labor since that Department was created in 1913. The Conciliation Service has handled an average

of 700 labor disputes a year, and for the year ending June 30, 1935, it had negotiated 1,007 cases. A National Mediation Board was created in June, 1934, by the amended Railway Labor Act to serve to administer employer-employee relations in the railway industries. The Act outlines three principles for sound relations in (1) written agreements, (2) conciliation of disputes, and (3) collective bargaining through unions including at least a majority of the employees concerned. During its first year of operation the National Mediation Board handled 166 disputes involving more than 100,000 employees on 117 separate railroads.

Voluntary arbitration.

Arbitration is termed voluntary when both parties freely agree to submit the dispute to some authoritative court or board for settlement. Most advanced states now maintain boards of conciliation and arbitration whose business it is to prevent strikes if possible. Before such boards can act, the parties to the dispute must submit the case for investigation and, usually, agree to refrain from strike or lockout and to accept the decision. Voluntary arbitration has proved helpful in maintaining industrial peace, but its success is entirely dependent upon the willingness of the parties to the dispute to agree to arbitration, and the power of public opinion to enforce it. For the most part voluntary boards of arbitration have shown little ability to cope with the situation. However, in a critical situation in 1921, the Railroad Labor Board created under the Esch-Cummins Transportation Act (1920), without any power of compulsion, succeeded in averting an impending general strike by constituting itself the unmistakable mouthpiece of public opinion. The Board of Mediation, created by the Watson-Parker Railway Labor Act of 1926 which superseded the Railroad Labor Board, was designed to facilitate negotiations in railroad labor disputes and was not given even a semblance of coercive authority. The authority of the National Labor Board did not go beyond this form of voluntary arbitration. Its successor, the (first) National Labor Relations Board, encouraged resort to this device, but even with its willingness to serve as an arbitration tribunal, only few cases from employers or employees were submitted for arbitration.[1]

[1] Lorwin and Wubnig, *Labor Relations Boards*, The Brookings Institution, Washington, D. C., 1935, p. 300.

In England many of the systems of collective bargaining are based upon formal treaties, which provide for arbitration in case the two parties cannot come to an agreement concerning terms. This is frequently referred to as trade arbitration. Many authorities on the subject are inclined to think that the introduction of arbitration, even as a last resort, makes less likely the success of collective bargaining. It is almost always necessary for both sides in collective bargaining to make some compromises; and this necessity imposes upon the representatives of the trade unions the disagreeable duty of reporting to their constituents that they have not secured the exact terms which they were instructed to demand. Because of this fact, if a provision for arbitration exists, the union representatives are disposed to throw the responsibility of disappointing their followers upon the shoulders of the arbitrators.

Moreover, collective bargaining is essentially inconsistent with arbitration. Collective bargaining is elastic: it deals with the formulation of future terms of employment; it looks to securing the best results possible; it has no rational foundation save the willingness of the parties concerned to get the most possible for their labor or their money, as the case may be; whereas arbitration is judicial in essence, and its successful application implies the acceptance of some established principle of wage adjustment, in the justice of which both parties acquiesce. It is unfortunate but true that up to the present time no one has ever formulated a doctrine of wage adjustment which is at once workable and acceptable to a majority of the people. Arbitration is a perfectly logical device, and works successfully in the interpretation of minor difficulties growing out of a broad agreement which has already been accepted. Or, if both sides adopt some governing principle, it is perfectly possible for a disinterested arbitrator to decide what this principle demands in a given localized situation. But as a helpful device in securing the initial adoption of a fundamental agreement, mediation is superior to trade arbitration, although the latter appeals to the employers because it promises to prevent stoppage of work pending the decision of disputes. The mediation formula adopted by the National Labor Board and its successors, the two National Labor Relations Boards which were created to facilitate the operation of this formula, added strength to mediation even in this respect.

Compulsory investigation.

The Canadian Industrial Disputes Act of 1907 created an agency for industrial peace which differs in important details from both arbitration and mediation, although it is sometimes spoken of as compulsory without compulsory acceptance of the award. This law provided for the creation of a public board, and forbids strikes or lockouts in important industries until the board has had time to investigate the dispute and publish its findings and recommendations concerning the equities of the case. Public opinion is depended upon to secure acceptance of the award. While compulsory investigation has not been entirely successful in Canada, having operated in some cases merely to postpone strikes rather than to prevent them, yet it is probable that such a law would go far toward delivering us from the more injurious industrial conflicts. Colorado passed a law in 1915 by which a state Industrial Commission is empowered to make investigations and employers and employees are obliged to give thirty days' notice before changing the conditions of employment. During that period strikes and lockouts are illegal.

The vital provisions of such a method of conciliation are: (1) the prohibition of strikes and lockouts before and during the investigation; (2) widespread publication of the findings of the board of investigation and conciliation; and (3) full permission to strike or lockout after the publication of the findings.

Compulsory arbitration.

In New Zealand an even more radical remedy has been tried. In 1904 the New Zealand system was adopted by the Commonwealth of Australia. Under this law seven workingmen in any industry may organize a union and lodge a demand for better conditions of employment before arbitration boards, whose decisions, when ratified by the supreme or central court of arbitration are absolute and binding. Similarly, any employer whose workmen are organized in a union may take a case to the arbitration tribunals for settlement. An award of the central court of arbitration may be extended by the court to all competitors of the original employer in the colony. In this way, compulsory arbitration brings about the introduction of minimum wages and other conditions of employment, established by the authority of the state and enforced, not only by the watchful care of the parties

concerned, but by the factory inspectors themselves. In Victoria and South Australia much the same results are reached through the agency of wage boards — containing representatives of both the employers and their employees, with a chairman selected by these representatives or appointed by the government — which are empowered to prescribe minimum wages and other conditions of employment, that are enforced, as in New Zealand, by the factory inspectors. Strikes, however, are not prohibited under this system, although they are very rare in industries in which wage boards regulate wages and hours of labor.

It is impossible to enter into a detailed discussion of either the New Zealand or the Victoria system at this place. Both systems have been in operation since 1896, both have been extended to other Australian colonies. The laws adopted in New South Wales, South Australia, and Queensland shortly before the World War contain the principal features of both systems. The fixing of minimum conditions of employment is perhaps the most important element in both systems, but it is noteworthy that the compulsory arbitration idea has endured and spread. Strikes are not wholly prevented, particularly in industries in which the labor organizations are very strong; and many employers criticize both systems vehemently. With the passage of time, however, they have been strengthened, not repealed; and the consensus seems to be that they have met with measurable but by no means complete success.

In 1920 Kansas created an Industrial Court with powers of making compulsory awards and prohibiting strikes and lockouts in food products, clothing, fuel, transportation, and public utility industries. Organized labor was violently opposed to the scheme. In 1923 the United States Supreme Court decided that the requirement that employers and employees must abide by wages fixed by the Kansas court was unconstitutional, and it has virtually passed out of existence.

In substance, *mediation* or *conciliation* is performed by an agency possessing the prestige of the government and having the confidence of the disputants. This usually succeeds in reducing hostility on both sides, especially where the issues are not based on such fundamental principles as union recognition and the right to collective bargaining. Legislation aiming to adjust labor disputes usually includes provisions for other forms of government

intervention if *mediation* fails. Usually what is known as *voluntary arbitration* is urged, and some state mediation agencies are authorized to act as arbitrators. Where the parties do not arrive at a settlement through *mediation* they may be induced *voluntarily* to submit their case to *arbitration*. *Compulsory investigation* is another form of governmental intervention in industrial disputes whereas *compulsory arbitration* outlaws strikes and lockouts.

Preventive Measures

The difficulty of successfully settling industrial disputes suggests the consideration of means and methods for the prevention of industrial conflict. The devices looking toward the elimination of the causes of industrial friction are numerous. The idea of anticipating and preventing further friction between labor and capital appeals to many as affording the only ultimate solution of the labor problem. Extended discussion or even mention of the many plans and devices cannot be undertaken here. The discussion must be limited to a brief consideration of methods that have received serious consideration.

Profit sharing attempts to remove the cause of industrial disputes by assigning to the employees a share of the profits fixed in advance. It is held that this arrangement enlists the employees' interest in the success of the business, makes them more economical, and so increases their zeal and efficiency that the share of profits they receive does not reduce in the long run the earnings of the employer. In other words, the employees create the fund from which their bonus is paid. This bonus may be paid in many different ways: in cash at the end of the business year, or in shares of stock in the company in question, thus making the workman partial owner of the business; or it may be amassed in a savings or insurance fund, from which in his old age the workman receives a pension, or his family an annuity or cash premium at the time of his death. The last method of profit sharing is usually spoken of as "deferred participation."

Neither historical study nor theoretical analysis of profit sharing furnishes reasonable ground for the belief that this method of industrial remuneration will ever play an important part in solving the modern labor problem. The reasons why profit sharing has not proved very successful are various. In the first place, it has incurred the enmity of most labor leaders, who oppose

it because it has often been introduced after a disastrous strike as an antidote to unionism, and because they believe that it stimulates the men to work beyond their strength, and eventually results in reduced wages.

In the second place it is illogical and inconsistent that, as explained by most of its advocates, the workmen create the fund from which their dividends are paid, by increased care, zeal, and speed. If this be true, and the system can hardly prove a permanent success unless it is true, the end which profit sharing seeks would be better achieved by the piece rate or gain sharing methods of wage payment. By both of these methods the worker gets his premium for extra zeal and efficiency as part of his wage, not as a gift; gets it on pay day, not at the end of the year; and feels as free to bargain and haggle about the size of the premium as he does about the size of the wage. Moreover, his premium cannot be dissipated by unwise management or dishonesty on the part of the employer, and it cannot be lost by reason of his death, discharge, or change of employment.

Co-operation is another device for the prevention of industrial disputes. There are two kinds of co-operation, coercive and voluntary. Coercive co-operation, which implies a partial or complete application of socialism, is discussed in another chapter.

Voluntary co-operation takes many different forms, among which we may distinguish: (1) consumers' co-operation, sometimes spoken of as co-operative buying; (2) co-operative borrowing or co-operative credit; (3) co-operative marketing; and (4) producers' or pure co-operation.

Consumers' co-operation, co-operative borrowing, and co-operative marketing are not of direct concern in a discussion of the agencies for the prevention of industrial disputes. Consumers' or distributive co-operation is merely a method of retail or wholesale exchange in which the purchasers come together to purchase what they need and thus lessen their outlays. Usually they form a stock company, subscribe for shares, employ a manager and clerks, — who often do not even share in the profits, — and start a business.

Co-operative credit and co-operative marketing are familiar phenomena in the United States; the first in the form of building and loan associations; and the second in the form of fruit growers' associations, co-operative elevator companies, and the like, formed for the purpose of securing better terms and facilities from railways,

commission houses, and middlemen in general. They have done little and promise to do little in solving the labor problem or in essentially improving the distribution of wealth. They are, for the most part, composed of small capitalists, farmers, or salaried men (not wage-earners), and in organization differ little from democratically managed stock companies of the usual type. The limited significance of the co-operative movement is indicated by the fact that the employees of the British Co-operative Societies have formed themselves into a trade union for the betterment of the conditions of their employment.

The one variety of co-operation which really attempts to alter or amend the wage system is producers' co-operation. The essential features of this form of co-operation are (1) that each group of workers is to be associated by their own free choice; (2) that these associates shall work under a leader elected and removable by themselves; and (3) that the collective remuneration of the labor performed by the group shall be divided among all its members (including the leader) in such a manner as shall be arranged, upon principles recognized as equitable by the group itself.[1]

Successful producers' co-operative experiments fulfilling the above conditions are seldom met with. Most experiments in producers' co-operation have failed, and we fear they must continue to fail. They apparently cannot meet the competition of businesses organized in the ordinary way, directed by one man or set of men with all the efficiency, mobility, and adaptability that come from singleness of aim and undivided management. Industrial democracy, as achieved in the co-operative form of industrial organization, is too unwieldy, too slow, and too mechanical. Multitudinous management means relatively uncertain, indecisive, and inefficient management.

The wage contract, whatever its defects, has one striking virtue — certainty. The wage earner knows what to expect and gets what he expects. He is safeguarded in large measure against business risk, and although he may pay too high a price for his safety, the safety itself is a highly desirable thing. It is one of the weaknesses of producers' co-operation that the workman is encouraged to invest his savings in the hazardous competitive

[1] D. F. Schloss, *Methods of Industrial Remuneration*, Williams and Norgate, London, 1898, p. 228.

experiments in which he is engaged. He becomes part owner of the enterprise, to be sure, but by doing so he assumes the risk of failure, a risk which, other things being equal, it is desirable to eliminate. It is very likely that the ultimate method by which industrial democracy is achieved will retain that feature of the present wage system by which most of the workers are largely safeguarded against business losses.

The Trade Agreement

The most important agency for maintaining industrial peace that is now available and that can be adapted to our present wage system is the trade agreement. The trade agreement does not attempt to secure a unity of interest between labor and capital, but frankly recognizes the conflict of interests. It is, in essence, an attempt to raise the plane of the conflict. Its purpose is to substitute peaceful negotiation for an appeal to force. The trade agreement has been described as an industrial treaty which defines the conditions of work in any particular plant or industry. The agreement is usually entered into for a definite period of time, and commonly carries with it a provision for some type of tribunal for the interpretation of the pact. It does not look as far ahead as co-operation, nor does it seek to remove all causes of conflict. It is a practical device with large possibilities. Trade agreements have proved most helpful in a large number of industries.

The trade agreement has been declared a form of price fixing with the disadvantage of imposing a rigid and inflexible wage structure upon industry. Thus, according to some economists, it would be difficult, and at times impossible, to effect a balance between the supply and the demand for labor and between production costs and profits — and therefore a possible deflationary influence in the face of a general price decline. While this contention is to some extent true, there are other factors which must be considered. "An appreciable degree of flexibility can be imparted to a trade agreement by providing that wage rates may be readjusted by negotiation or arbitration at stated intervals during its life." There is great danger that "wage cuts may accentuate a downward trend of prices unless accompanied by other measures to prevent this effect."

An important compensating factor to the disadvantage of whatever undue rigidity trade agreements may entail lies in the

reduction of strikes and lockouts as the result of successfully functioning trade agreements. In addition, trade agreements "give employees a status in industry and an equity in their jobs which experience has shown they want and to which they are entitled." [1]

Where Is Labor Bound?

The labor situation in this country underwent striking changes following the World War. From 1922 up to the crash of 1929 which heralded the recent bitter years of depression, labor prospered with industrial prosperity and with the shutting off of the sources of cheap labor through immigration. Employers have done much to improve the conditions of their workingmen, sometimes under direct or indirect pressure and sometimes because there was a growing understanding of the many problems that are herein involved. The rapid strides that have been made for mass education and enlightenment outside of the regular educational institutions have probably brought as much real improvement to the labor situation as may be attributed to the labor organizations themselves. The press, radio, cinema, and the like are today powerful influences for the improvement of many difficult situations, and with their *intelligent* use much can be accomplished.

Employers in this country have generally taken the view that industrial peace would be achieved more easily if the union, and more particularly the organized strike, were by some means abolished. Unionists, on the other hand, have claimed that neither industrial democracy nor industrial peace can be achieved without collective bargaining. It is certain that, since the introduction of collective bargaining, its range has constantly widened. Beginning with questions of wages, hours of labor, and apprenticeship, it has gradually spread, until at the present time some unions bargain about the sanitary conditions of the work, the introduction of safety devices, the employment of women, the use of machinery, and the status of the men with whom their members work. A few powerful unions insist that the foremen under whom their members work shall belong to the union, demand a voice in the discharge of employees, and try to

[1] Alfred L. Bernheim and Dorothy Van Doren (editors), *Labor and the Government, an Investigation of the Role of the Government in Labor Relations*, McGraw-Hill, New York, 1935, p. 6.

force the employer, when taking on new men, to select them in order from lists of unemployed journeymen prepared by the union. These demands, of course, may be harmful, for in industry as in government, certain functions must be entrusted almost wholly to the executive head. The fact that power may be abused, however, is really beside the point. The point lies in the possibility of extending the range of collective bargaining until the employees have a real voice in determining the conditions of employment.

These words are written in no spirit of advocacy, and with no intention of palliating the obvious shortcomings of the union. But the fact remains — whether we like it or not — that economic theory and economic history unite in the conclusion that the union has come to stay as long as the system of capitalistic production remains. The union must be improved, it cannot be extirpated; and there will be no permanent peace until employers acknowledge the inevitableness of the union, and unions acknowledge the serviceableness of the employer. Trade unions have been guilty of many sins — violence, monopoly, political corruption. But their gravest danger in the past has been a false philosophy, in accordance with which many unionists came to believe that the best way to help the union was to oppose the employer. This was never true of the more wisely conducted unions. In the recent past the philosophy of opposition gave way in increasing degree to a policy of co-operation. There is the danger, however, that the natural co-operation that should exist will be defeated by the still more recent legislation that followed the death of Section 7*a* in the National Industrial Recovery Act. This legislation, the National Labor Relations Bill, is the object of severe criticism because of its very obvious one-sided measures. The act practically calls for compulsory arbitration upon the part of the employer but makes no provision for compelling labor to bargain. It bids fair to further the open conflict between the two sides. The act seems motivated by the argument that since labor has suffered in the past, it is now time to swing to the other extreme and "oppress" the employer.

Granted that collective bargaining is a desirable method of dealing with industrial disputes after the different methods of maintaining industrial peace have been tried, it must be remembered that trade unions still have many weaknesses in organ-

ization as well as in point of view which inhibit the collective bargaining function. A handful of American workers belong to labor unions and the remainder are uneducated in the need for union organization. The American tradition of individualism, democratic culture, and the lack of a "class" or group consciousness have hindered widespread union organization. Moreover, the existing union organization suffers from limitations. Factional disagreements, rivalries over jurisdiction, clumsy union government, "racketeering," and the desire of union officials to keep their jobs even at the cost of the union movement have not only hindered the spread of organization, but have prevented the complete effectiveness of already existing unions.

Employers, on the other hand, in opposition to trade unions, object to the organization of their employees and have banded together in associations which have sought to foster the growth of company unions and eliminate outside unions. While company unions perform a useful function in the settlement of grievances, they suffer from many limitations as effective agencies for collective bargaining. Studies of company union activities reveal that generally questions of wages and hours are infrequent issues of consideration.

The forces which aim to promote industrial democracy will probably continue to meet the opposition of forces which seek to maintain complete individual freedom in economic pursuits and to protect property rights of individuals, regardless of the effects thereof on social welfare. Moreover, the seemingly conflicting interests of classes, a matter which has been the concern of legislators throughout the whole of American history, still requires a compromising attitude in positive political attempts to maintain economic stability and promote the general welfare. "The problem is one of social justice — of giving each factor its just and appropriate portion of the utilities created under the present system of co-operative economic organization. Such portion should in the long run be sufficient to keep labor and capital operating in co-ordination with the other factors to produce the greatest good to the greatest number. This should be the aim of legislation, unhampered by tradition and unbiased by new and untried experiments for the promotion of higher general economic and social welfare." [1]

[1] A. M. Sakolski and Myron L. Hoch, *American Economic Development*, Thomas Nelson and Sons, New York, 1936, pp. 430–431.

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CHAPTER XXXVI

BUSINESS CYCLES

One of the most fascinating and important aspects of modern economic activities is their wave-like movement from time to time. This movement, if not rhythmic or periodic, is cyclical, in the sense that the alternating phases of expansion and recession recur continually and, as some authorities think, almost inevitably. The particular form of cyclical movement which first attracted the scientific interest of economists was the commercial crisis, accompanied by industrial paralysis and, as the Swiss economist Sismondi pointed out in 1819, by "cruel sufferings of the industrial workers."

Perhaps the most definite result of the later study of business cycles is an appreciation of the necessity of distinguishing carefully between types of economic movements. Speculative manias such as the South Sea Bubble, the Florida land boom, and the stock-market inflation in 1929 appear irregularly at long intervals, and must be differentiated on the one hand from sporadic economic disturbances such as those due to great wars, and on the other hand from commercial *crises* (and the financial *panics* which usually accompanied crises in this country before the federal reserve banking system was introduced). Crises and panics in turn must be distinguished from *business cycles* which recur at shorter intervals averaging (since 1885) a little less than 40 months in duration. Business cycles are distinguished from fluctuations occurring during the intervals between crises "by the fact that each cycle includes one wave of rising and falling, or falling and rising activity, whereas the intervals between 'crises' often include two and sometimes include three such waves." [1]

In statistical measurements of economic movements, it is necessary first to distinguish the *secular trend* or long-time move-

[1] Wesley C. Mitchell, *Business Cycles: The Problem and Its Setting*, National Bureau of Economic Research, New York, 1927, p. 468.

ment which marks such phenomena as gold production or canal traffic. This long-time movement, when dependent directly on population or similar factors, is often referred to as the "growth factor." At the other extreme are the well-known *seasonal variations*, which recur annually. In the case of many economic movements both the secular trend and the seasonal variations have to be eliminated by appropriate statistical treatment, in order to bring out and measure the cyclical movement proper.

Different types of price movement.

The accompanying chart (Fig. 1), based upon index numbers of wholesale prices, indicates that the forces which control the

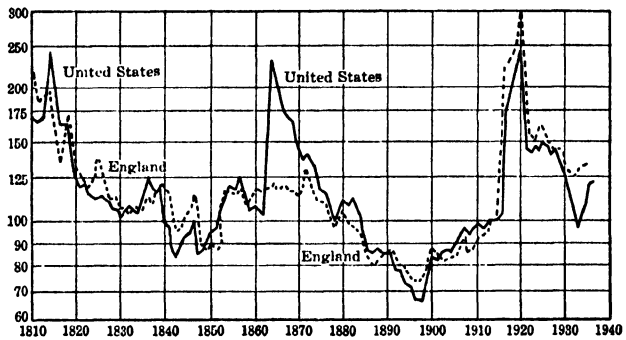


FIG. 1

trend of prices, in the long run, are world-wide rather than national in scope. Except during the greenback period the general course of prices in the United States has been strikingly similar to that in England. In the second place, an inspection of the chart will suggest that during the period at least three different types of general price movements have been at work.

1. At certain periods the movement of prices reflects the results of *inflation*. Such movements are noticeable (1) in the period of the Napoleonic Wars and the War of 1812; (2) in the greenback period; (3) during the World War and after.

2. Certain sustained movements or *basic trends* of prices are clearly marked. (1) From the peak reached in 1814, prices declined until the middle of the nineteenth century. During this period the production of gold and silver was stationary, or even diminishing, and failed to keep pace with the volume of trade. (2) In the middle of the century the flood of new gold from the

mines of California and Australia turned the trend of prices upward. (3) From 1873 to 1896 the trend was downward. The effects of the augmented production of gold had spent themselves, and the annual output of the mines was less than between 1850 and 1873. Furthermore, during this period silver was abandoned as a monetary standard in a number of important countries, so that there was an increased monetary demand for gold. Finally, the volume of the world's production and trade continued to increase. (4) The upward movement from 1897 to 1914 resulted partly from the development of the South African mines and from the use of new and more economical methods of mining and of reducing the ores. The most important factor determining the secular trend of prices, it will be observed, is the relative rate of the increase of the world's supply of standard monetary metal as compared with the increase of the volume of trade that is carried on by the use of money. Another factor, persisting through these periods, has been the development and growth of banking. Without the increased use of bank credit the general level of prices today would be far lower than it is.

3. Neither the upward nor downward trends of prices are smooth and steady. The curves have a distinct and fairly regular wave-like movement. These shorter undulations reflect the fluctuations in business activity which constitute *business cycles*. Some of these cyclical movements have begun and ended at

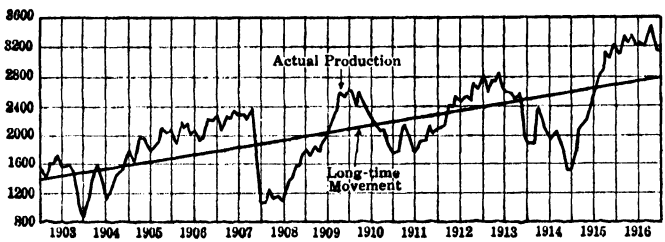


FIG. 2

approximately the same times in England and the United States. In other instances, however, the cycles have been distinctly national rather than international in character.

Though the movement of wholesale prices is a fair index of the movement of the business cycle, the cycle is in itself much more than a movement of prices. It is characterized by wide fluctuations in production, trade, speculation, interest rates, profits,

wages, employment, and other economic activities. Note, for example, the cyclical variations in the production of pig iron (Fig. 2). The demand for pig iron is in itself a very good index of the condition of industry. An increased output of pig iron means an increased output of railway rails, structural steel, factory buildings, machines, tools, and vehicles. The output of

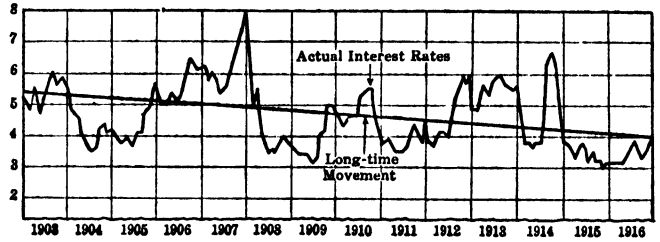


FIG. 3

other mineral products, including coal, also oscillates with the business cycle, although not generally with the high degree of regularity shown by the production of pig iron.

The money market also is subject to cyclical variations. Figure 3 shows some characteristic fluctuations in the interest rate on commercial paper. The prices at which investment bonds sell follow very closely (although inversely) the fluctuations in the rate of interest which banks charge on short-time loans. A fairly safe bond yielding 5 per cent a year will sell for more when the market rate of interest is 4 per cent than when it is 6 per cent. The prices of shares of corporation stock, however, vary with the fluctuations of business profits rather than of interest rates. The fluctuations of profits play a very important part in the business cycle.

The list of things that fluctuate in the business cycle and whose fluctuations can be measured and expressed in statistical form could be greatly extended. In fact, it would be difficult to find any important objective measurable economic phenomena which do not exhibit these cyclical fluctuations in some degree. All these variables, however, are manifestations of the general condition of business activity. The successive stages through which business passes in a typical cycle may conveniently be marked off as follows: (1) *recovery* (from a period of depression), (2) *prosperity*, (3) *recession*, (4) *depression*.

Older theories of crises.

Long before the cyclical character of the movement of business activity had been noted, *crises* had attracted attention. Crises generally appear as sharp interruptions of periods of business prosperity, when credit has been relatively abundant, prices and profits relatively high, markets good, and employment plentiful. They are of all degrees of severity, but are generally characterized by a scarcity of bank credit, sluggish markets, a sudden drop in prices, bankruptcies, a subsequent period of business depression, lack of employment for wage earners, and kindred symptoms.

The earliest explanations of crises attributed them to psychological factors. They were viewed as inevitable reactions to ebullitions of contagious speculative manias, such as the "tulip mania" of 1636 in Holland, and the South Sea and Mississippi "bubbles" of 1720 in England and France. Even today there are many who turn to psychology for an explanation of crises and, in fact, of the whole business cycle. Thus a crisis is often attributed to a "loss of business confidence, following upon a period of overconfidence." There is no denying that psychology has much to do with the business cycle. An undue degree of business optimism may lead to an overdoing of business expansion, and bring about its later contraction. Pessimism, expressed in timidity or undue caution, may deepen or prolong the depression following a crisis. But why should there be this regular alternation of optimism and pessimism in business? Most students are agreed that, behind men's opinion respecting the state of business, economic forces of a quasi-mechanical rather than a psychological order are at work.

Another popular theory of crises attributes them to *overproduction*. Some of the older economists dismissed this theory curtly by the statement that the supply of one good necessarily constitutes an equivalent demand for other goods; that value or price is a mere ratio of exchange; and that in consequence *general overproduction* is impossible. To this argument a French economist, M. Albert Aftalion, replied that if the older economists were right, the prices which increased in times of depression would counterbalance those which decreased and the general index number of prices would remain constant, whereas in fact it falls. He also pointed out that those who maintain that there can be no general overproduction almost always forget their thesis

when investigating practical questions, and act as if overproduction were a reality. Dismissing mere verbal niceties, what is meant by overproduction is widespread maladjustment of production, and these periods of maladjustment occur frequently. The problem is one of securing proportionality in production; a problem whose solution is one of the most difficult tasks of our time. Moreover, it must be remembered that goods are not exchanged for other goods; they are sold for money. Hence it is entirely possible that the aggregate industrial output may be too large for consumers to purchase at prices profitable to the producers.

The *socialists*, from Robert Owen (1815) down to Karl Marx and his followers, have given a characteristic twist to the overproduction theory of crises. Production under machine methods they hold, tends always to increase faster than the consuming power of the great mass of the people, for most consumers are wage earners whose incomes, according to socialistic doctrine, are determined, not by the value of what they produce, but by the minimum upon which they can live. Capitalistic methods of production thus yield a *surplus product*, and at any given time an even larger surplus product is always possible. The surplus product accumulates in the market and leads periodically to crises. The demand for luxuries on the part of the capitalist employers affords an outlet for a part, but only a small part, of the surplus product. The employers want profits and power even more than they want luxuries. Crises, in the opinion of the socialists, are not the only ills for which the surplus product is responsible. Endeavors to find an outlet for it, they hold, lead to economic rivalries among nations, to the exploiting of undeveloped or backward countries, to colonial expansion, to "economic imperialism," and to wars.

Despite the absurdities of the notions respecting prices and wages upon which it rests, the socialistic theory of crises, like others of the older theories, contains a germ of truth. In periods of advancing prices and profits, wages do lag behind them, and this has some significance in the explanation of the economic cycle. But the socialists are clearly wrong in holding that there is a continuous and irresistible tendency to overproduce, interrupted and halted from time to time by crises. Business men gauge their productive activities, not by the maximum possi-

bilities of modern machine methods, but according to their estimates of the market for their goods. If they overproduce, or if the productive capacity of their plants becomes too large, it is because their estimates are wrong, not because production or productive capacity grows spontaneously or of its own accord. To explain a crisis, or the business cycle of which a crisis is a part, we must explain why business men in general prove to be mistaken from time to time in their estimates of future demand and profits.

Cycles and the weather.

Business cycles vary in length. The range of variation, however, is not so great but that it suggests the possible presence of some definite periodic element. This, in turn, has suggested to various observers that one or another of the periodic forces of nature may be at work. In various phenomena, such as the seasons, the tides, and different types of vibratory motion, nature displays a rhythmic periodicity. On the assumption that the business cycle has a fairly definite normal period — an assumption not yet verified, and, on the whole, doubtful — it would by no means be unreasonable to look to external natural forces for its controlling causes.

The first important suggestion of this sort came from the brilliant English economist, W. S. Jevons, whose "sunspot theory" of crises was a courageous if unsuccessful attempt to reach a scientific solution of an important problem. The variations in the proportion of the sun's surface covered by spots have long been thought to have some connection with meteorological phenomena. Jevons thought that the average interval between maximum sunspot areas (about eleven years) coincided with the average interval between important crises in England. The connection between sunspots and crises, he thought, was through the effect of rainfall upon the crops (especially in tropical regions) and the influence of the variations in crops upon the demand for British exports and hence upon the prosperity of British industry. In various ways Jevons' thesis has been found wanting. Since 1840, for example, the average interval between the crises that have occurred in England has been no more than eight or nine years, while before 1840 the interval was exceedingly irregular. And an "average interval" of whatever length does not necessarily indicate a recurring "period."

The search for some joint periodic variation of business conditions and the weather continues, different findings having been announced by Professor H. S. Jevons (India), Sir William H. Beveridge (England), and Professor H. L. Moore (United States). For the present, however, we must regard as unproven the thesis that the business cycle is a reflection of a climatic cycle. Yet it would be absurd to conclude that the weather and the crops have no effect on the condition of business. Farmers often regard a large (total) crop as a misfortune. The demand for agricultural products is so inelastic that a large crop sometimes sells for less in the aggregate than a small one. From the farmer's point of view a "bumper crop" may mean overproduction. Nevertheless good crops usually augment, and poor crops diminish, the prosperity of the general industrial and business activities of a country. When crops are large, foods and raw materials cost less. Consumers can spend more money for other things. Poor crops diminish the earnings of the railways and, in various ways, interfere with the smooth working of the mechanism of business and industry. In the United States, poor crops diminish agricultural exports and may thus make it necessary to take gold from bank reserves to ship to other countries in payment for imports. Thus when business conditions are already strained and the available supply of credit is nearly exhausted, a crop failure may help to precipitate a crisis at a time when large crops might have enabled business men to enjoy a further period of prosperity. Considerations like these explain the observed fact that many of the more severe crises the United States has experienced have accompanied poor crops. But, on the other hand, not all crop failures have been attended by crises. It may be inferred, therefore, that if a crop failure comes when other conditions are ripe, it may help to precipitate a crisis.

Banking and the business cycle.

That the way the mechanism of banking operates has much to do with the cyclical oscillations of business is scarcely open to doubt. Banks furnish an elastic supply of purchasing power, swelling in volume as business transactions increase, and then — for the supply is elastic only up to a certain point — often enforcing a sudden halt to further expansion.

The period of depression following a crisis is a period of liquidation. Business firms reduce their debts. The loans and the deposits of the banks decrease, and thus their reserve ratios increase. Furthermore, with low prices and a sluggish movement of trade, money that had been in hand-to-hand circulation collects in the banks. Low prices stimulate exports and discourage imports (unless the depression is world-wide) so that a favorable turn of the balance of trade sometimes brings in gold from other countries. In such ways the reserve ratios of the banks are still further augmented. Low discount rates result, and make business undertakings more attractive. Bonds sell at good prices, so that the time is propitious for building new plants and for other undertakings requiring large permanent investments of capital.

The money borrowed by business men is paid out in the form of the expenses of production. It increases the money incomes of consumers, and comes back in the form of a demand for more goods. Sales increase, and the low prices, which of themselves had had something to do with the revival of buying, are slowly advanced. The increasing volume of trade and the advancing price level both require and support further advances by the banks. Consumers' incomes continue to grow, their purchases continue to increase, prices and the volume of trade continue to rise. Thus the loans and discounts of the banks, together with their deposits, tend to increase in a cumulative way.

But the growth of deposits diminishes reserve ratios; money is drawn out of reserves into hand-to-hand circulation; interest and discount rates rise; finally the higher level of prices, by attracting imports and impeding exports, may lead to an unfavorable turn of the balance of trade, so that gold may be exported. The diminishing bank reserves fix limits beyond which the expansion of credit, and with it the expansion of business, cannot go. Even if no other unfavorable factor intervenes, such as a failure of the crops, the tide of prosperity encounters an obstacle it cannot surmount.

Important as the cyclical oscillations of bank credit are, however, they do not suffice solely to explain the business cycle. Cheap supplies of credit help to give the stimulus that turns business upward, enabling it to pass from depression into the period of recovery. Exhausted supplies of credit, moreover,

may bring prosperity to an end. But for the most part credit plays a passive role. Its expansion follows rather than precedes the expansion of business. And, even if the supply of credit were unlimited, business could not continue to expand indefinitely. The post-War experience of many countries with irredeemable paper money has proved once more that no amount of inflation will carry business and industry up with it beyond a certain point. It operates like a drug, of which increasing doses are required to keep vitality from sagging below a normal level. Inflation may delay but cannot prevent the inevitable collapse.

The cyclical movement of profits, costs, and output.

The prosperity of business firms is measured by the profits they make. Profits depend upon the difference between the expenses of producing goods and the prices at which they can be sold. The way in which prices and the expenses of production move in the business cycle, with reference to one another, is therefore a matter of prime significance. During the part of the business cycle characterized by rising prices, profits (in general) at first rise and then fall.

Profits for a time increase more rapidly than prices, because for a time the expenses of producing goods do not increase as rapidly as prices. Some expenses are fixed for the time being, such as rents, interest on outstanding bonds, and the other types of overhead costs. So long as wage earners are not fully employed, wages will increase more slowly than prices. The prices of raw materials, if the available supplies are large, may increase less rapidly than the prices of finished goods. And so long as the unemployed funds of the banks are large, interest rates will remain relatively low. While profits continue to rise, or rather, while *prospects* of rising profits continue, they will induce a continuing expansion of business undertakings, accompanied by larger borrowings from the banks.

But profits cannot increase indefinitely. With labor fully employed higher wages must be paid, and with full employment, labor loses in energy and efficiency. As outputs approach the limits set by the capacities of their plants, many establishments find that their increased outputs are produced uneconomically. Congested factories, overtime and night work, crowded railways, — these and other factors lead to increased expenses per unit of

output, even in industries characterized in the long run by decreasing expenses. Moreover, interest rates increase as bank loans expand, a factor which diminishes the profits that can be made by employing borrowed money in business. In particular, the fall in the prices of bonds accompanying the rise of interest rates puts difficulties in the way of undertaking extensive additions to the existing equipment of industry.

Finally, the supply of raw materials is elastic only within limits. In fact, the world supply of some important materials — wool, hides, and rubber are examples — for the time being is fixed and inelastic. The output of some products of the farms and mines cannot be increased rapidly enough to keep pace with the expansion of business. The competition of industries for the limited supply of raw materials leads finally to rapid advances in their prices, and to corresponding increases in the prices of production goods. The higher prices paid for raw materials, like the higher wages paid to labor and the higher interest rates paid for loans, do not elicit a correspondingly larger supply, after a certain point has been reached, but become merely the means by which a relatively inelastic supply is distributed among competing industrial establishments.

During the period of recovery and the early stages of the period of prosperity, business expansion is accompanied by a rapid increase of the *physical product* of industry as well as of prices. But in the later stages of the period of prosperity, for reasons just reviewed, prices are likely to continue to rise, and even more rapidly than before, but the further increase of the physical product is likely to be small. The general condition of business thus becomes unhealthy. Advances in costs follow closely upon advances in prices. Business men can count on further profits only if prices *continue* to advance so as to keep ahead of costs. Their activities tend to take on more largely the character of speculative operations in a rising market. Conditions are then ripe for a crisis, for anything that puts a stop to the further advance of prices is likely to precipitate a collapse.

Business cycles, saving, and underconsumption.

Many writers find the fundamental cause of business cycles is underconsumption or the failure of consumption to keep pace with production. One exposition of this theory starts with the

self-evident axiom that a business in order to be prosperous must get back from its customers more than it pays out in wages, interest, dividends, and other expenditures: it must cover its outlay and have some profit in addition. But these outlays constitute consumers' income, and the amount of this income is obviously less than the value at which producers must sell their goods in order to make a profit. Thus, by contrasting purchasing power released with products to be sold there appears an initial deficit of consumers' purchasing power. This initial deficit is apparently increased or aggravated by the consumers' savings and by what the producers plow back into business. Such considerations have led some writers to discourse upon the "dilemma of thrift" and others upon the "fallacy of saving."

These savings, however, are not hoarded. They are spent chiefly in business extensions and in financing new enterprise. In large part they are expended for fixed plant and equipment which are not sold at all, and from which their owners do not expect immediate returns. Money disbursed in constructing such plant or in making such equipment increases the consumers' purchasing power without adding an equivalent supply of goods intended to be sold at once. To this extent the consumers' purchasing power outruns the volume and value of salable goods; and if business expansion goes on rapidly enough consumers may have even more purchasing power than is required to buy (at prices profitable to producers) consumption goods and other products ready for immediate sale. In such a case prosperity results. If the process of capital expansion lags, or, in other words, if rigid restrictions are placed on expenditure for the construction of plant and capital goods on which no immediate returns are expected, there is a deficiency of consumers' purchasing power and trade languishes. Then we have depression.

Most of the proponents of this theory mention, but do not emphasize, the phases of expansion and prosperity. They stress the "leakage" in consumers' purchasing power, "underconsumption," "oversaving," and the "dilemma of thrift," but forget that there are as many booms as there are crises, as many recoveries as recessions. The statistical measurements of the nineteen American business cycles which Professor Wesley C. Mitchell distinguishes during the years 1855–1927 indicate that the phase of expansion lasts longer than the phase of recession; 25.4 months

and 20.7 months respectively. If the evil or problem involved is essentially monetary, as has been asserted, it apparently lies in inflation rather than deflation or inadequate purchasing power. The theory that underconsumption is the main cause of business crises is enlightening and stimulating. It emphasizes the important truths that balance or equilibrium between production and consumption is vital, *that business is kept on an even keel largely by industrial expansion*, and that there must be adequate and wisely controlled sources of new credit for the financing of industrial expansion. But there is both error and danger in the suggestion that the evil is monetary in its origin and can be corrected only by monetary and credit devices. Such a point of view leads to proposals to stimulate purchasing power by artificial methods, particularly through governmental action, which in the past have brought repeated disaster. The maxim that "the consumer must be financed" is true enough in the sense that high wages are socially profitable, that a high standard of living makes for business prosperity, and in other senses. It is an old and pernicious error, however, when it leads governments to depend on paper money or to distribute bounties to favored classes.

Other aspects of the business cycle.

The business cycle is attended with *maladjustments* in industry and in the general economic life of the nation. During its course different sorts of economic phenomena do not move upward together, in even procession; some lag behind others. These lags and the maladjustments they bring are among the worst features of the cycle. They show themselves, for example, in changes in the proportions in which incomes are distributed. Wages, salaries, and incomes from fixed investments lose in net purchasing power during the period in which prices are rising. The increase of business profits, on the other hand, is such that they come to constitute a greatly increased proportion of the country's total income. A very large share of this profit is "plowed back into the business." The result is a tendency toward overinvestment in prosperous concerns, showing itself in overexpansion and overproduction of factories, equipment, and other capital goods.

To a considerable extent the increased earning capacity of business undertakings is "capitalized" in the form of the increased

money values imputed to plants, good will, and franchises. Established businesses, corporation shares, mines, and farms are sold at high prices. Generally a considerable part of the purchase money is borrowed, and the interest on these loans becomes a fixed charge on the income of the newly acquired property. When prices and profits drop, the new holders find these fixed charges a heavy, and often an impossible, burden. Such, in times past, was often the experience of corporations that had bought or reorganized American railways. Such was, in 1921 and 1922, the experience of farmers who had bought land at the high prices prevailing after the war.

For wage earners business cycles have proved not to be unmixed evils. Though wages fall in a period of depression, the drop is seldom if ever as great as the rise during the preceding period of prosperity. Wages, moreover, rarely fall as far as prices, so that the wage earner usually emerges from the business cycle with some net gain in the purchasing power of his money wages. But wage earners pay a heavy price, in unemployment, for these gains. During the recent depression there were over 13,000,000 people unemployed, compared with 2,000,000 in the normal years 1924 and 1926. Cyclical unemployment is vastly more significant than the seasonal unemployment to which certain trades are subject. The magnitude of the problem of cyclical unemployment is suggested by the estimates reproduced in the accompanying table, comparing conditions at the peak of prosperity in 1920 and in the midst of depression a year later.

CYCLICAL DECREASE OF EMPLOYMENT IN THE UNITED STATES: 1920-1921[1]

INDUSTRY	THOUSANDS OF EMPLOYEES IN THIRD QUARTER OF THE YEAR		PER CENT DECREASE
	1920	1921	
Agriculture	2,300	2,204	4.2
Mining	1,120	944	15.7
Building	1,600	1,415	11.6
Transport	3,420	2,865	16.2
Manufacturing	11,370	8,460	25.6

(Seasonal unemployment does not affect the comparability of these figures, for in both cases they relate to the same months of the year.)

[1] From estimates by W. I. King, *Employment, Hours, and Earnings in Prosperity and Depression*. Publications of the National Bureau of Economic Research, New York, 1923, No. 5, p. 30.

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CHAPTER XXXVII

PROBLEMS OF FOREIGN TRADE

Financing exports and imports.

In an earlier chapter the treatment of foreign trade was directed, primarily, to the basic economic principles and the essential political considerations of the interregional exchange of goods. We are now concerned with the problems of financing the interchange of goods — the means and methods of paying for imports.

Payments arising out of local merchandising and service transactions are made by the use of money or bank checks. When credit facilities are required, the usual commercial banking procedure of "loan and deposit" accommodation is available. When goods are being delivered to distant points and payments are being made between persons in widely separated places, special problems arise. Facilities must be provided for the rapid, safe, and convenient transfer of satisfactory currency or acceptable credit instruments from the purchaser to the seller. In addition to the obstacles of time and transport inconvenience, a difference in monetary units is usually encountered when transactions are international in character.

The discussion of credit instruments in Chapter XV serves as an introduction to our present study. However, an extraordinary series of events during recent years, touching upon conditions of international trade, has created problems in foreign exchange which greatly complicate the normal situation described on page 395. In order that confusion may be avoided at the start, we shall disregard, for the time being, the fact that the monetary systems of many countries, including the United States, are temporarily so disordered as to have seriously disturbed the established system of foreign exchange. After we have reviewed the *customary operations* of foreign exchange under normal condi-

tions of trade, the unusual conditions affecting the exchanges will be discussed. The conditions of disorder to which we refer, arise partly from the suspension of the gold standard by practically all trading countries, and partly because a number of currency, credit, and exchange controls are being exercised by governments and central banks in pursuance of "currency management" policies. Some of these controls directly affect exchange operations. Others affect transactions which involve exchange operations.

For the sake of clarity in our preliminary analysis, we shall return to conditions as they have been throughout the world for over half a century, with the exception of a short time during and following the World War and also the chaotic period which began with the British abandonment of the gold bullion standard in 1931. We, therefore, make the following assumptions.

1. That international trade is on a gold basis, implying thereby that the currency of each country is unconditionally redeemable at face value in standard gold coins and that unrestricted sale, coinage, import, and export of gold prevails in all countries.
2. That there are no official controls, either of trade or of finance, which seriously interfere with the operation of competitive exchange markets.

Financing exports. — Among the many commodities of almost continuous export from the United States is cotton, which moves in quantity from southern shipping points to the receiving ports of every nation. A typical transaction would proceed as follows:

1. *A*, who is a British importer located at Liverpool, England, places an order with *B*, who is a cotton trader, located at Galveston, Texas, for 10,000 pounds of raw cotton, of specified grade. Conditions of sale designate a price of 12 cents per pound, delivery within 30 days after receipt of order, and payment to be made 60 days after receipt of goods.
2. *B* prepares an invoice for the sale, delivers the cotton to the Galveston docks for transport, and receives from the shipping company a bill of lading, which clearly identifies the shipment, designates the consignor, the consignee, the destination, route, and carrying charges. *B* also arranges insurance covering possible loss of or injury to the consignment in transit. A copy of the invoice showing date of shipment is sent by mail to the consignee in Liverpool.
3. *B* draws a bill of exchange (cotton trade bill) for the amount of the transaction ($1,200.00) on *A*, payable to the First National Bank of Galveston, "at 60 days sight." To this trade bill is attached a

copy of the invoice, the bill of lading, and the insurance policy, both of the letters being properly endorsed to the bank. The bill is now called a "documentary bill." [1]

4. *B* presents the documented bill to the bank, which is designated as payee, for discount. Such bills are classed as "prime commercial paper" and, when presented to commercial banks, in good order by reliable clients, are always "bought" or discounted at prevailing discount rates. Inasmuch as the bill is payable 60 days after presentation to *A* upon whom it is drawn, and approximately 15 days will be required to transmit it to Liverpool for presentation, a total of 75 days must elapse before the bank can effect collection. The bill, therefore, is discounted, say at 3 per cent for 75 days, and the proceeds ($1,192.50) paid by the bank to *B*.

5. The bill of exchange, with documents attached, may then be forwarded by the Galveston bank to its correspondent bank in Liverpool for collection, or, as more frequently happens, is sent to a New York bank for rediscount and, thence, to Liverpool for collection.

6. The Liverpool bank presents the bill of exchange to *A*, who is the importer of the cotton and the drawee of the bill, for "acceptance." The act of acceptance involves an endorsement on the face of the bill, binding the endorser to pay the amount due at the date of maturity (60 days thereafter). Having accepted the bill of exchange, the importer usually receives the bill of lading and the insurance policy which enable him to secure possession of the cotton. The draft, thus "stripped" of supporting documents becomes a *clean bill*. The accepted bill will be retained by the bank until maturity and then again presented to the acceptor for payment. The commercial transaction is now concluded. The goods have been delivered and are paid for.

7. To complete the financial transaction, the proceeds of the bill of exchange are deposited to the credit of the American bank and charged against the English bank. The manner in which this financial account is finally settled will depend upon the convenience of the respective banks as regards the use of the funds. The amount which is now on deposit in Liverpool, subject to the order of the American bank is known as *sterling exchange*. Such deposits form useful reserves of foreign exchange funds which may be drawn upon for the convenience of American purchasers abroad, for the accommodation of American travelers, or as a means of foreign investment.

Each of the seven steps involved in financing an export transaction is subject to considerable variation under different circumstances of custom, convenience, and contractual agreement.

[1] Such trade bills may be drawn in a variety of forms. A customary form is to make the bill payable "to ourselves." The bill is then endorsed by the shipper before presenting it to the bank for discount.

Some of these are explained farther on in this chapter. However, the essentials of normal foreign exchange as outlined, remain unchanged.

A commercial bill of exchange is drawn in the following form.

No. 1323 Galveston, Texas
April 1, 1937

Sixty Days after sight, pay to the order of
First National Bank of Galveston,
Twelve Hundred ——————————Dollars
To I. M. Porter and Company, Ltd.,
Liverpool, England

(Signed) *Sells A. Broad*

FIG. 1

Financing imports. — In principle, the financing of imports is simultaneously and automatically accomplished by and included in the process of financing exports as explained above. As a matter of fact, while cotton, copper, automobiles, and packed meats are being exported to European buyers from American ports, rubber, woolen textiles, wines, and cosmetics are being exported from European ports to American buyers. Ultimately, the proceeds of trade bills drawn by European sellers against purchasers in the United States find their way into American banks as "foreign currency deposits." Likewise, the proceeds of American export bills are simultaneously accumulated in European banks as "dollar deposits."

Now, the dollar deposits in foreign banks, which result from American exports, are American *credits* and foreign debits, and the foreign currency deposits in our domestic banks, which result from imports, are American *debits* and foreign credits.

If the foreign exchange accounts of American and foreign banks were actually cleared at any time, and total trade debits set off against total trade credits, only a relatively small balance would remain. This balance could be settled by a shipment of gold or foreign currency. As a matter of fact, although the accounts are never entirely cleared, the credit and debit trade balances between different countries are always known, and are designated as the "balance of trade."

We may not, however, dismiss the subject of financing imports with the above somewhat idealized description of balanced exchanges. Frequently, it is inconvenient, or otherwise undesirable, to confine international payments to the mechanism of bills of exchange, acceptances, collections, etc. Custom sometimes prescribes exceptional methods of making international payments. Sometimes, when foreign currencies are of uncertain quality, banks insecure, or governmental policies doubtful, the foreign buyer may be required to remit the value of goods in specified kinds of currency or exchange.

Such payments may be required in advance or upon delivery of the goods. They may be made direct to the seller or to his agent. In either case, the debtor is obliged to secure from his bank a bank draft or banker's bill of exchange, in the required amount and specified currency, which is transmitted as agreed to the seller or his agent.

Such foreign drafts are available at all banks in almost any currency, upon payment of the current rate of exchange plus a service charge. These drafts are drawn upon deposits abroad which usually represent funds accrued from the proceeds of domestic exports. Foreign currencies are, thus, made available for the convenience of travelers abroad, for the transfer of investment capital, and for the payment of interest and profits earned by foreign capital and enterprise in domestic industry.

A bank draft or banker's bill of exchange usually is drawn payable "at sight." This is in contrast with the 60-day trade bill illustrated on page 854. Trade bills may also be made payable on demand. An example is shown below:

No. 711 London, England
May 15, 1937

At sight, pay to the order of G.W. Edwards

One Thousand Pounds Sterling----------

and charge same to our account.

(Signed) *The London Bank*

To-
The Bank of New York

FIG. 2

The exchange market.

In a previous chapter, a market has been defined, in effect, as the business mechanism which brings together the forces of demand for and supply of any commodity or service, resulting in transactions of purchase and sale at prices which tend to bring demand and supply into equilibrium. The foreign exchange market, which provides necessary facilities for the purchase and sale of instruments of foreign payment, is no exception to this principle. Freedom of competition within this market has been practically unrestrained in times of normal currency systems and friendly international trade. In recent years, however, government controls which have affected international trade, monetary systems, and ways and means of making international payments have greatly distorted the exchange market.

Strange as it may seem, there is no exchange market place similar to the stock market and the produce exchange, where rates are determined by sales to the highest bidder. Nevertheless, the volume of foreign exchange passing through the market closely approximates the total volume of the world's exports.

The exchange business is handled, almost exclusively, by a few large banks and exchange houses in New York which distribute their services locally through their thousands of correspondents. The reserve and clearing provisions of the federal reserve system facilitate this practice. Each bank dealing in foreign exchange, in theory, fixes the terms upon which it will buy and sell exchange on financial centers abroad. However, whether by independent judgment or by mutual agreement, the banks seldom differ materially in their posted rates on like classes of "paper." The Federal Reserve Bank of New York issues a daily report of the buying rates of cable transfers between New York and the more important financial centers. This rate is compiled as an average of actual charges being made by leading exchange houses and serves as a conventional basis of calculating rates to be charged on other types of exchange.

Foreign exchange is sold in a great variety of forms — bankers' drafts, cable transfers, travelers' checks, travelers' letters of credit, and postal money orders.

The illustrations used above, while typical of a large part of the foreign exchange of this country, fail to represent adequately the complexity which marks some conditions of international

payment. An illustration of the more complex class is found in "triangular exchange." Normally, we import from South America very much more than we export to it. British exports to South America, on the other hand, are usually larger than South American exports to Britain. But the United States has generally exported more to England than she has imported from that country. A part of the debit balance arising from our South American trade is settled by the transmission of London drafts to our South American creditors, or by arranging that South American exporters, when shipping goods to this country, may collect payment by drawing their bills (in sterling) against London banks. By either method American balances in London are used in paying for imports from South America. Our rate of exchange with any particular foreign country is in this manner determined not by our trade with that country, but by our dealings or general balance with the entire world.

The price of exchange.

We have thus far been occupied with the discussion of facilities of foreign exchange and the manner in which they operate in the transfer of funds from one country to another. We now come to the consideration of the forces which determine the ratio at which the funds of one country are exchanged for the funds of another. This is called the *rate of exchange.* Due to the vast quantity of transactions in foreign exchange this ratio responds in a sensitive manner to the play of the forces of supply and demand. It may be defined as the *price paid in domestic currency of the home country for one monetary unit of a foreign currency delivered in the foreign country.*[1] For example, when sterling exchange is bought in New York at $4.88, the transaction involves the purchase of a draft on London at $4.88 per pound sterling, payable in London. The factors controlling the price or rate of exchange are as numerous and as difficult to trace as the influences which affect the price of any economic good of world-wide purchase and sale. However, to facilitate discussion, we may classify them as: (1) the amounts of pure gold represented by the monetary units which are to be exchanged, (2) the cost of shipping gold, and (3) the balance of international payments.

[1] Rates of exchange are also expressed in terms of the price payable abroad in foreign currency for one unit of domestic currency.

The par of exchange and the gold points.

Before 1931, when gold played its normal role of the international standard of value, an English sovereign (the gold "pound sterling") contained as much fine gold as 4.866 American dollars, and when exactly this amount must be paid in New York for a draft or order for one pound payable in London, the price of sterling exchange was said to be *at par*. Fluctuations in the rate of exchange depend chiefly upon the "balance of international payments," but it is plain that when a gold standard is in force in both countries, upper and lower limits to these variations are established by the actual cost of shipping gold. Suppose that, on the basis of the gold standard of 1930, it cost two cents to transport $4.866 worth of gold bullion between New York and London. Except under unusual circumstances which might prevent the open purchase of gold in these countries or restrict its transport, sterling exchange could not rise above $4.886, nor fall below $4.846 without stimulating a flow of gold from one country to the other. Such limits are frequently spoken of as the "gold points," "specie points," "shipping points," or "export and import points." The cost of shipping gold varies with the size of the shipment, with freight, insurance, and interest rates, and in some degree with the steamer and the season of the year. Furthermore, gold is so important as the basis of bank credit in all parts of the world that sometimes a central bank will put a small premium on gold, thus virtually raising the gold-export points or lowering the gold-import points. The gold points, then, while in one sense very real, represent extreme limits and are in themselves variable.

Even when only one country is on the gold standard, there will be gold points, if gold may be purchased for depreciated paper and freely transported. During the Civil War gold was quoted in paper dollars and merchandised like any other commodity. The cost in paper dollars of the gold content of a foreign standard unit, plus the cost of transporting the gold to the foreign country would be the maximum rate paid for exchange on that country. This would also indicate the gold-export point. In a similar manner, the cost in paper dollars of the gold bullion equivalent of a foreign standard unit, minus the cost of transporting the gold from the foreign country, would be the gold-import point. Thus, the relative purchasing power, in terms

of gold bullion, of the two currencies would be determined — a relation which might be called a *quasi par of exchange.* By this method it becomes possible to approximate the comparative gold values of two or more paper currency units in as many different non-gold standard countries so long as one nation which maintains wide commercial relations remains on the gold standard — provided, of course, that gold bullion markets remain open. For example, assume that the gold-purchasing power of the paper standard units of countries A, B, and C, in their respective relations to the gold standard unit of country D, are as 2 to 12, 4 to 12, and 6 to 12. Then the gold equivalent of the currency units of A and B are as 2 to 4, the currency units of A and C are as 2 to 6, and the units of B and C are as 4 to 6. From these gold-purchasing ratios, the quasi par of exchange between A and B is 2, between A and C is 3, and between B and C is 1.5.[1]

Now, let us assume that there is no open international gold market and that gold may not be bought as a commodity for irredeemable paper currencies and freely exported or imported. In this case, the above structure of calculated gold-purchasing ratios and quasi pars of exchange fails, and neither a direct nor indirect means of measuring the values of paper standard currencies in terms of gold is available. This is the actual situation today. One might suggest that some other commodity be used in lieu of gold, as a common denominator of the purchasing power of these several currencies. The answer is, of course, that no other single commodity which is universally dealt in on the open world market has the relatively high and stable value attributable to gold. Furthermore, if there were such another commodity, its use as a standard of value would be prevented by the same causes that have demonetized gold. There remains, however, another alternative. It is possible, theoretically, at least, to make use of the principle of the "tabular standard of value," which is briefly discussed on page 365.

The purchasing power par of exchange.

By the tabular standard method suggested above, index numbers of domestic prices of a selected list of commodities

[1] This situation prevailed, in fact, from 1933 to 1936, when Britain and the United States were off gold and France remained on the gold standard. The pound and the dollar were both quoted in French gold. In this way, the ratio of the pound to the dollar in terms of gold was established.

common to the world markets, may be expressed in terms of the respective currencies of the several countries. These series of index numbers would show the purchasing powers of the different currencies on their home markets. When these indexes become stabilized, they will show, by comparison, the relative purchasing powers of the currencies in which they are expressed. It is proposed, therefore, that when disturbed currencies so recover as to retain a stable domestic exchange power in terms of identical groups of commodities, the ratios of their indexes of purchasing power should be accepted as a *de facto* par of exchange. The comparative purchasing powers of currencies expressed in terms of such "tabular values" constitute what has recently come to be known as the *purchasing power par of exchange.* This concept of expressing the *par of exchange* between otherwise incomparable currencies is defined as *a rate of exchange between two currencies which expresses an equivalence in the purchasing powers of the respective units in the home countries.*[1]

The possible operation of the purchasing power par of exchange may be illustrated as follows. Assuming that, on a stabilized level of prices in both Great Britain and the United States, the relative purchasing powers of the dollar and the pound, in terms of like commodities, are as 1 to 5, or the par of exchange is \$5.00 = 1 pound. If now, the index of prices in the United States changes and again becomes stabilized at such a point as to indicate a 20 per cent decline in the purchasing power of the dollar, while the British price level remains unchanged the par of exchange of the pound would rise to \$6 = 1 pound. Contrariwise, if the purchasing power of the dollar were to remain stable, as indicated by a sustained price level, and the index of British prices were to advance to a level 20 per cent higher, indicating a proportionate decline in the purchasing power of the pound, the par of exchange would decline to \$4 = 1 pound. These three variations in the *purchasing power of exchange* would mean that the pound sterling had, at different periods of temporary price stabilization, 5, or 6, or 4 times the command over commodities in England that our dollar had in the United States. During each period, the *rates of exchange* would have varied about these ratios of dollar to pound purchasing power in precisely the same manner as

[1] Fairchild, Furniss, and Buck, *Elementary Economics*, The Macmillan Co., New York, 1936, Vol. II, p. 432.

rates of exchange normally fluctuate above and below a gold standard par of exchange.

In the absence of exchange controls,[1] the market rates of exchange actually do tend to approximate the purchasing power of exchange.[2] That is to say, the tentative par of exchange of the money of any nation with that of another will automatically approach the relative purchasing power, in terms of goods, of the monetary unit of the one nation as compared with the purchasing power of a monetary unit of the other nation. This is true regardless of the physical character of the monetary unit. The only method by which this relation can be measured, in the absence of a metallic standard, is by the use of properly constructed index numbers. The movement of indexes of prices may be accepted as a possible basis of measuring the comparative values of currencies and calculating appropriate rates of exchange. This statement also applies to the practical evaluation of international debts and of income from foreign investments and in the making of foreign investments. The fact must be emphasized, that such measures are useful only when the currencies in question are essentially stable in their domestic purchasing power. It remains, however, for economists to formulate a system of index numbers which will be acceptable for this purpose. In the meantime, our best hope for the stabilization of the foreign exchanges and the recovery of international trade is a speedy return to the gold standard.

The confusion of world currencies.

In the preceding pages of this chapter, we have chosen to describe the normal operations of foreign exchange under conditions which prevailed, generally, for many years prior to 1914. During these years the currencies of most nations were stabilized on a monometallic basis. In order to accomplish this the nations were generally successful in maintaining balanced budgets and were not dependent upon irredeemable currencies or foreign loans to finance their needs. National currencies being stabilized, domestic prices, likewise, remained comparatively stable. Such general changes of domestic price levels as occurred usually were downward and were traceable to technological advance in

[1] See discussion on stabilization funds, p. 866.

[2] This, of course, prevails under the gold standard, for both exchange and the purchasing power of exchange are expressed in gold.

methods of production, increased credit facilities in both production and exchange, and the economies of foreign trade. The natural downward tendency of prices was, in some cases, partially neutralized by the operation of tariffs and monopolies.

The economic progress of the western world always has been closely related to friendly and co-operative international trade. There were certain essential facts of public policy which sustained normal and profitable international trade prior to 1914. (1) National budgets were balanced. (2) National currencies were stabilized. (3) Domestic price levels were fairly well established and maintained. From these three conditions, it automatically followed that the natural currents of international trade encountered a minimum of resistance. During this period international trade and the foreign exchanges were closely synchronized. The financial operations of the foreign trader were quite as simple as were those of the domestic merchant. Foreign trade in its composition was confined to commodities moving naturally from areas of more favorable production to areas of more favorable marketing, and the commercial world enjoyed a universal language of prices, contracts, credits, and accounts.

This state of normal equilibrium of world trade is not seriously disturbed by revolutionary wars or wars involving small nations. But when war does exist, trade between belligerent nations is suspended, and warring nations are unable to sustain their military efforts and to maintain their customary domestic industries and normal trade relations with neutral nations. Because of their reduced production for export and their amplified needs for foreign goods, the equilibrium of their foreign trade is destroyed and, in the face of rising rates, only the export of gold or the assumption of "war debts" will provide import requirements. At this point, serious domestic fiscal problems usually appear which give rise to an irredeemable paper currency. In the absence of the financial support of friendly nations, international trade may fail entirely and, at best, becomes a matter of speculation and political intrigue with serious future portent. Indeed, fiscal and commercial troubles coincident with warfare are sometimes more difficult to overcome than are the military forces of the enemy; and the defeatist economic aftermath of war may reduce the fruits of victory to an empty shell.

In modern times, until 1914, international trade, as a whole, was not greatly disturbed by war, and when peace was restored the combatant nations soon renewed normal trade relations between themselves and other nations. The World War precipitated a situation such as had never before been experienced. Instead of only two or three nations being at war, and the commercial and fiscal relations of the great mass of nations remaining comparatively undisturbed, many nations were at war and only a few small nations maintained a semblance of neutrality. Consequently, no nation maintained an equilibrium in its foreign trade and no internationally acceptable standard of value or available medium of settlement survived the universal confusion of national currencies. No nation escaped inflation and greatly disturbed price levels and the deleterious economic reactions which always follow. No nation, except the United States, was able to sustain the gold standard during the early years of the war and, when the United States joined the conflict, both inflation and substantial restriction of the gold standard were soon apparent here. No nation escaped the accumulation of great public debt which was to remain a paralyzing economic and social burden upon the future.

In order to understand the recent regression in international trade and the coincident confusion of the world's currencies, it is necessary to see clearly that behind this situation lies the breakdown of both the internal and the external fiscal equilibrium of many nations, monetary and credit inflation, abandonment of standard currencies, and futile, so-called, "nationalistic" economic policies.[1]

Trade among nations, under the abnormal conditions of the war, was necessarily out of balance, and, in the absence of gold exchange, there was no medium of international settlements. It logically followed that foreign trade was continued very largely upon a credit basis. At the close of the war the accumulated international indebtedness was increased by the tremendous reparation charge levied upon Germany. Furthermore, large stocks of goods were sold on credit to the impoverished nations of Europe and reconstruction credits were advanced by England,

[1] The principles of nationalism which are being so aggressively advanced in western Europe do not differ basically, in their economic connotation, from the mercantilism of medieval times.

France, and the United States to the insolvent nations of Central Europe. This unexampled accumulation of international indebtedness, consisting of both commercial and political obligations, remains, in large part, an inert and immovable obstacle to the successful reorganization of normal world trade. Since 1929, considerable progress has been made toward the inevitable writing off of the "war debts" by negotiation and by indirect repudiation. A large portion of the war debts of Europe were payable by contract in United States dollars. The devaluation of the dollar automatically reduced the principal and interest of this part of the debt by 41 per cent. The United States and American citizens are the principal creditors concerned.

The control of exchange rates.

The United States was the only nation which remained effectively on the gold standard from 1914 to 1933.[1] This was possible because the balance of foreign trade was strongly in favor of this country during the period and also the gold stocks of Europe were steadily flowing to the United States in settlement of trade balances and in search of security from the hazards of conquest. Britain, although off gold after 1914, maintained a relatively stable sterling exchange until 1925 when it returned to gold at pre-war parity.

The spirit of optimism which prevailed at the close of the war, together with the irregularities of prices and the exchanges coincident with depreciated currencies, inspired an ardent desire among European countries to emulate the United States and England by re-establishing the gold standard as soon as possible. England, in her effort to sustain a traditional monetary solidarity, was doubtless over hasty in returning to gold at the pre-war par. France, weighing the burden of her domestic and foreign debt and realizing the uncertainty of receipts on the reparation account from Germany, devalued her currency by approximately 80 per cent and stabilized the franc on a gold bullion standard. Other nations did likewise, so that practically all of Europe, except Russia, was on some form of gold monetary basis by 1929 and stabilized rates of exchange generally prevailed.

[1] Several neutral nations were nominally on the gold standard during the war period. They were, however, engulfed in the post-war flood of inflation which swept Europe, and were obliged to go off gold both to conserve their monetary reserves and to protect their foreign trade.

This long-hoped-for situation was not long to endure. The anticipated recovery of international trade did not occur. Impoverished nations found themselves unable to buy, as formerly, in foreign markets, and were forced to adopt a rigorous economic policy of national self-sufficiency. Germany, finding foreign markets closed to her industrial products, had nothing with which to pay war indemnities. France, Britain, Belgium, and Italy, depending upon receipts from Germany to liquidate their obligations to the United States, were obliged to default their interest payments. The United States government, although well aware that nothing was forthcoming on existing European debts, encouraged the continued sale of American products to Europe on "short-term credits" which only served to augment the permanent debt and to erect a phantom structure of "favorable foreign trade" and business prosperity. Britain, having returned to the pre-war standard currency, found her foreign trade dwindling and her exchange rates falling under competition with the devalued currencies of her European rivals. As had previously been the case in France, the growing instability of the sterling exchanges caused a flight of capital "to the dollar" and there were heavy gold exports from Great Britain to the United States. Britain then chose to abandon the gold standard in 1931, installed a managed currency, and dropped sterling to approximately 60 per cent of its former gold value. The United States continued, with considerable success, to compete in the foreign trade with the devalued gold currencies of Europe and the managed exchanges of England. However, because of a domestic banking crisis, with which foreign relations had little to do, this country went off gold in March, 1933. By that time, England and the continental countries had become convinced that the stabilization of international exchange and a co-operative development of foreign trade, was desirable. This involved the stabilization of domestic currencies also. Up to that time, such a policy had been consistently supported by the United States government and an international conference for that purpose had been suggested by the President.

A conference for the consideration of international stabilization of currencies and the exchanges was called in London, in the summer of 1933. Because of the unexpected withdrawal of the United States delegates, nothing was accomplished. The

new domestic economic policy of the United States was at that time being developed along experimental lines which included further inflation of money and credit at the cost of shrinking the dollar. The manner of accomplishing the desired devaluation of the currency and the degree to which inflation might be extended had been delegated, without substantial reservation, by Congress to the President, with authority to act at his discretion. The international purchasing power of the dollar, as expressed in gold, was reduced within a few weeks by 41 per cent.

In January, 1934, the approximate gold equivalent of the dollar was 13.7 grains (pure). The corresponding equivalent of the British unit was 45.2 grains gold. Britain was then operating an exchange control system. An Exchange Equalization Fund amounting to £375,000,000, was being used to adjust and steady sterling exchange rates. With the same purpose in view, the United States treasury set aside two billion dollars in gold to be used by treasury officials in the control of dollar exchange. In this arrangement we see the initial machinery of a "managed dollar exchange," which has since continued as a part of our general scheme of money, credit, exchange, and price controls. It was then thought that the management of dollar exchange would involve competitive action between British and American controls. On the contrary, the sterling and dollar controls seem to have been conducted in close harmony.[1]

Methods of exchange control.

The immediate objectives of the control of foreign exchange rates may be (1) to raise or to lower the existing level of the rates, (2) to stabilize the rates at a predetermined level, (3) to render the rates flexible so as to meet the needs of the future as they may arise, or (4) to eliminate annoying irregularities in the rates caused by speculation or by erratic changes in the supply of or demand for bills of exchange. The problem of exchange control may involve the careful adjustment of the basic factors of the rates, such as currency values, the volume and conditions of the export and import of merchandise, the service of international debts, the negotiation of international loans, the transfer

[1] In 1936, an attempt by Russia to break the British exchange rates was defeated by the use of the United States stabilization fund to purchase at the market all sterling exchange offered by Russia.

of capital, and the interchange of short-term funds. It may also involve questions of political relations among nations.[1]

The most immediate and direct method of controlling exchange rates is by modifying the demand for and supply of bills of exchange in the open market. If it is desired to raise the rate, the controlling agency will buy bills until the price is advanced to the required level. If it is desired to lower the rate, bills will be sold. If the rate is irregular and stability is desired, bills are sold on the rise and bought on the decline. It is apparent that, to achieve the purposes enumerated above, the agencies of control — treasury officials, central banks, or administrative boards created for the purpose — must be constantly alert and frequently active in the exchange market. They must also be supplied with adequate funds to dominate the market at any time, and they will be expected to use available funds to keep the rates under control regardless of loss or gain.

A type of exchange control not included above is sometimes required to protect the financial structure and the monetary system of a nation from certain dangers inherent in international financial and commercial transactions. Efforts at such control are not always successful. For example, the recent purchase of silver by the United States treasury, under the terms of the Silver Purchase Act of 1934, so rapidly drained silver from Mexico and China as seriously to impair their national currencies. Attempted exchange controls in both countries were too late, however, and they were obliged to abandon the silver standard for the lack of an adequate monetary supply of that metal. We have observed an example, also, in the futile exchange controls set up by the Dawes Committee, and later under the Young Plan, to facilitate the transfer of the large reparation funds supplied by Germany and, at the same time, protect the internal financial system of Germany and safeguard the complex structure of the international exchanges. The Bank of International Settlements, created for this purpose, was acclaimed as a world clearing house of international exchange, the probable future custodian of the world's monetary gold and, possibly, the administrative head of a future "world federal reserve banking system." In its first mission it failed, not because Germany was delinquent in

[1] The "pegging" of sterling exchange during the war with the assistance of a syndicate of New York bankers is a case in point.

supplying treasure for reparations, not for lack of operating funds, or skill of management, but because its problem was insoluble.

The methods of protective or defensive exchange control necessarily include restrictions upon individual freedom in matters of international trade and finance. A degree of continuous official control approaching government monopoly is usually necessary. Rates of exchange may be officially determined. Public service agencies, central banks for example, may be directed to requisition, on behalf of the government, all instruments of foreign exchange and to make them available to the trade only for certain purposes and at official rates. The so-called gold exchange currency system constitutes a mild variety of this type of exchange control.

Among countries whose currencies and exchanges are solidly on a gold basis, the international purchasing power of exchange is automatically equalized and essentially stabilized because international pars of exchange and rates of exchange are expressed in terms of gold as a common basis of reference. Under normal conditions of international trade, there is no convincing argument that the foreign exchanges will be improved by a system of official control. Several potent reasons may be advanced in support of this conclusion. The existence and secret use of an equalization fund, even if directed by officials of superior acumen, integrity, and technical skill in manipulating the exchanges, is not in keeping with the philosophy of production and trade in modern progressive society. There is room for doubt, also, as to the probability of maintaining, under prevailing political practices, an administrative board which would always reflect the desired qualities of personal ability and character.

Other regulatory devices which recently have been used to control the exchanges include: the quota system which limits the amount of particular imports and thus serves both as a restraint on domestic consumption and a protection to domestic industry; the stipulation that exchange funds shall not be available for the purchase of goods in certain countries unless obtained by the sale of domestic goods to those countries; the regulation that foreign funds must be arranged for at certain banks before licenses will be issued; the requirement that all foreign funds acquired from abroad by the sale of goods, or in

any other way, must be surrendered to the government in exchange for domestic currency; the prohibition of interest payments outside the country; embargoes upon the export of capital; fixed export price differentials either above or below domestic prices; and flexible tariff systems permitting "discretionary" changes, prescribed by administrative officials, in the customs duties.

Dollar exchange at the present time is clearly a controlled exchange. The stabilization fund, under the management of the Secretary of the Treasury, which was created for a period of three years, continues to operate by virtue of an extension granted by Congress. Likewise, the power of the President to raise or lower the gold equivalent of the dollar, within pre-

TABLE I. — STATEMENT OF THE BALANCE OF INTERNATIONAL PAYMENTS OF THE UNITED STATES FOR 1936 [1]

ITEMS [a]	MILLIONS OF DOLLARS		
	Dollar Receipts	Dollar Payments	Net Receipts (+) or Payments (−)
1. Trade and services:			
Merchandise	2,453	2,419	+ 34
Freight and shipping	65	125	− 60
Tourist expenditures	122	495	− 373
Remittances, contributions, etc.	5	143	− 138
Interest, dividends, etc.	575	200	+ 375
Other transactions, adjustments, etc.	250	220	+ 30
Trade and service transactions	3,470	3,602	− 132
2. Gold and silver:			
Gold exports and imports	28	1,144	− 1,116
Gold earmarking operations	——	——	+ 86
Silver exports and imports	3	183	− 180
Gold and silver movement			− 1,210
3. Capital:			
Reported long-term capital movement	——	——	+ 792
Reported movement of short-term banking and brokerage funds	——	——	+ 404
Paper currency movements	55	35	+ 20
Miscellaneous capital transactions			− 75
Capital movement			+ 1,141
4. Residual item			+ 201

[a] A significant aspect of this statement, which is true of all complex records of international account, is the impossibility of accuracy in determining and interpreting the several items. Because of incomplete records, changing monetary standards, and fluctuating rates of exchange, figures here shown are not, in some cases, comparable with estimates of previous years.

[1] *Federal Reserve Bulletin*, May, 1937, p. 432.

scribed limits, has been continued. The President also retains power to bring all foreign exchange transactions, either in goods or in credit, under government regulation and control in the event of any national emergency as declared by him. In the absence of an open gold market, the Secretary of the Treasury continues to exercise monopoly control of all transactions in gold.

Conditions seem to point to a relaxation rather than a tightening of exchange controls; nevertheless, sufficient administrative authority exists to impose much more rigorous controls than have thus far been applied.

The balance of international payments.

The table on page 869 shows in some detail the items of international account of the United States for the year 1936. One's first observation is that the facts presented in the table dispel the rather general illusion that *exports and imports,* and the resulting "balance of trade," constitute about the sum total of international business relations. Merchandise transactions admittedly are prime factors of international business, and the balance of trade, either credit or debit, if not offset by some other item, exerts a favorable or unfavorable influence on concurrent rates of exchange. The balance of trade also tends to establish the position of a nation as creditor or debtor in its relation to other nations.

Some nations appear to accept the medieval principle that a favorable balance of trade should be maintained, even at the sacrifice of socially needed imports, so that national treasure may be accumulated in the continued receipt of settlement balances from other countries. Some nations prefer to pursue a trade policy of maintaining a balance of exports and imports with each foreign country with which they deal. Germany attempts to follow such a practice at the present time and buys American goods only to the amount that we buy from her. British officials are said to have persuaded South American countries that they should purchase more British goods and less American goods in order to balance their trade with Great Britain. Insistence upon direct trade in this manner overlooks the frequent advantage of triangular trade. Trade opportunities thus neglected reduce the total value of the international exchanges and result in lower domestic price levels and unmarketable products.

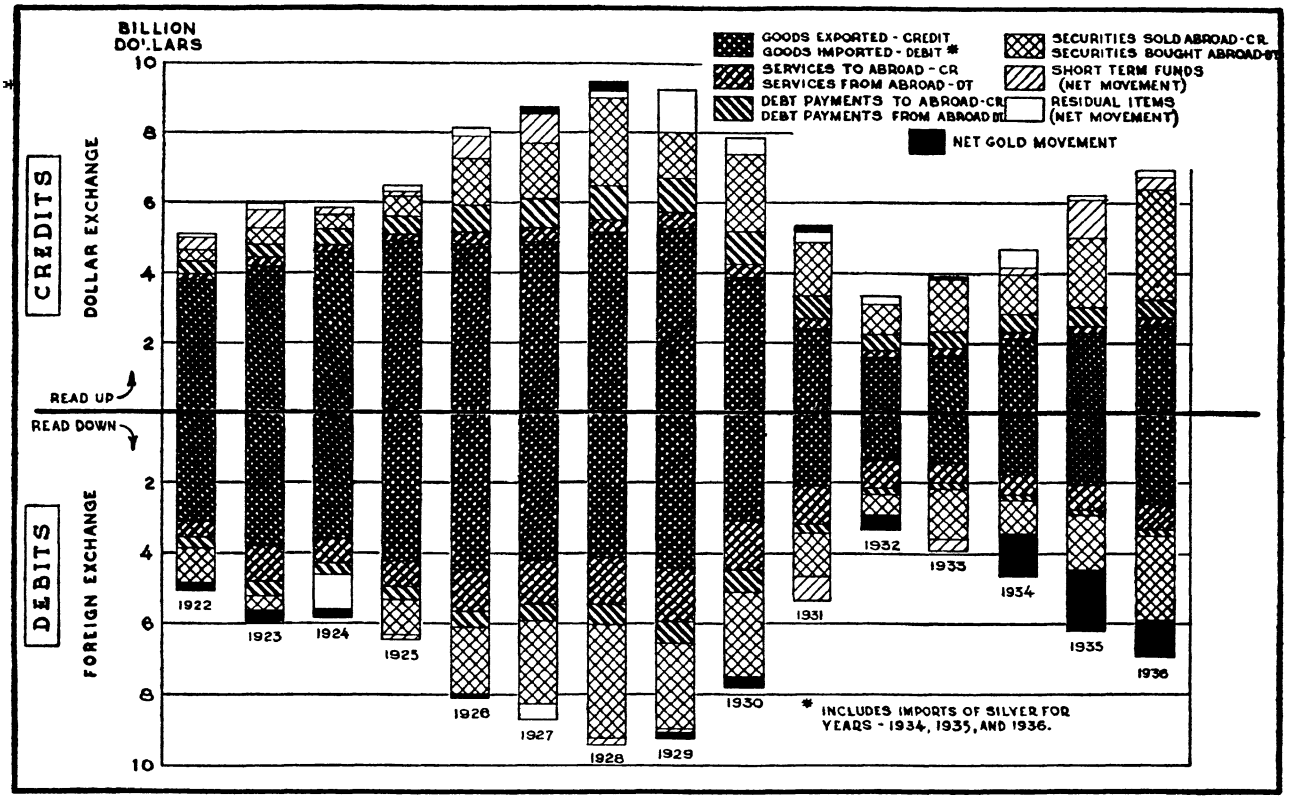

BILLION DOLLARS
CREDITS
DOLLAR EXCHANGE
READ UP
READ DOWN
DEBITS
FOREIGN EXCHANGE
GOODS EXPORTED - CREDIT
GOODS IMPORTED - DEBIT *
SERVICES TO ABROAD - CR
SERVICES FROM ABROAD - DT
DEBT PAYMENTS TO ABROAD - CR
DEBT PAYMENTS FROM ABROAD DT
SECURITIES SOLD ABROAD - CR.
SECURITIES BOUGHT ABROAD - DT
SHORT TERM FUNDS (NET MOVEMENT)
RESIDUAL ITEMS (NET MOVEMENT)
NET GOLD MOVEMENT
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
* INCLUDES IMPORTS OF SILVER FOR YEARS - 1934, 1935, AND 1936.

FIG. 3

It is noteworthy that the various items under the caption *Services* amounted, in 1936, for a gross sum approximately equivalent to one-half of the total merchandise export and import values. It is interesting also that American tourists traveling abroad expended, in 1936, substantially more than the national balance earned in trade.

The role of gold movements among the international transactions of 1936 is revealed not to constitute the conventional "remittances to cover trade deficits," for there were no trade deficits in that year, after tourists' expenditures and silver purchases were provided for. It is evident, however, that for whatever reason the $1,740,000 in gold was sent into the country, it was made available to the banks in the form of short-term commercial and banking funds — a convenient medium for temporary investment in securities and other forms of speculation. About one-fourth of it appears to have been directly invested in stocks and bonds.

The heavy *imports of silver* which appeared for the first time in 1935 reveal the operations of the treasury in compliance with the requirements of the Silver Purchase Act.

Residual items indicate the estimated unknown and invisible credits necessary to balance the known total of debit items.

The chart (Fig. 3) on page 871 serves to show in perspective the course of international commercial and financial transactions over a period of fourteen years. The variable and recently declining exchange of merchandise and the movements of capital and of short-term funds are noteworthy. The gradual accumulation of gold in the United States is indicated and the conditions of its transfer may be implied from coincident features of the chart.

The problem of protection and free trade.

In a world controlled by purely economic considerations, in which there was neither war nor preparation for war, protection would in the long run almost certainly represent a losing policy. But the World War has supplied another illustration, on a gigantic scale, of the historic truth that the tariff problem cannot be regarded as a purely economic question. Protectionism, which before the war played a material part in generating the international friction which brought on that conflict, has since the war

rapidly gained ground, as indeed it had been doing for a half-century preceding the outbreak of hostilities in 1914. Since the war, additional protective tariffs have been adopted by the new states created by the Treaty of Versailles; the older states have generally denounced their pre-war commercial treaties and have strengthened the tariff barriers which protect them; old strongholds of free trade such as Great Britain and Holland have made important concessions to the demand for protection; both the import and export of particular articles have been prohibited or radically restricted by governmental licensing systems; and there has been a general adoption of anti-dumping duties designed particularly to restrict imports from countries with greatly depreciated currencies, the latter acting, although temporarily, as a marked stimulus to exportation. This stimulus was so great that Germany and Austria adopted restrictions to prevent the depletion of domestic markets by purchasers from foreign countries having currencies of relatively high purchasing power.

All this makes it plain that in the world as it exists, tariff policy cannot, as a matter of fact, be controlled by considerations of mere dollars and cents. The modern state repeatedly sacrifices the economic gains which could be achieved by a thoroughgoing application of the territorial division of labor, in order to foster industries needed in time of war, to counteract the harmful effects of foreign tariffs, to provide penalties against unfair practices on the part of foreign trade competitors, to raise needed revenue, and above all, perhaps, to secure that temporary stimulus of heightened prices and wages to which attention was called in the earlier chapter on this subject.[1] When the nation is in a fit of depression, it "picks itself up" with a fillip of increased customs duties. It may be unwise as a general rule to use stimulants; but it cannot be denied that protection frequently affords an effective stimulant. When factories are closing down and trade is languishing, a part of the home market heretofore enjoyed by foreign dealers may be temporarily taken from them and given to domestic dealers. It is true, of course, that such action may provoke reaction and retaliation in the future. But the protectionist is willing to meet future problems when they arise — possibly with an increased dose of the old remedy. While the arguments for protection change from time to time, this craving

[1] Chap. XIX.

for preferential advantage has been over a long course of years perhaps the most potent single factor making for the political success of the policy of protection in this country. The principal arguments by which that policy is defended, however, are of a different type and must be considered in more detail.

The case for protection. — 1. One of the most captivating arguments for protection is the assertion that it promotes *nationalism*, which is held to be a good thing. Domestic trade, it is claimed, draws the citizens of a country together, while international trade is cosmopolitan and tends to their separation. Upon the creation of our federal government, state tariffs were abolished and their place taken by a national tariff designed partly to protect the whole of the country against the rest of the world. The introduction of national protection thus went hand in hand with the promotion of internal free trade. Protection against foreign competition, it is agreed, is historically coincident with the enfranchisement of internal trade, and has as its main object the creation of a strong national economic unity, without which permanent political unity is impossible. The validity of this argument, it will be noted, depends largely upon the truth of the assumption that the development of a strong feeling of national unity is a thing to be desired.

2. Governments should, the protectionists say, foster *infant industries* in order to develop the natural resources of a country and to produce diversity in industrial pursuits. We prevent children from earning a little while they are young in order that they may earn more when they are old. For the same reasons many trade-unions insist that apprentices shall be given a broad knowledge of the trade they are learning, although it is more profitable for the employer to have them specialize early in some narrow branch of the work. So, similarly, protection prevents a nation from specializing too exclusively in its undeveloped stage, in order that it may the sooner arrive at industrial manhood.

Economists have generally admitted that there is a certain amount of truth in this argument. If an industry gets an early start in a given district, this locality is likely to retain its advantage because of the concentration there of business men and laborers acquainted with the requirements and possibilities of the industry. Of course, such localized industries can be maintained only when the cost of transporting the article is small, and when other districts do not possess unusual natural advantages in the way of

accessibility to superior raw material, power, or skilled labor. The census studies in the localization of domestic industries seem to indicate that while the industrial inertia of which we have been speaking is an important factor, it is not so important as the opposing forces making for territorial diffusion of industry.

3. Closely connected with the preceding arguments is a defense of protection based upon grounds of *war and military necessity.* Obviously, no great state can permit itself to become wholly dependent upon foreign nations for its supply of war equipment and munitions. But in modern war the list of "essentials" extends far beyond the obvious enginery of war. General industrial self-sufficiency, it is asserted, is desirable. There is unquestionably much truth in this argument. Before the World War, Germany used protective tariffs to preserve her capacity as a producer of food and the raw materials necessary for her industries; and her ability during the war to provide in large part for her food necessities indicates that as a measure of military preparedness this policy was justified. Similarly, her protection and encouragement of the dye industry, before the war, helped to create an important peace industry which, because its processes and technique are largely the same as those required in the manufacture of explosives, could be readily turned under the stress of war to the immediate manufacture of munitions. It is true that some war essentials, such as nickel, antimony, tungsten, and quicksilver, the United States possesses in such small quantities that provision must be made by accumulating reserves in advance; that other essentials, such as nitrates, can probably best be produced in this country by government plants or in plants directly subsidized by the government. But other industries, *e.g.* dyestuffs, can conceivably be built up in this country by protection; and in such cases purely economic arguments against protection are likely to avail little. In any event, a self-respecting and farsighted nation will retain its ability to feed and clothe its people and its armies in time of war. The failure of the South in the Civil War was largely due to her industrial dependence upon the cotton export trade. A sufficient diversification of industry to prevent industrial paralysis and to insure a prompt supply of the necessaries of life in time of war is manifestly desirable.

4. The *home market argument* for protection naturally follows. Much that is said in defense of this claim is childish. One distin-

guished American economist seriously maintained that a country can remain permanently prosperous only on condition that what is taken from the soil shall be returned in manure and other kinds of fertilizers, and that this will be accomplished only when the products of the soil are consumed at home. A much stronger application of the argument, however, is found in the assertion that the home market is superior because it is a surer market. A foreign market is likely to be closed by war or by capricious changes in foreign tariffs. If it were practicable to take and keep all home markets for home producers, it might conceivably be wise to pay the price. But when by increased duties we take one home market from the foreign producer, we are likely to give another home market to some other foreign producer, or — what is much the same thing — when we capture a new home market for one domestic industry, we are likely to deprive another domestic industry of an equivalent home or foreign market which it has theretofore enjoyed. Thus, protection for the American manufacturer is likely to injure the foreign market of the American farmer and raise the latter's cost of living and expenses of production. And only in a few lines is it possible to compensate the farmer by effective protective duties on agricultural products.

5. This brings us to the argument for protection as a *defense against "dumping."* By dumping is meant the sale of products abroad at prices lower than those charged at home. Dumping arises in a variety of ways. Export bounties may be granted by the home country for the specific purpose of encouraging foreign trade; or a monopoly may find it profitable to dispose of a surplus abroad at prices which would be needlessly low in the highly protected home country; or manufacturers may avail themselves of the difference between fixed and variable expenses of production to secure some profits over the specific or variable expenses of production by selling abroad at prices which would not be remunerative if applied to their entire output. Moreover, the low price at which certain American products are sometimes sold in Europe would seem to indicate that many manufacturers for the export trade make it a practice to sell abroad at unusually low prices whenever they believe that their foreign market is threatened.

Now if the reduction of prices were permanent, the country in which the products are dumped would have no real cause for com-

plaint. On the contrary, it might logically regard itself as a beneficiary of the foolish practices of foreigners. But real dumping is not intended to be permanent. It often aims to secure foreign markets by selling temporarily at prices which if continued would not be profitable; and when the market is secured, prices will be raised. If temporary and malicious dumping can effectively be prevented by countervailing customs duties, neither the economist nor the freetrader can logically object to their employment, since their object is not to afford protection in the usual sense, but to prevent or punish a prominent form of unfair competition. Dumping is one form of local price discrimination. It is interesting to note that the Tariff Act of 1922 "extends to import trade practically the same prohibition against unfair methods of competition which the Federal Trade Commission Act provides against unfair methods of competition in interstate trade. Under this section [section 316], additional duties may be imposed on the importations of any individual engaging in unfair price-cutting, full-line forcing, commercial bribery, or any other type of unfair competition; and if the unfair practices are of an aggravated character, the offending individual may be prohibited from importing goods into the United States." [1] We touch here upon what may be called the international trust problem, an obviously difficult field. Countervailing import duties or even prohibition of imports may prove ineffectual remedies, and if unskillfully used they may lead to costly trade wars. But until better remedies are available, it seems obviously wise to authorize their use as the only measures offered of minimizing in the import trade those demoralizing practices which we properly seek to repress at home.

6. Many arguments for protection rest on the assumption that it is desirable to *diversify industry*. One of these parallels the free trade argument based upon the territorial division of labor, and demands a sufficient diversification of industry to utilize fully all the industrial talent of the home population. It is unprofitable for a country to specialize in agriculture if the population of that country has in high degree the talents required for manufacturing and mechanical industries. Again, it is maintained that protection leads to the more rapid accumulation of capital by fostering

[1] W. S. Culbertson, "The Making of Tariffs," *Yale Review*, January, 1923, Vol. XII, p. 269.

that type of industry which most rapidly saves and accumulates capital. The modern corporation is perhaps the greatest agency of saving yet devised. Furthermore, it is maintained that the diversification of industry increases wages by stimulating the demand for labor. As has already been pointed out, the prices of particular products may be increased and money wages in the corresponding industries may be temporarily raised by new or increased duties on such products. But that the general level of real wages or incomes in any country may be permanently raised by protective duties is contrary to the better teaching both of political economy and economic history. Certainly some of the cruder wage arguments for protection are absurd. It has been repeatedly maintained, for instance, that every American industry is entitled to an amount of protection equal to the difference between the wages which it pays and the wages paid by its most efficient foreign competitor. Link this argument to the initial claim that protection raises wages, and the result is the following amazing plea for ever-increasing tariffs: Protection raises wages — but high wages put the American manufacturer at a disadvantage in competing with foreign producers — and the home producer must be protected to the extent of the difference in wages — therefore, every advance in protective duties laid for the benefit of the wage earner must be accompanied by additional advance for the benefit of the manufacturer — and so on, *ad infinitum*.

7. That protective duties should be used to *equalize costs of production* here and abroad — or more accurately, to equalize "the difference in costs of production in the United States and the principal competing country" — has been widely advocated as the modern and scientific basis of protection. Indeed, in the Tariff Act of 1922 this formula was clearly adopted as "the policy of the Congress by this Act intended." The proposal has many attractive features. It recognizes that some taxation of imports is necessary, but abandons the Chinese-wall interpretation of protection and aims to preserve competition between domestic and foreign producers. But it looks to the permanent policy of protection and to continuous readjustments of protective duties as costs of production change here and abroad. From the standpoint of economic principle, its validity rests on the assumption that the collateral or indirect advantages of diversified industry are worth the cost of maintaining indefi-

nitely in this country a large number of non-essential industries which could be conducted at a lower cost abroad. It raises again the old question whether it pays to produce goods here at costs in excess of the prices for which we could purchase them from foreign producers.

As a standard or measure of the amount of protection to be applied, the rule, it is certain, will be found in practice to be unsatisfactory. Many important articles, such as wool, are joint products. Neither the economists nor the cost accountants have yet succeeded in devising a satisfactory method of computing or allocating the cost of a joint- or by-product. It may fairly be said, that that problem is, in general, insoluble. Again, costs vary greatly from producer to producer, and from place to place. In the case of beef cattle, wool, sugar, and many other products of like importance, the average cost by states frequently varies by more than 30 per cent, and in some years by more than 50 per cent. If duties are to be based on average costs throughout the United States, compared with the average costs in the principal competing country, the producers in the high cost states are likely to raise most effective opposition to tariffs honestly adjusted on the basis of this rule. Furthermore, it is difficult, and in many cases impossible, to get accurate cost data in foreign countries. And in the end, the task of getting comparative costs for many articles year after year will probably prove beyond the powers of a governmental department, however well disposed. The record of the Interstate Commerce Commission with the valuation of railways, and that of the Treasury Department with the determination of invested capital under the excess profits tax, hold no encouragement for the belief that complicated economic questions of this kind can be expeditiously handled by the federal government. Finally the rule of equalizing costs of production affords no criterion by which the goods to which protection is to be granted shall be selected. Applied indiscriminately it would lead to such absurdities as high protective duties on tropical fruits or other things which might conceivably, but with great disadvantage, be produced in the United States.

Arguments of free traders. — The most effective arguments of free traders are those which aim to show either that protection does positive harm, or that it fails to accomplish its ends, or that those ends may be better accomplished without protection.

1. The logical premise of the theory of free trade resides in the principles of relative and *comparative costs* laid down on page 375. So long as there are relative, not necessarily absolute, differences in the cost of producing cheaply portable articles in various countries of the world, so long will there be international trade in those articles. Protective tariffs, therefore, merely divert capital and labor from intrinsically more productive to intrinsically less productive industries.

Temperate advocates of "freer trade" do not contend that this theory of relative comparative costs demonstrates the desirability of complete free trade under all circumstances. They admit that it may occasionally be profitable for a country to pay enormous bounties — this is what protection amounts to — for the development of certain industries. But they do contend that it establishes free trade as the general rule, every departure from which should require the most positive justification. More particularly, they hold that at the present time, after a century of industrial development, capital and labor should be freely allowed to take themselves to those employments in which they can reap the largest natural reward, a reward, that is to say, which is not artificially enhanced by subsidies wrung from the general body of consumers.

2. Moreover, it is clear that protection is not necessary to *diversify industry* in a country with such varied natural resources as the United States. The claims of the protectionists at this point may be tested by examining conditions within the wide borders of our own country, within which trade is wholly free. Now, if protection were necessary to foster infant industries and bring them to maturity, the manufacturing industries of this country would still be concentrated in the northern states of the Atlantic seaboard, where they first gained a foothold. But they have not been so confined. The early establishment of the textile industries in New England has not prevented their rapid development in the South. As pointed out in Chapter VII, the movement of industrial decentralization has been specially rapid in recent years. Internal free trade has not prevented the diversification of industry in the United States.

3. The inevitable spread of manufactures throughout the United States suggests the essential weakness of the *home market argument.* International trade expands just as inevitably as the

manufacturing area. It might be desirable to confine domestic producers to the more certain home market, which cannot be destroyed by tariff wars or international complications. But, as a matter of fact, home products will seek foreign markets, and the nation that sells abroad must buy abroad. Since the Civil War we have protected home producers with extremely high tariffs. But in the last fifty years our foreign trade has increased even more rapidly than the foreign trade of the rest of the world. Protective tariffs can cripple and harass and distract foreign trade, but they cannot permanently suppress it.

4. The protectionistic appeal to the *wage earner* seems particularly inconclusive. One reason for distrusting it is the double-faced way in which it is manipulated to suit the particular requirements of time and place. France wants protection in order to protect her low-paid workmen against the greater skill and efficiency of America's highly paid workers. The United States, on the other hand, must have protection in order to shield her highly paid employees from competition with the "pauper labor" of Europe. When first used in the United States the argument was that wages were already so high in this country as compared with England, that it was impossible for manufacturers in this country to pay the American rates and continue to compete with English manufacturers. Later, cause and effect, as related in the earlier syllogism, were reversed, and it was asserted that the high wages in this country were due to protection, from which it followed naturally that in order to raise wages higher, still more protection would have to be given.

We cannot arrive at any useful conclusions concerning wages, however, without considering the efficiency of labor and the productivity or favorableness of the environment in which the laborer works. The reason why American labor may receive higher wages and yet have nothing to fear from the competition of less highly paid workmen in Europe is found in the great productivity of American labor (though this greater productivity may depend more upon machinery and the natural wealth of this country than upon any innate technical superiority of the American workmen). The average American workman is in no more danger from the goods produced by the "pauper labor" of Europe than the highly paid workman of Montana is threatened by the products of his less well remunerated fellow-workmen of the

South. Labor competes with labor, not with commodities. Consequently, if it is really desired to protect labor, the logical way is to place a tax on imported labor, or to restrict immigration, as the United States has done. Indeed, if our tariff makers are sincerely anxious to benefit labor, they should, after rendering labor scarce and dear by restricting immigration, encourage the importation of such commodities as are consumed primarily by wage earners, in order that labor may secure an abundance of them cheaply.

No intelligent free trader would deny that there are now dependent upon protection many industries which pay high wages, nor that the sudden abolition of protection would throw many wage earners out of work. Their contention in the first case is merely that by taxation and by diverting capital and labor into naturally unproductive industries, protection lowers the general level of real wages. Their reply to the second point is that protection affects the industrial organism much as the alcoholic habit affects the human organism. To abandon the habit suddenly would certainly be painful, and possibly dangerous — but this is sufficient reason neither for increasing the dram nor delaying the gradual abandonment of the habit.

5. Turning to the *fiscal aspects* of the question, the free trader asserts that there is little or nothing to be said in favor of protection. The protective import duty, as compared with the import duty "for revenue only," is a poor tax. It is uncertain and perversely variable. Thus in 1913 the customs receipts of the United States amounted to about $319,000,000, or 44 per cent of the total ordinary receipts; but in 1918 when the war was at its height and revenue was sorely needed, the customs collections fell to about $183,000,000, less than 5 per cent of the total ordinary receipts. In 1936 the customs receipts came to $386,812,000. This represented nearly 8.4 per cent of the total ordinary receipts. In the great majority of cases the tax is borne by the home consumer. To the extent that it does not prevent importation the tax affords no protection; and in so far as it does protect, it yields no revenue to the government. If it raises the price of the article upon which it is levied, however, the increase constitutes a tax upon one class of society — the consumer — for the benefit of another class — the producers of the article. One authority, perhaps the foremost authority, upon the American tariff problem,

estimates that the tariff upon sugar imposed by the Payne-Aldrich Act of 1909 resulted in an annual tax upon American consumers of $101,000,000, of which $52,400,000 went into the treasury and $48,600,000 into the hands of sugar producers, principally resident in Hawaii, Puerto Rico, and Cuba.[1]

In answer to this charge that protection involves the taxation of one class for the benefit of another class, it is not sufficient to reply that everybody is free to take advantage of the subsidy and engage in a protected industry. Everybody is not free to establish a rolling mill or a silk factory or a tin-plate plant. Protection means the taxation of the less acute, the less enterprising, the less educated, and the poorer classes in order to create additional commercial opportunities for the abler, wealthier, and better-educated classes. This reverses the whole spirit of modern taxation, which contemplates — so far as it may be done without danger — the taxation of the rich for the assistance of the poor rather than the taxation of the poor for the benefit of the rich. It is not implied, of course, that protection involves class legislation of an unlawful character, or that taxes are collected from one class and handed over in cold cash to the members of another class. The point turns upon the relative ability of the various social classes to take advantage of artificial opportunities created by the state at enormous expense to all.

6. This brings us naturally to the *ethical criticism* of protection, the charge that by making the temporary prosperity of influential classes dependent upon government bounty, protection encourages those classes to exert a demoralizing pressure upon federal legislation. So great is the stake of private interests in tariff legislation, that systematic lobbying, log rolling, and corruption of the voter follow as inevitable consequences. The beneficiary of the tariff sacrifices his disinterested convictions concerning the general welfare, in order to preserve his own little subsidy from the government. Even if we admit what is probably true, that protection has resulted in comparatively little direct bribery of legislators, there seems no escape from the conclusion that it creates a kind of interest in legislation which is inherently dangerous and exceedingly difficult to keep within legitimate bounds. The weightier arguments for protection all imply that tariff laws should be scientifically adapted to secure the real national pur-

[1] F. W. Taussig, in the *Atlantic Monthly*, March, 1908, p. 342.

poses of protection. The impossibility of getting a "scientific tariff" under the political conditions that protection creates is possibly one of the strongest arguments against protection.

7. Finally, it is alleged that protection *fosters monopoly*. This contention forms the subject matter of a particularly heated dispute, the exact truth of which is difficult to determine. Certain modifications of the more extreme charge, however, are hardly open to question. Protectionists take it for granted that if foreign competition is shut off or lessened, home producers will still compete. Nevertheless, protective duties have frequently been levied upon the import of commodities whose manufacture in the United States had fallen under the substantial control of trusts. It is furthermore admitted that such trusts have frequently sold their products at lower prices in foreign countries than in the United States. In addition it is impossible to deny that the abolition of the duties, by giving foreign producers a chance to compete in this country, would tend to reduce prices, and thus give the American public a valuable ally in their struggle against monopoly. It is not true that the tariff has been "the mother of the trusts." Other and more important forces are mainly responsible for the development of the trust. But protective tariffs have at times deprived the American people of a strong weapon against the trusts.

Summary. — Most of the arguments enumerated above, both for and against protection, contain a measure of truth. Historically, protection was inevitable in the United States while industry was still in an early stage of development. During the wars which seriously threatened the stability of this country, many new industries sprang up which, upon the cessation of war and the resumption of international trade, were seriously threatened by foreign competition. Many of these industries were so suited to our soil and our people that only a short period of protection was needed to make them self-supporting. Under the circumstances, it would have been unwise to permit the sacrifice of the capital invested in these industries.

For the immediate future, it is plain, as a matter of practical politics, that the United States and most other nations of the world have adopted protection as a settled policy. On this account unusual interest attaches to *flexible or elastic tariffs* under which administrative bodies are authorized to change duties in

accordance with the general policy laid down by the legislature or the government. In Great Britain the Board of Trade and committees appointed by it are given wide powers to impose protective duties under the Safeguarding of Industries Act of 1921. In France, from the end of the World War until the close of the year 1922, an Interministerial Commission adjusted duties to meet fluctuations in international exchange due to currency depreciation. In the United States, under the Tariff Act of 1922, the President, acting on findings of the Tariff Commission, was given wide powers to change duties so as to equalize costs of production here and abroad. While he may not change specific duties or move an article from the free to the dutiable list, or *vice versa*, or change any *ad valorem* duty by more than 50 per cent, he may change classifications, increase or decrease *ad valorem* duties within the limits noted.

The elastic tariff is attractive in its aims and purposes. It promises in some degree to take the tariff out of politics and to put protection on a scientific basis. President Harding called these provisions of the Tariff Act of 1922 "the greatest contribution towards progress in tariff-making in a century." That eulogy has not been justified by experience. The elastic provisions have facilitated increases in duties, and where an increase is justified by the policy and standards of the tariff law, prompt action is of course a virtue. But in important instances in which a convincing case has been made for reduction of duties, no action has been taken. As administered, the law has been effectively elastic only in one direction. Moreover, the policy-formula upon which the whole program in this country rests — that of equalizing differences in costs of production — is regarded by most authorities as unsound in principle. Even if we concede the question of principle, the cost-of-production rule remains, for reasons stated above, a particularly difficult formula to apply in good faith.

It can be very easy, with executive prejudice and administrative delay and hesitation, to make tariff tinkering by commission far worse than tariff tinkering by Congress, which in the nature of things can hardly attempt general revisions of the tariff more than once every eight or ten years.

Looking beyond the immediate future, informed opinion is divided as to what may be expected in the control of the inter-

national exchange of goods. There are many who hope that the next half-century will record a strong movement towards freer trade. It is argued that the fundamental conditions which made high protection in this country inevitable have changed. Our one time under-nourished infant industries have for the most part attained a vigorous maturity, and in some instances have assumed the arrogance of monopoly. Our manufactures have become sufficiently diversified to remove all danger of industrial collapse in time of war; and, above all, we are rapidly entering the economic stage in which protection is a hindrance rather than a help. That is to say, we have built up an extensive export trade in manufactured articles; year by year raw materials constitute a larger proportion of our imports and a smaller proportion of our exports. This means that in the future our manufacturers will face a wall of tariff and quota restrictions erected by foreign nations against American goods. It is better that they be required to submit to the withdrawal of the protection they do not need than to incite foreign governments to retaliatory taxation upon goods imported from the United States. We believe that if this is done, the further development of our foreign trade will itself bring a wider appreciation of those fundamental principles which have led economists, with but few exceptions, to condemn protection as a permanent policy applicable to all stages of economic development.

At the World Economic Conference held under the auspices of the League of Nations in 1927, at which the United States was ably represented, a resolution was adopted announcing that "the time has come to put an end to the increase in tariffs and to move in the opposite direction." In accordance with this consensus of international opinion the League of Nations in 1929 took the initiative in calling an international conference for the conclusion of a tariff truce, and offered a draft convention [1] to serve as the basis of discussion at such a conference. But that conference was never convened, and from 1929 the actual course of events has definitely led in the opposite direction from the hopes and expectations expressed at Geneva in 1927.

In 1929 the total foreign trade of the United States amounted to over $9,600,000,000, equivalent to $80 per capita. A steady

[1] Series of League of Nations Publications II. *Economic and Financial, 1929*, II. 45. Geneva, 1929.

drop followed to a low of $2,900,000,000, or $24 per capita, in 1932. For 1935 the total value was $4,300,000,000, a per capita of $34.[1] Not only did total trade decrease in alarming proportion, but exports fell off faster than imports. During the decade following the war, United States exports exceeded imports by an annual average of over $1,000,000,000. In 1932, the excess of exports declined to $289,000,000, in 1935, to $236,000,000, and in 1936, exports and imports were practically in balance.[2]

The decline in foreign trade during the earlier depression years was in large part traceable to loss of international purchasing power due to the enormous accumulation of indebtedness during and after the war. The collapse of foreign trade faced many nations with the necessity of formulating an economic program of self-sufficiency. To do this they were obliged to follow a course directly opposite to that which had been applauded as the high road to both national and international well-being in 1929. Instead of the anticipated trend toward reciprocal trading, there was a frenzy of economic planning designed to develop and protect home production. In 1932, trade barriers were erected or strengthened in at least sixty-five countries, including every member of the League of Nations. The result of this stalemate in foreign trade was a veritable paralysis of industry. At least 30,000,000 industrial workers throughout the world were unemployed, according to the estimates of the International Labor Office. Roughly speaking, these unemployed with their families numbered not far short of the population of the United States. Obviously, conditions have not thus far been improved by economic nationalism. There is good reason to believe that this experiment will not long be continued. In the meantime, however, the miasma of indebtedness which rests so heavily upon the organism of specialized industry and interregional trade must be dispelled.

As the world's greatest creditor the United States will be obliged to take an active part in revitalizing world trade. This cannot be done by stimulating home production for foreign

[1] In reading these figures, note must be taken of the fact that, prior to 1933, estimates are expressed in standard gold dollars and later data are expressed in the depreciated Roosevelt paper dollar. Measures of the physical volume of trade will show a greater decline during the period.

[2] When imports of silver during 1935 and 1936 are included, the trade deficit of $250,000,000 appears.

markets and maintaining barriers against foreign goods. We also deceive ourselves if we accept the reasoning that, inasmuch as the usual volume of our exports in the past approximated only 10 per cent of our total product, and since, in any case, we can produce almost anything we may need, there is not much to be lost if foreigners do not like our tariffs and if foreign markets do not take our goods.

Table II shows a group of important industries, over 25 per cent of the total annual product of which normally finds its way

TABLE II. — EXPORTS OF LEADING COMMODITIES IN RELATION TO PRODUCTION

COMMODITIES	PERCENTAGE EXPORTED			3-YEAR AVERAGE
	1914	1929	1934	
Copper, refined	54.8%	36.2%	66.0%	51.7
Cotton [a]	62.6	54.8	58.3	58.6
Tobacco, leaf [b]	47.2	41.2	34.2	40.9
Agricultural implements and machinery	——	25.1	29.7	27.4
Office appliances	23.6	30.2	27.0 [c]	26.9
Refined mineral oil	37.9	19.6	11.0 [c]	22.8
Automobiles	4.5	12.0	11.0	9.2
Industrial machinery	——	13.3	9.0 [c]	11.6
Wheat [d]	19.7	17.9	5.1	14.9
Average exported	35.7%	27.8%	28.0%	

[a] Based on production figures and exports for the year ended July 31.
[b] Based on production figures for the preceding calendar year and exports for the year ended June 30.
[c] Data are for 1933.
[d] Exports include flour.

to foreign markets. Fourteen leading American products, in proportion varying from 15 to 55 per cent of their volume, must be sold in foreign markets. Approximately two million American families are dependent for their living upon receipts from goods sold in foreign markets, and many more are indirectly dependent upon the sale of American goods abroad.

In pre-war times, Great Britain was the world's creditor. For that reason England was a free-trade country. By that policy she enabled her debtors to meet their obligations with goods — the only way great international debts can be paid. British capital earned abroad was usually permitted to remain abroad as an investment. Thrifty Britons were content to collect the interest and dividends. Such an annual remittance from the United States was a customary part of British income from colonial days until 1914.

In 1912 the total foreign investment of American citizens was less than $2,000,000,000 and our foreign obligations were twice as much. By 1922, foreign private indebtedness owing to United States citizens amounted to $8,000,000,000, and at the close of 1930 it totaled fifteen and a half billions. The United States, having replaced Great Britain as the world's creditor nation, the Congress, in 1930, passed the Hawley-Smoot Bill — the highest protective measure in our history. Unlike Great Britain, we refused to admit the merchandise of our creditors, and today, in addition to $11,000,000,000 of war debts owing to the government, the people of this country are carrying foreign credits amounting to over $11,000,000,000. Unless our reception of foreign goods soon becomes more cordial, it is logical to conclude that the interest account on our private foreign investments will go the way of the war-debt obligations. That the principal sum may be repaid at any determinable date is not contemplated. That such payments, if made, must be accepted in the form of goods and services, cannot be denied. The insistence that past payments, amounting to $2,448,000,000, be made in cash undoubtedly was a potent cause in precipitating and intensifying the world depression. The approximate balancing of the American export-import account, in 1935 and 1936, is an encouraging symptom of a constructive trend in international financial affairs. This does not mean that exports should not be increased, but that selected imports should be permitted to increase at a greater rate than essential exports can be made to expand.

The Reciprocal Tariff Act of 1934. — The Reciprocal Tariff Act of 1934 in no way renounces the basic principles which have been incorporated in the American tariff policy from the beginning. It does, however, introduce a revised technique in the application of old principles — a different method, or policy, in the negotiation of commercial treaties with foreign countries.

Heretofore, in the application of the traditional *most-favored-nation* principle of our tariff system, we have always reserved, in our trade agreements, the right to fix our tariff rates to suit ourselves, but, under the terms of the treaty with any specific nation, we will accord to it the same treatment as may at any time be extended to any other nation. That is to say, we pledge equality of treatment, as respects tariffs and reception of goods, to all nations with which most-favored-nation treaties are negoti-

ated; provided, of course, that we receive similar privileges in respect of our exports to them.

Under the Act of 1934, the Executive branch of the federal government, presumably including the Tariff Commission acting in an advisory capacity, may negotiate commercial treaties with foreign nations. Considerable latitude is allowed in the arrangement of mutual concessions. Rates may be reduced as much as 50 per cent below those provided by the Hawley-Smoot Act, in return for reciprocal concessions. It is thus conceded that we must buy abroad if we continue to sell abroad. The provisions of the law seek to realize a proportionate increase in both imports and exports, but the flexibility of its application seems to make no provision for the adjustment of existing foreign financial obligations by the transfer of foreign goods to the United States.

Considerable progress has been shown in the negotiation of fifteen reciprocal treaties. The reaction to these has been sufficient to demonstrate that tariff rates may not readily be modified, no matter how socially desirable the change may be, without protest from economic groups whose individual fortunes are unfavorably affected by the change. If only non-competitive commodities were affected, there would be no complaint because no one's ox is gored. But, in general, only competitive articles are included in our tariff schedules; and when rates are eased on imports which enter the markets in direct competition with home products, bitter opposition is inevitable. Under the circumstances, one might suspect the motives of Congress in placing responsibility for the initiation and conclusion of tariff-lowering treaties with the Executive. Personal and political courage would appear to be the first essential of a successful use of this authority.

The possibility of a wise selection and equitable treatment of a sufficient number of items to substantially alleviate the objectionable features of our basic tariff laws is remote. The Reciprocal Tariff Act embodies a weak and inadequate compromise which can never be made operative by the negotiating of treaties with the assistance of a politically subservient commission.

Undoubtedly a general lowering of tariffs and the complete removal of certain trade barriers could be more easily and effectively accomplished by firm and direct legislation. Its application should be sufficiently flexible to permit gradual but profound

change from the present obsolete and unsound structure to a rational system which would serve to advance our national prosperity and contribute to international well-being and good-will.

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PART V

PUBLIC FINANCE

CHAPTER XXXVIII

PUBLIC EXPENDITURES

Nature of public finance.

Public finance deals with the revenues of government, including loans, their expenditures, and their administration. Public finance is part of economics, for it deals with the means for the satisfaction of human wants. Some of our wants we satisfy in one way, some in another; some we satisfy individually; some we satisfy through private associated effort; still others we satisfy through public collective effort, that is to say, through some governmental agency. The wants which we satisfy through governmental agency are not *all* so peculiar that they could not be satisfied either through private individual activity or private associated activity. Take the simple case of watering the streets. There are places in which the streets, if they are watered at all, are watered by individuals in their private capacity, each watering the street in front of his own house. There are other places in which the householders join together and pay someone to water the streets for them, doing this privately. There are still other cities in which the city government employs persons to water the streets and pays them from the proceeds of taxation.

There are many wants which are satisfied through governmental agency, which a civilized community will not allow us to satisfy privately. This is the case with those wants which are satisfied by means of the police and the courts. It is an important function of government in modern times to provide security of person and of property. This requires economic resources, just as does the satisfaction of the other wants not necessarily restricted to public collective effort, and public finance has to do with the provision of those resources.

Public finance is a part of economics because it deals with the satisfaction of human needs by the use of economic resources.

It is further a part of economics because it exerts a powerful and, at times, a dominating influence upon the production, distribution, and consumption of wealth. A tragic illustration of this is seen in the recent condition of a large part of the world, where a general public financial weakness caused by unbalanced budgets seriously impedes efforts toward economic recovery.

The increase of public expenditures.

The significance of public finance may be brought out by examination of, first, the enormous aggregate of public expenditures at the present time, and second, the rapid increase of these expenditures during the last hundred years. During the World War public expenditures reached totals the significance of which it is difficult for the mind to grasp. The World War cost, up to the close of the year 1919, was over $200,000,000,000, converting foreign currency at pre-war rates of exchange, or over $84,000,000,000 expressed in gold dollars with a purchasing power as of the year 1913. During December, 1918, our war expenditures averaged nearly $65,000,000 a day. It has been estimated that the war cost noted above represented about 15 per cent of the pre-war national wealth of the countries involved, and in the case of the Central Powers over 25 per cent.

The aggregate annual expenditure of all governmental agencies throughout the world is now well in excess of the aggregate annual income of some 130,000,000 people in the United States, which amounted to $53,440,000,000 in 1935. In the United States the net cost of government in 1935 on a per capita basis had increased 292 per cent since 1913. This increase during the period of a generation has been greater than the increase in population, and according to authorities greater than the increase of national wealth and income, although the latter conclusion is doubtful.

In seeking to ascertain the fundamental cause and meaning of the world-wide increase in public expenditures, it will be helpful to clear the ground of erroneous explanations which have been offered. In the first place, it is not due to the spread of democratic government. Governmental expenditures have been as great in countries where political democracy was not introduced as it has been in other countries in which democratic government prevailed. Neither can the increase be *wholly* explained by war and militarism. It has characterized peaceful countries such as

Switzerland, Holland, and Sweden, as well as Germany, Italy, France, and other countries in the budgets of which military expenditures have played a more important part. Nor has the increase been caused by any socialistic trend towards government ownership. Except for current apprehension concerning governmental competition with private business, past financial history contains ample warrant for the conclusion of the late Professor H. C. Adams that the facts "do not lend their support to the prevailing idea that government in these latter days is encroaching upon the domain of private initiative and that coercive association is expanding more rapidly than voluntary association." [1] Finally, the increase in public expenditures does not signify *increasing* extravagance or corruption. Quite the contrary. While modern government is characterized by waste, inefficiency, and extravagance, it is probably better than it has ever been before, even though there is ample room for further improvement.

The fundamental cause or meaning of this increase is twofold: on the one hand, provision and maintenance of national defenses is co-extensive with the well-nigh world-wide spirit of nationalism; on the other hand, an increasing *socialization of consumption.* The present period is one of increasing public co-operation. It appears more advantageous to satisfy certain wants, growing in number and significance, through public co-operation than through individual effort or private co-operation. This is the chief significance of the increasing governmental budget throughout the civilized world. Expenditures for promotion of the general welfare, so far as outlays of magnitude are concerned, belong to the nineteenth and twentieth centuries. The scope of the police power is expanding in the United States, and this means expansion both of public revenues and public expenditures. The discussion of public expenditures reveals, as do few other subjects, the nature of our civilization. Educational expenditures afford perhaps the best illustration of the general tendency. They run up into hundreds of millions in the modern nation, whereas before the nineteenth century they were relatively insignificant. Except in times of the most extraordinary drains upon public treasuries, the various divisions of government in this country spend more for education than for any other purpose or function.

[1] *Science of Finance*, H. Holt and Co., New York, 1924, p. 85.

National Defense.

The elementary mechanism of the national or central governments of the world is directed, in the first place, to the *national defenses.* In the second place, national governments are concerned with diplomacy and other controls of foreign relations, including trade and migration. The national budget must provide for the costs of these services. The political and economic policies of other nations quite as often determine the nature and costs of these services as do the actual desires of our own people.

In addition to these primary functions, the national authorities gradually assume a larger share and expense in other specific activities. The United States government has always fostered both individual and collective opportunity and well-being, but in recent years increasing attention and expenditures have been directed to internal affairs of the general welfare. Indeed, the federal government has absorbed and supplemented the former administrative functions of the states and local governmental units to an extent which some careful observers consider to be an alarming threat to our constitutional principle of "checks and balances." The fact remains, however, that, no matter what other contributions flow from the national exchequer, the government will continue to assume most, if not all, of the direct costs of preparedness for war. When war comes, financial costs of campaign and many contingent and indirect costs as well logically fall into the national budget. Large contingent costs continue for many years after the war. On the other hand, costs of socio-economic services, such as education, health, sanitation, recreation, protection of life and property, and the promotion of the fine arts, remain for the most part the responsibility of the states, counties, and municipal units. This divided financial responsibility of the national, state, and local governments has led to a rather common misuse of statistical data in the unreasonable contrast of the large expenditures of central governments for the purposes of "war and militarism" with their apparently modest contributions to the causes of peace.

The proper proportion between the total income of society and public expenditures.

Attempts have been made to give estimates of what is a large public expenditure, what a small expenditure, what is desirable,

undesirable, or even intolerable. One writer speaks of public expenditures of 16 per cent as average and 25 per cent as excessive. Another regards public expenditures which consume 15 per cent of the total annual wealth production as the upper limit. In American state practice, the fixing of a maximum direct tax rate is generally attempted. These limits are usually based on the valuation of property and not on income. State constitutions very frequently also limit state expenditures, as well as the expenditures of cities and other local units. For local purposes, we have roughly a tax span of 1 per cent to 3 per cent of the value of property. Total taxation of real property frequently runs in the United States from 20 per cent to 30 per cent of the net profits, and indeed not infrequently goes far beyond that.[1] The truth is that it is absolutely impossible to give any general answer to the question, "What is the proper proportion between the total income of society and public expenditures?" Variations in the wealth of a country have to be considered, and these mean much when the question of additional expenditure is raised. Variation in tax systems and the consequent distribution of the burden of taxation made a wide difference. In times of distress, more can be expended than on ordinary occasions. When the national life of the state is endangered in a war, expenditures will be incurred which would be impossible at any other time, simply because the people would not submit to the sacrifice for any other purpose.

But there are other points of view which go still deeper. Why do we spend money at all through the state? Obviously to satisfy needs. How much we should spend publicly depends upon what needs are satisfied publicly. We have to ask and answer the questions, "What position do these needs hold among our needs in general?" "Do they belong to our necessities or superfluities?" When we consider public expenditures in the broadest terms, we must take into account the amount of production which is carried on by the state. If the railways are state railways, a larger percentage of the expenditures and revenues of the country are public in character than would be the case if they were privately owned and operated. No comparison of expenditures of various countries can have any value if it does not take into account considerations of this kind.

[1] President's Conference on Home Finance and Home Building, Vol. II, *Home Finance and Taxation*, Washington, D. C., 1931, pp. 153–155.

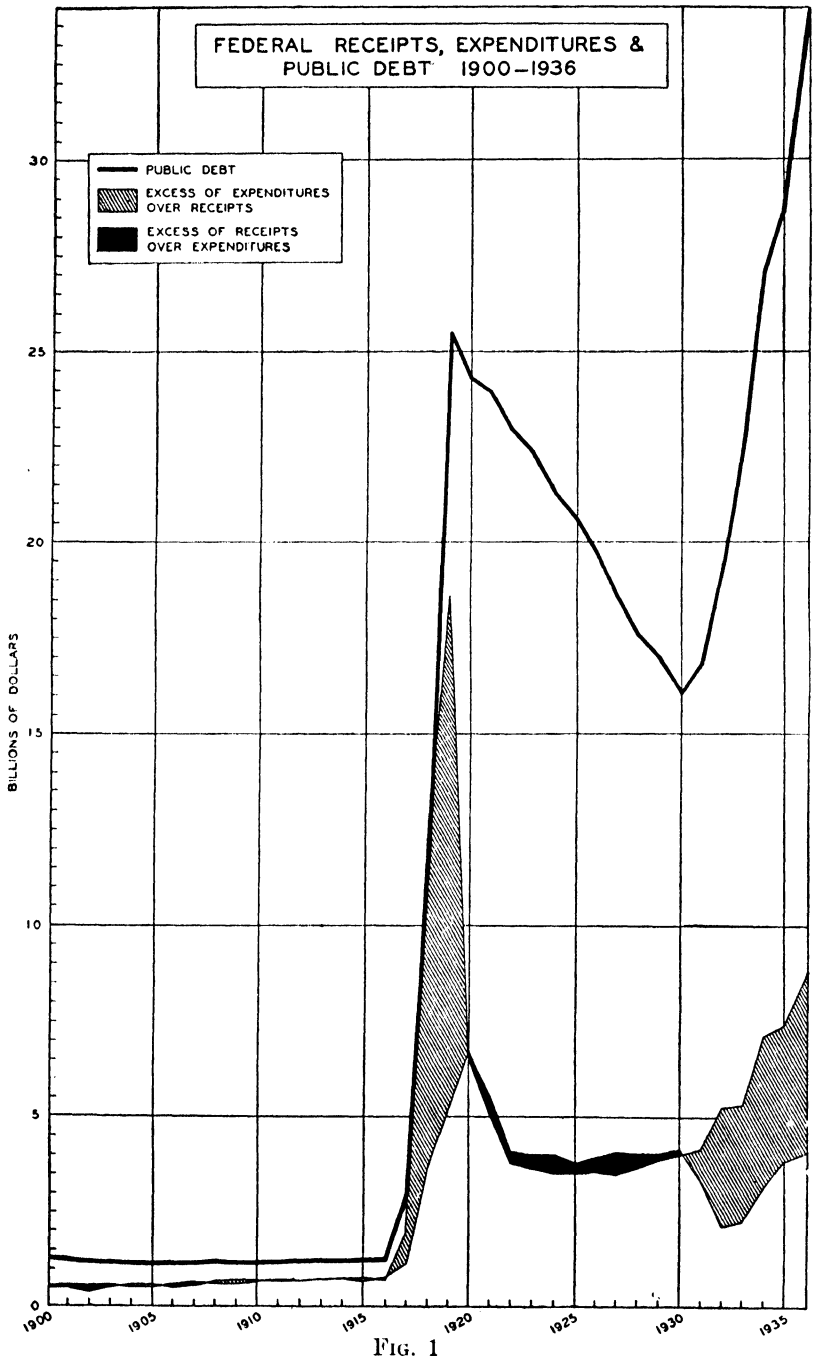

FEDERAL RECEIPTS, EXPENDITURES & PUBLIC DEBT 1900–1936
PUBLIC DEBT
EXCESS OF EXPENDITURES OVER RECEIPTS
EXCESS OF RECEIPTS OVER EXPENDITURES
BILLIONS OF DOLLARS
0
5
10
15
20
25
30
1900
1905
1910
1915
1920
1925
1930
1935

FIG. 1

In fact, except as a concrete historical problem, it is impossible to state how great the public expenditure should be. We are now in a position to understand why it is that the nations of the world are not ruined by expenditures which even a generation ago would have been thought crushing, and one hundred years ago would have been inconceivable. We satisfy our needs to an ever-increasing extent through public agencies. This finds expression in the *law of increasing public expenditures* formulated by Professor Adolf Wagner.

"*Comparisons between different countries and different periods show regularly among progressive nations an extension of public activities. This manifests itself extensively and intensively. The State and its subordinate political units continually undertake new functions, and they perform their duties, old and new, better and better. In this way, that is, through public agency, the needs of the population, especially their common needs, are satisfied to an increasing extent; and the public services for the satisfaction of needs continually improve in quality. The clear proof of this is given statistically in the increased demands made by the State and the subordinate political units.*" [1]

Extravagance, economy, and parsimony in public expenditures.

After a definition of economy in *Webster's New International Dictionary*, we find the following: "Economy, Frugality, Parsimony. Economy avoids all waste and extravagance, and applies money to the best advantage; frugality cuts off indulgences, and proceeds on a system of saving. The latter conveys the idea of not using or spending superfluously, and is opposed to lavishness or profusion. Frugality is usually applied to matters of consumption, and commonly points to simplicity of manners. Parsimony is frugality carried to an extreme, involving meanness of spirit and a sordid mode of living. Economy is a virtue and parsimony a vice."

We must have clear ideas as to which course of the three we shall follow, for it is scarcely to be taken for granted that we shall follow the course of extravagance. There is, however, danger of indifference as to the size of public expenditures, and extravagance may result therefrom. Sectionalism often results in extravagance, and this shows itself badly in the United States at times.

[1] *Grundlegung der politischen Oekonomie*, Leipzig, 1892, 3d ed., Vol. I, p. 893.

Whatever any state can secure from the federal treasury is often looked upon as so much clear gain. At the present time, an example is afforded of this in the struggles by states and cities to obtain increasingly larger shares of federal relief and work relief funds. This was clearly brought out in the discussions concerning the repayment, several decades ago, of the direct tax that had been paid by the states to the federal government. This tax has now been repaid, but many states gave agents large and extravagant sums to work for the refund. Sometimes sectionalism manifests itself even in cities. In one section of the city there may be vigorous efforts to secure money for itself without due regard for the general interest.

During the period from 1880 to 1895 in this country, federal taxes were laid very largely for other than revenue purposes, and there was no careful balancing over and against one another or probable revenues and probable expenditures, with the result that there was frequently a large surplus in the federal treasury. There never has been a time when it would not have been possible to have expended wisely the entire revenues of the federal government, *e.g.* educational expenditures might have been increased. But there was no demand for these expenditures strong enough to prevail, and the outlet was found along the lines of least resistance, or, perhaps it ought rather to be said, along the lines of greatest "pull." In the late eighties the great demand for Civil War pensions arose in part from the fact that the federal treasury had a surplus. This was used as an argument for extending liberal pensions to Civil War veterans. We may then lay it down as a general principle that *there is danger of extravagance whenever public revenues outrun felt needs.*

From 1919 to 1930 somewhat similar conditions prevailed, but under wise guidance the high surpluses were used to retire the public debt and reduce the burden of taxation. During the eleven years in question the federal debt was reduced over $10,000,000,000, only to climb to new heights under pressure of depression demands. The federal government in 1936 has completed its sixth successive deficit year. The gross accumulated deficit during this period is $19,441,000,000; the increase in the debt is $17,593,000,000. On June 30, 1936, the national debt had reached the all-time high peak of $33,778,543,493.73, an increase of 108 per cent in six years. In considering this

striking rise it is necessary to distinguish between general and emergency expenditures. The emergency expenditures necessitated by the depression, and the cost of prepayment of the bonus account for the tremendous deficit. Without these two factors, it is obvious that from the present trend in receipts the budget could now be balanced and provision made for the beginning of the retirement of the national debt.

In the domain of local government it is possible to limit taxes or expenditures, and American statute books are full of laws prescribing maximum rates for school, highway, and other tax levies. These laws have largely failed in the past because they were adjusted to our prevailing under-assessment of property, and it was easy to evade them by raising the assessment a little closer to the actual value. More recently, however, Colorado and several other states have adopted "tax limit laws" which work more effectively. Instead of limiting tax rates, the total tax levy or the total expenditures are limited to a certain increase, say 10 per cent, over the tax levy or total expenditures of the previous year; and some authority — usually the state tax commission — is empowered to raise the normal limit in "cases of emergency or urgent necessity." Some cases exist where a tax is restricted to a certain fixed amount, and at the present time there is much activity in the direction of imposing over-all tax rate limitations. Tax limit laws applied in an arbitrary way may cripple, and in some cases have crippled, municipal governments in necessary and desirable expansions of public activity; but when administered by a wise board of commissioners, authorized to modify the ordinary limit when necessary, they are capable of restraining harmfully rapid expansion of public expenditures.[1]

There is a tendency, especially wherever public spirit is not highly developed, to favor parsimony, and to regard that as the best administration which spends least, and the smallest tax as the best tax. This idea is particularly encouraged by those who looked upon government expenditures as external to the life of the people — as if they were expenditures for some outside person. This idea, indeed, may be traced back to monarchical government and to a time when royal courts consumed a large part of the public revenue. The smallest expenditure means the accomplish-

[1] See discussions of this subject in *State and Local Taxation*, Proceedings of the National Tax Association, Macmillan, 1908, Vol. VIII, pp. 368–390, and Vol. IX, pp. 452–473.

ment of the fewest purposes. Parsimony means meanness, and should never be the rule either of public or private financiering. Frugality is the rule when it is a necessity. Economy is the sound rule; and this means a broad and liberal policy and a husbanding of resources. The wise citizen judges any particular administration either in the nation or the state, not chiefly by the *amount* of public expenditures, but by the *results* of public expenditures, appreciating full well that increasing public expenditures are a normal condition in a sound and healthy society.

The development of public expenditures.

It is instructive to consider the historical order in which the objects of public expenditure appear. This order throws a strong light upon the evolution of industrial society and of civilization in general. It can be presented here only on the most general terms, and in these terms it is somewhat as follows: Expenditures for (1) external security; (2) security within the community; (3) promotion of material interests; (4) benevolence (transferred in part from the Church at the time of the Reformation); (5) education in its various phases; (6) labor.

In a general way the organization of the departments of the federal government corresponds with this order. In 1789, the Treasury, War, and State departments were organized, also the Department of Justice, Supreme Court, and the Navy Department; the Post Office Department was organized as a distinct department in 1829; the Department of the Interior was organized in 1849; the Department of Labor as a separate department (without representation in the Cabinet) in 1889; the Department of Agriculture as a separate department (with representation in the Cabinet) in 1889; the Department of Commerce and Labor (with representation in the Cabinet) in 1903. In 1913, Commerce and Labor were divided and given separate representation in the Cabinet.

In recent years the federal government has spent more than $5,000,000 annually "to promote the interests of labor." Even more interesting has been the appearance of appropriations in the national budgets to foster international agreements and arrangements in the interests of labor. In 1900, the International Association for Labor Legislation was formed, and its permanent Bureau was established at Basle, Switzerland, in 1901. As the

competition of labor and capital was international, it had, in the opinion of many careful observers, become necessary to safeguard the interests of labor by international agreements. Consequently, we find that this international association received subsidies from most European governments, and a small one from the United States through our federal Department of Labor. In 1905, an international treaty was entered into by Italy and France for the advancement of the interests of labor and for mutual protection of employers. After the war this international movement was officially recognized in the treaty of Versailles, and an International Labor Office is now financed by and conducted in close connection with the League of Nations.

When we compare modern times with ancient times, we find that an increasing proportion of the public expenditures are incurred for objects which directly benefit the people, and relatively a decreasing amount for objects in which they have comparatively little concern. This finds most striking exemplification in a comparison of the budget of France in 1789 with the expenditures for 1913, which we take merely as a typical modern peace budget. The expenditures for 1920 have been placed in comparison with those for 1913, to give some idea of the financial

TABLE I. — NATIONAL EXPENDITURES OF FRANCE: 1789 [1]

MINISTRY OR SERVICE	LIVRES[a]
Cost of collection and reimbursements (does not include cost of collecting taxes farmed out)	31,478,000
Consolidated debt — including portion made up of annuities	162,486,000
Interest, etc., on remaining portion of debt	80,527,000
Pensions	29,560,000
Royal family and princes	33,240,000
War	100,548,000
Marine and colonies	40,900,000
Foreign affairs	7,480,000
Justice	6,353,000
Interior	8,249,000
Financial administration	5,801,000
Public works, agriculture, and commerce	11,907,000
Public instruction and fine arts	1,227,000
Public worship	2,188,000
Total	521,944,000

[a] A livre is slightly — say 2 per cent — less than a pre-war franc.

[1] Necker's "Budget," May, 1789, rearranged by the author of the article in the *Dictionnaire des finances*.

effects of the World War. It will be observed, in comparing these budgets, that the French court consumed a very large proportion of the aggregate expenditures of 1789; and that of what remained a very large proportion was consumed by the public debt, the army and navy; and that for education and the promotion of general welfare the expenditure was relatively insignificant.

TABLE II. — NATIONAL EXPENDITURES OF FRANCE: 1913, 1920[1]

Including Ordinary, Extraordinary, and Special Accounts
(In Millions of Francs)

MINISTRY OR SERVICE	1913	1920
Debt Charge	958	11,269
Pensions[a]	326	859
War Pensions		4,909
Public Powers	20	38
Ministries		
Finances	57	1,779
Justice	61	148
Foreign Affairs	21	318
Interior	150	597
Army	1,262	5,459
Navy	553	1,009
Colonies	103	313
Worship	[b]	
Agriculture	55	179
Commerce	8	15
Industry	8	[c]
Public Works[d]	394	4,751
Education and Fine Arts	328	1,378
Pensions		1,058
Hygiene, etc.[e]		1,713
Labor	85	154
Cost of collecting revenues	627	[f]
Reimbursements, Restitutions, and non-valeurs	51	
Special Accounts		5,736
Algeria		[g]
Alsace-Lorraine		725
Liberated Regions[h]		15,709
Total	5,067	58,116

[a] The pre-war civil and military pensions known as *Dette viagère, i.e.* "life debt" or "life annuities."
[b] Discontinued in 1905.
[c] Included in Public Works.
[d] Includes Post Office and Telegraph and Telephone.
[e] Includes Hygiene, 393; Revictualling, 1,311; Stocks, 9.
[f] These totaled 2,709 in 1920, but the amount is distributed in the various accounts.
[g] Not given in statement. Presumably included in figures for ministries.
[h] Total cost of reconstruction was 16,484. This includes the 15,709 for the liberated regions and certain relatively small items incorporated in other accounts listed above.

[1] H. E. Fisk, *French Public Finance*, Banker's Trust Co., New York, 1922, p. 182.

The test of successful financial administration.

Professor Henry C. Adams formulated in a suggestive way what may be called the optimistic view of public expenditures. He classified expenditures into three great groups: protective, commercial, and developmental. "The protective functions of the state tend to decrease in their claims upon the social income. This is true because the protective functions of government minister to social development by repressing the unpropitious forces in society, thus giving the propitious forces an opportunity to operate. . . . The success of the repressive activities of the state tends to curtail the necessity of their exercise." With respect to the state's commercial functions, Professor Adams concluded that, because the receipts ordinarily balance or exceed the costs, this class of expenditures has "nothing to do with the theory of public expenditures. So far, however, as they are general in character it is probable that they will increase rather than decrease with social development." With respect to developmental expenditures, he found that "they tend constantly to increase with an increase of social intelligence and with the progress of social differentiation." Upon this analysis, Professor Adams found the test of successful administration "in the relative amounts which from time to time are assigned to the several chapters of the budget. As a rule, a possible exception being made for military expenditures, the older the protective function the less will be the percentage of aggregate expenditures assigned to it, while the newer the developmental function the greater will be the relative demand which it makes for the funds to be placed at its disposal." [1]

Judged by this test, the statistics of expenditures indicate that the financial management of American states and cities is hardly "successful." If we compare the newer and less densely populated sections of this country with the older and more thickly populated sections, it will be found that while the percentage of the total expenditures devoted to general government and the courts is lower in the latter, the proportionate expenditure for police, fire protection, and other miscellaneous protection is higher; that the percentage for health conservation, for drainage and sanitation is higher; but that the percentage for education is lower.

[1] H C. Adams, *op. cit.*, pp. 79–82.

Similar results emerge when we compare the expenditures of smaller with those of larger cities. As we pass from cities having from 30,000 to 50,000 population up to those having more than 500,000 population, we find that the proportionate expenditures for general government and police protection increase, while the proportionate expenditures for education decrease. Here apparently is a striking exception to the principle laid down by Professor Adams. And while the proportionate expenditures devoted to conservation of health, sanitation, charities, hospitals, and corrections increase slightly, it is doubtful whether this means greater service or greater need for service in these lines. In the case of fire protection and highways, however, there is a distinct and wholesome decrease in proportionate expenditure as we move from the smaller to the larger cities. Crowding population not only brings higher per capita expenditure, but it brings also, apparently, greater need for health precautions and police protection, and greater necessity for governmental activity in general. And so great is the drain of these special needs upon the resources of the community that a smaller and not a larger share of the expenditures is devoted to education. One conclusion in this connection is apparently certain. American state and local government, particularly city government, is not subject to the law of decreasing expenses. The larger the population to be governed, the higher the necessary cost of government per head.

Budget control, economy, and efficiency.

It is impossible in a single chapter even to touch upon all of the important phases of the subject of public expenditures, because it involves all of the questions which arise in the financing of modern government, and is as broad as the subject of government itself. Because of this truth, it is vitally necessary that the financial aspects of modern government be so presented that the average citizen, with the knowledge and amount of time at his command, can get an intelligent grasp upon the facts and issues involved.

Until quite recently in many jurisdictions, the fundamental facts have not even been available. Public accounts were so poorly kept and the statistics of expenditures and receipts published in such a confused and unscientific form, that no one but the expert could understand or helpfully discuss them. This

situation in recent years has been materially improved. The federal government has adopted a budget system; Congress has greatly simplified the legislative aspect of the problem by creating single appropriation committees in the House of Representatives and the Senate; and in recent years there has been an improvement in the methods of classification and presentation of the statistics of expenditures and receipts, as well as those of estimates and appropriations.

A number of state governments, many city governments, and an increasing proportion of county, town, and village governments have similarly adopted budgetary laws, or have been brought under such laws; and in increasing degree the statistics of past expenditures and proposed appropriations are being presented so that the newspapers and those citizens who are interested can, without undue trouble, ascertain what has been done and what is proposed for the immediate future.

It now becomes the duty of each citizen to formulate and exercise an intelligent judgment on proposed expenditures. In few departments of public life has there been so much superficial talk and so little solid thinking shown as in the discussion of public expenditures. Most of this discussion centers around economy, efficiency, and the reduction of taxes. Few purposes could be more worthy. Waste and corruption are grave evils in themselves, irrespective of their effects on the tax rate. But they become doubly offensive when they increase the heavy burden now resting upon the taxpayer. Every sound proposal to eliminate waste, therefore, deserves support.

But, in the long run, it will be realized that *if tax rates are to be materially reduced, it can only be achieved by decisions of policy.* Underpaid public officials neither achieve economies nor reduce tax rates. Elimination of petty waste, although desirable in every way, will not materially reduce tax rates. If tax rates are to be reduced, we must not only abstain from war, but also cut down expenditures on schools, ship subsidies, soldiers' bonuses, highway improvement, railway aid, and the like. The reduction of public expenditures is primarily a question of political policy, not a question of waste and graft. And we have little doubt what the general answer to such a question of policy will be. Government activities will not be abandoned; expenditures will not be reduced. Wisely or unwisely, as President Wilson said,

"The people of the United States do not wish to curtail the activities of government, they wish, rather to enlarge them; and with every enlargement, with the mere growth of the country itself, there must come, of course, the inevitable increase of expenses." [1]

Trend and purpose of federal expenditures.

The trend of federal expenditures since 1917 is indicated later (p. 949) in connection with an analysis of revenue collections and the course of the public debt. The rapid and extreme rise of expenditures already referred to above is but emphasized by the visual presentation. The World War raised our annual expenditures from a measurement expressed in millions to one of billions, and in no year since 1917 has it dropped below $3,500,000,000. The principal contributors to the level of federal expenditures are best illustrated in Table III, where we present an abbreviated schedule of expenditures for 1915, 1925, 1935, and 1936. There again is emphasized the heavy burden of wars upon the structure of federal finances, and it is to be pointed out that prior to the recent depression the large bulk of federal expenditures went toward financing past, present, or future wars. In 1915 the war items (the principal items of the budget) aggregated 66 per cent of the grand total, increasing to 78 per cent in 1925, and 81 per cent in 1935, when the enormous expenditures toward recovery and relief are deducted from the grand total.

The war on the depression which began early in the 1930's has changed considerably the complexion of federal expenditures, and in 1935 we find a total expenditure of some $7,376,000,000, of which total about 58 per cent was allocated to programs of recovery and relief. The expenditures in this field exceeded $4,250,000,000 for both the fiscal years of 1934 and 1935, and the estimated cost for 1936 still exceeds four billions of dollars. Federal assistance to agriculture represented about one-fifth of the totals for 1934 or 1935; direct federal relief agencies absorbed 43 per cent in 1934 and 55 per cent in 1935; public works excluding the Tennessee Valley program accounted for 15 per cent in 1934 and 24 per cent in 1935; and much smaller proportions were given in assistance to home owners and for other miscel-

[1] C. C. Plehn's *Introduction to Public Finance*, The Macmillan Co., New York, 1909, p. 25.

laneous items. The Reconstruction Finance Corporation drew over $500,000,000 net from the Federal Treasury in 1934 but carried a substantial credit for 1935. The industrial operations of the Tennessee Valley Authority cost the government some $50,000,000 during 1934 and 1935.

TABLE III. — SUMMARY OF FEDERAL EXPENDITURES: 1915, 1925, 1935, AND 1936
(In Thousands of Dollars)

PURPOSE	1915	PER CENT OF TOTAL	1925	PER CENT OF TOTAL	1935 EXCLUDING RECOVERY AND RELIEF	PER CENT OF TOTAL	1936 INCLUDING RECOVERY AND RELIEF	PER CENT OF TOTAL
Grand Total	$760,587	100	$3,529,643	100	$3,113,568	100	$8,879,798	100
Principal Items:								
Interest on Debt . .	22,903	3.01	881,807	24.98	820,926	26 37	749,397	8 4
Debt Retirement .	—	-	466,538	13 22	573,558	18.42	403,240	4 5
Veteran's Administration	164,388	21.61	702,496	19 90	605,573	19.45	675,982 [a]	7.6
							1,673,492 [b]	18.9
National Defense	314,809	41.39	708,030	20.06	533,597	17.14	764,439	8.6
Recovery and Relief	—	—	—	—	-	—	3,290,928	37.1
All Other	--	—	—	—	--	—	1,322,320	14.9

[a] Regular payments.
[b] Bonus payments.

State and local expenditures.

The aggregate annual gross governmental costs of state and local governments in the United States has increased from $2,227,000,000 in 1913 to $6,035,000,000 in 1923, and to $8,289,-000,000 in 1934. The aggregate increase in the two decades is 272 per cent. The state government expenditures increased 456 per cent, or from $383,000,000 in 1913 to $2,132,000,000 in 1934; and the total spending units climbed 234 per cent from $1,844,000,000 in 1913 to $6,157,000,000 in 1934.

In the expenditures by state governments it is usually the case that one-third of their costs are incurred for highway systems, a little over one-fourth for education, and on down the list of smaller items, including 7 or 8 per cent for debt retirement and interest. The local units of government spend about 30 per cent of their total for education, some 15 per cent for streets, about the same for interest and debt retirement, and the remaining 40 per cent for the general government costs of administration, protection to person and property, conservation of health, and social services.

(References follow Chapter XLI.)

CHAPTER XXXIX

TAXES

Revenues to meet the great public expenditures described in the preceding chapter may be raised by four general methods — by *taxation*, by *borrowing*, by *receipts from government property or business*, or by the *issue of paper money*.

Taxation

Constitutional limitations.

The fundamental character of the American revenue system is determined by those clauses of the federal constitution which provide that "direct taxes shall be apportioned among the several states . . . according to their respective numbers"; that "all duties, imposts, and excises shall be uniform throughout the United States"; and that "no state shall, without the consent of Congress, levy any imposts or duties on imports or exports, except what may be absolutely necessary for executing its inspection laws."

Just what the words *duties, imposts, excises, direct and indirect taxes* signify, as used in the constitution, has been a matter of considerable discussion. Ordinarily the word *duty* "means an indirect tax imposed upon the importation, exportation, or consumption of goods," being given "a broader meaning than *custom*, which is a duty imposed upon imports or exports," while "the term *impost* also signifies any tax, tribute, or duty, but it is seldom applied to any but indirect taxes. An *excise* duty is an inland impost levied upon articles of manufacture or sale, and also upon licenses to pursue certain trades or to deal in certain commodities."

All these differences turn largely upon the meaning of the words *direct* and *indirect* taxes. According to most economists direct taxes are taxes levied by the state upon those who are expected to bear their burden, while indirect taxes are supposed to be shifted to others. In the economic sense, therefore, poll taxes,

property, income, and inheritance taxes are usually called direct, while customs taxes and excise taxes are called indirect. But these terms are exceedingly vague because their meaning turns upon expectations concerning the shifting of taxes, and upon few subjects is there more uncertainty, both of fact and opinion.

This is graphically illustrated by the history of the federal income tax. During the Civil War, the federal government made important use of the income tax and collected over $370,000,000 from this source before the tax was discontinued in 1872. In 1894, in a period of financial emergency, the tax was reintroduced. Its constitutionality was promptly challenged, and in 1895 it was declared invalid by the Supreme Court as an unapportioned direct tax — or more accurately, because it acted so much like a direct tax in practice that it was invalid unless apportioned among the several states according to population. Notwithstanding this decision, what was in practical effect an income tax on corporations was introduced in 1909. It was justified by the Supreme Court as an excise tax; but the principal difference between this excise tax and an income tax appears to have been the verbal point that, instead of being levied directly *upon* income, it was imposed "with respect to the carrying on or doing business" by corporations and *measured* by their income. Later, in 1913, the sixteenth amendment to the Constitution was ratified, which provides: "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 or enumeration." But it is worthy of note that the Supreme Court, in a number of recent decisions, appears plainly to have intimated, in advance of a case specifically raising the point, that the Congress may not impose an income tax upon interest derived from state and municipal bonds, even though the sixteenth amendment gives the Congress "power to lay and collect taxes on incomes, *from whatever source derived. . . .*"

This probably means that the evil of the tax-exempt bond can be remedied only through the lengthy process of adopting another constitutional amendment. Unfortunately, it is doubtful whether an amendment so framed as to supply a real remedy would be ratified by the requisite number of states. The history of the federal income tax is a striking illustration of the dangers involved in the use of poorly defined economic terms and of the meta-

physical complexities introduced into tax legislation by constitutional limitations. Historically, such restrictions may have been necessary in the United States, but none can deny the enormous difficulties which they throw in the way of consistent and business-like legislation.

Taxes and quasi-taxes.

Brief reflection upon the nature of the services performed by governmental agencies will indicate two main classes: those imposed upon the consumer or purchaser who specially benefits by the service, and those — like the revenues devoted to the maintenance of education and public parks — imposed upon the tax-paying public generally, irrespective of the benefits conferred by the service. Moreover, we may discern a gradation from prohibitive to gratuity principles, with a general though not regular change in the degree and kind of compulsion exercised by the state in collecting the contribution. The state does not encourage the purchase of intoxicating liquors under the Gothenburg system in order that the revenue may be as large as possible, — it actually discourages their sale; one is not forced to marry, but if one marries one is compelled to take out a marriage license; and whether one uses the public schools or not, one must help pay for their maintenance. Finally, it will be noticed that as the element of compulsion increases, the public interest in the service changes, and generally, though not always, increases.

There are, then, three general principles of classification: (1) the assignability of the benefit of the service to an individual; (2) the degree of compulsion exercised by the state; (3) the degree and kind of public interest involved in the service. The general classes of governmental charges in the form of taxes or quasi-taxes may be segregated as follows:

Public prices are the more voluntary payments for the more commercial services made by persons who receive a special benefit from these services.

Fees are the less voluntary payments for services in which the public interest is less commercial in character, made by persons who receive a special benefit from the services.

Special assessments, in the United States, are compulsory contributions, "levied in proportion to the special benefits derived, to defray the cost of a specific improvement to property, undertaken in the public interest."

Taxes are compulsory contributions, exacted by public authority according to some general rule, without reference to the special benefits conferred by the services to whose maintenance the contributions are devoted.

The reader is to be warned that little regard is paid to these distinctions in everyday usage. The words "fees," "taxes," "licenses," "tariffs," "rates," "charges," and the like are hopelessly confused; and even census statisticians find it impossible in public accounts, as now kept, always to distinguish between prices, fees, rentals, licenses, and some kinds of taxes. The utility of the terms is in emphasizing the important truth that these great categories of public contributions must be distinguished and differently treated by the legislator and student, by whatever terms the different categories are designated.

Fees.

In the exercise of its most fundamental and general functions, the government frequently confers, in an incidental way, special benefits upon particular individuals. Thus the courts, whose function it is to administer justice in general, find that this function must be performed by deciding disputes between particular litigants, one of whom usually benefits by the decision. Now if the government is disposed to take advantage of the opportunity, it is evident that much revenue may be raised from the individuals who, in a more or less adventitious way, benefit from the government activities; and where the nation is poor or the people averse to taxation, much dependence will be placed upon fees. As wealth increases, however, and the government becomes more democratic, there is a growing disposition to support general functions by general contributions — taxes — and the relative importance of fees is likely to decline. On the other hand, there is no likelihood that fees will wholly disappear, as they exercise a wholesome influence in preventing waste. Court fees, for instance, would probably have been abolished before this, if they did not serve to prevent litigious persons from carrying their quarrels to the courts for settlements. Because of this restrictive and economical influence exercised by fees, they will undoubtedly retain a permanent place in the public revenues of even the more advanced and democratic states; and in the present condition of governmental finances, where general tax

sources are hard pressed to meet the costs of the more general services, certain serious suggestions have been made for a return of an improved fee system of charging for specific services.[1] A few governmental agencies, such as public-service commissions and the like, have quite successfully been placed on at least a semi-self-supporting basis.

During the colonial epoch the fee system was much abused in America, many offices being wholly maintained by fees which should have been abolished or supported by taxation. At the present time, however, the evils of the system arise not from the number or amount of fees, but from their connection with the salaries of certain public officials. Many officials are allowed to keep the fees which they collect in lieu of fixed salaries, and this practice results in serious evils. In the first place, some fee-paid offices, particularly those of sheriff and registrar of deeds in populous districts, have come to yield princely incomes, and the scramble for these rich offices constitute a prolific source of political corruption. In the second place, fee payment of public officials often impels them to an excessive and pernicious activity, in which their own interests and those of the commonwealth are placed in direct conflict. In a few states, for instance, prosecuting attorneys are paid so much per conviction, the fee increasing with the heinousness of the offense, while in many cities and villages the police force and city courts are supported partially by fees and fines. Under these circumstances, officials tend to bend their activity to the conviction of offenders, not to the prevention of crime and the reform of the criminal; they frequently set traps for persons who are likely to break the law, creating the temptation and the opportunity in order that they may increase their emoluments. Finally, the fee system has been a constant corrupter of justice as dispensed by justices of the peace in "the people's courts." In many states there are several justice's courts open to the plaintiff who desires to bring suit. In consequence, a disgraceful competition springs up, each justice endeavoring to swell his business and multiply his fees by constantly finding for the plaintiff.

The remedy is in the substitution, wherever possible, of regular salaries for fee stipends, and in the institution of methods of

[1] President's Conference on Home Building and Home Ownership, Vol. II, *Home Finance and Taxation*, Washington, D. C., 1931, p. 124.

accounting which will hold public officials to strict accountability for every fee collected. Fortunately, the movement of legislation, while slow and obstinately fought by some politicians, is in the right direction; and in almost every state public officials are being required to turn their fees into the general treasury and accept instead a fixed compensation.

Special assessments.

Where the operations of the government confer a special benefit upon some restricted group of individuals, those individuals are often led to exercise undue influence upon the government to secure that service, if the latter is supported by appropriations from the general funds. Log-rolling and graft are encouraged. On the other hand, if the only way the group of individuals can secure the service is by expenditure of the common funds, the government or legislature often delays the expenditure unduly for fear of criticism or because of unwise parsimony. Thus in cities where the method of special assessment is not used, it often happens that the opening of a street is delayed long after the time when it would be desirable for the citizens most interested, although perhaps the latter would be willing to defray the cost from their own pockets, were this permitted.

A recognition of these facts has led to a striking development, in the United States, of the method of special assessment. The special assessment has been approved by the American courts because it places at least a part of the cost of the service upon the beneficiaries of the service, — a rule which can sometimes, but not often, be violated without subjecting the government to excessive and corrupting private influence. It has appealed to the people, however, because it permits public improvements to go ahead at a pace which would be impossible if taxation were the only method of defraying the cost of the improvements. Needless to say, the special assessment has occasionally stimulated extravagance and premature development. Thus, in New Jersey, in the last quarter of the nineteenth century, several large cities were practically thrown into bankruptcy by undertaking ambitious public works, in which the special assessment played an important part. In New York, under the Tweed regime, the system of special assessments furnished an excuse for undertaking public works in which corruption flourished, and which probably

would never have been undertaken, had it been known in the beginning that their cost would have to be partially defrayed by taxation. The 1920's witnessed a tremendous over-development of most metropolitan areas in the United States and special assessment abuses played a heavy supporting role.

On the whole, however, the special assessment has been a notable success as a fiscal expedient, and has proved an important, if not an indispensable, factor in the development of American cities. Where its use has been followed by extravagance, speculation, or jobbery, these evils are to be attributed almost wholly to political corruption of the government, and only in a very small measure to the principle of the special assessment itself. Most of the evils, moreover, have arisen where the city government, or some department of the city government like that of public works, has been given the power to order the improvements against the will of the property owners involved, or where, as was the case in the cases cited above, assessments upon particular lots were permitted to exceed the value of the property. Special assessments should not be levied against the will of a majority of the property holders subject to assessment, except by a two-thirds or three-fourths vote of the municipal legislature, and in no case should the assessment exceed a minor portion of the value of the property against which the assessment is laid. Where these rules are observed, the special assessment is unlikely to lead either to premature development or hardship upon the property holder.

Taxes.

In times of peace taxes are by far the most important source of revenue, and the problems of taxation are in many respects the most important with which the public financier has to deal. These problems are of two varieties: those dealing with the nature of taxation in general, and those dealing with specific taxes. The general questions will be treated in this chapter and a later chapter will be given over to more specific problems of American federal, state, and local taxation.

Justice in taxation.

By far the most important lesson which the student of fiscal questions has to learn is the supreme necessity for tolerance and

breadth of view. The factors which condition justice or make for equity in taxation are exceedingly numerous; and the mistake most commonly made by superficial thinkers is to seize upon some one element of justice, build a philosophy upon that alone, and vigorously condemn everything that does not harmonize with their petty and bigoted little system. No rule less sweeping than that of the general welfare can serve as a safe guide in public finance.

1. Some writers go so far as wholly to deny the right of the State to take private property by taxation. These writers forget that there is no such thing as absolutely private property. As the State determines what shall be private property, so also it determines the conditions of its existence, and the most fundamental condition of private property is the obligation to contribute to the support of the State.

2. However, the State must exercise this power over private property in an equitable manner, or, as this maxim is ordinarily expressed, *taxation must be equal and uniform.* Thus, for example, the constitution of West Virginia provides that: "Taxation shall be equal and uniform throughout this state, and all property, real and personal, shall be taxed in proportion to its value, to be ascertained as directed by law." Now, if we examine the way in which these requirements of equality and uniformity have been interpreted in the administration of practical justice, we find that equality and uniformity have come to mean little more than this, that *taxation shall not be arbitrary, capricious, or plainly unreasonable.*

a. Everywhere the legislature is given a wide latitude in exempting property, so that institutions and industries which are regarded as of peculiar value to the people may be encouraged by freedom from taxation. Almost everywhere, poll taxes which impose an unequal burden upon the poor, license taxes which impose unequal obligations upon those who pay them, inheritance and corporation taxes which single out particular classes of society for unusual taxation, are sustained by the courts. *Justice in taxation, then, does not require rigid equality or narrow uniformity of treatment.*

b. Institutions which are socially harmful may be subject to peculiarly drastic taxation; that is to say, *justice may take into account sumptuary considerations.*

c. Old taxes, which would not be used if they were not already intrenched in the fiscal and social system, are permitted to endure; *justice takes cognizance of the fact that, other things being equal, an old tax is a good tax by very reason of its age.*

d. Indirect taxes which weigh more heavily upon the poor than the rich show no signs of disappearing; that is to say, *justice gives due weight to the productivity of a tax, its cheapness of collection, and convenience of payment, and balances these considerations against factors which we are accustomed to regard as more fundamentally ethical.*

e. Taxes may be employed to suppress state banks of issue, protect home manufactures, and in general to accomplish political and social ends other than the mere raising of revenue. Congress may not use taxation as a pretext to accomplish some purpose such as the repression of child labor, which it would be unconstitutional for Congress to legislate upon directly, and recently we have witnessed the Agricultural Adjustment Administration's program with its questionable processing taxes fall before the Supreme Court. The best agent of social or political reform is seldom found in general taxation. If there is an evil which needs eradication, the best way is to suppress it directly, if possible, rather than discourage it by taxation. *Tax administration is complicated enough solely within the field of revenue production without burdening it with regulatory measures, but this does not affect the general proposition that where taxation is an efficient remedy, or the only remedy, justice sanctions its employment.*

f. Finally, it is plain that, however we strive, nothing better than approximate justice can ever be secured in taxation. A system that frankly recognizes this truth and makes for rough justice, by the imposition of taxes which are simple, stable, convenient, inexpensive, and productive, is far better than one which attempts to secure exact justice through complex and delicate schemes of taxation which cannot be definitely or efficiently administered.

3. The theory of justice most widely accepted by American courts during the nineteenth century is expressed in the maxim that taxes should be proportioned to *benefits* derived. Like other rules of justice, this maxim contains elements of truth and elements of error. It is a fairly helpful guide, for instance, in dealing with public revenues other than taxes. Public prices,

fees, and special assessments should, as we have seen, be proportioned to benefits, unless there is strong reason for departing from the rule. And in the apportionment of taxation among districts or governmental sections, the rule still retains, and probably always will retain, a large measure of validity. Taxation, we say, must pertain to the district taxed, meaning by this that under ordinary circumstances it is not wise to tax District A for the benefit of District B; although there are important exceptions to this rule. But in the apportionment of taxes among the individuals of a given district, the rule has little or no place. This conclusion follows, if for no other reason, from our definition of the word "taxes," which we confine to contributions levied without reference to special benefits received, either because no special benefit can be assigned, or because (as in the case of free schools) we specifically desire to lift the cost of the service from the shoulders of some of those who specially benefit by the service. Moreover, in general, it is impracticable to determine what proportion of the general benefits of government accrues to particular individuals.

4. At the present time a great majority of economists agree that taxes should be apportioned according to *faculty* or *ability to pay*. It must be confessed that the rule is not very satisfactory. No simple measure of ability exists, and many taxes, which under a superficial examination seem to conform to the rule, such as the general property or income tax, are found upon closer examination to violate the rule in many ways. Despite all these defects, however, the ability principle has elements of great strength. It satisfies our sense of justice, in the first place, when explicit reasons cannot be given for departing from a general rule; and it expresses the ideal towards which we strive in voluntary contributions to the church or other voluntary joint enterprises of a social nature. In the second place, we can often ascertain with certainty that the rule is being violated, even though we cannot define its meaning positively, and hence it is capable of practical application in a negative way. We may therefore accept the rule in this sense, that unless other treatment is justified by the considerations cited in paragraph 2 above, or by analogous reasons, no tax which is plainly disproportional to the ability of the contributors should be employed.

5. Accepting the ability principle as the best rule for general

taxes as distinguished from the specific taxes noted in paragraph 2, we at once encounter the difficult question, how is ability to be measured? Different writers have recommended as the basis or measure of ability, income, outgo or consumption, and property. A little consideration will convince the reader that each of these measures is marked by minor defects. The consumption of the poor, for instance, is out of all proportion to their ability to bear the burdens of the State. Property, on the other hand, differs widely in its productiveness, and, moreover, many persons with a little property have large incomes, and therefore great ability to bear taxation. Incomes, similarly, differ in permanence and security, and equal incomes are called upon to support very unequal numbers of persons. Fortunately it is not imperative in practice to make a decision among these measures of ability. The necessities of fiscal administration make it imperative in actual practice to employ all three bases of taxation. *Property*, *consumption*, and *income* are all employed in the United States at the present time and will unquestionably continue to be employed for many generations.

Progressive taxation.

After we adopt any concrete measure of ability, we soon realize that it is only approximately correct, because we are immediately confronted with the question: Does ability increase in direct proportion or more rapidly than our measure of ability? In other words, shall taxes be laid in direct proportion to income, property, etc., or shall the rate be increased as the amount of income or property increases? The first method is called *proportional* taxation, the second *progressive* or *graduated*. If the rate diminishes as the income or property increases, we speak of it as *regressive taxation;* and if the rate increases faster than the income or property, but toward a fixed limit which it can never exceed, it is referred to as *degressive taxation*. The last kind of rating is of course a special variety of progressive taxation, and usually results from the combination of a nominally proportional rate with the exemption of a fixed sum from all incomes or assessed wealth. The American property tax is in principle a degressive tax, though it is regressive in practical effect.[1]

[1] See Herbert D. Simpson, *Tax Racket and Tax Reform in Chicago*, Institute for Economic Research, Inc., Chicago, 1930, p. 70.

From the theoretical standpoint our real knowledge upon this subject is exceedingly unsatisfactory. On the whole, the arguments of whose who approve progressive taxation are more convincing than those of its opponents, and a majority of economists at the present time agree in asserting that ability increases faster than income, property, or any common measure of ability. If we construe ability as ability to bear sacrifice (as John Stuart Mill and some other authorities do) and confine our attention solely to the consumer, there can be little doubt that progressive taxation is the means by which the least sacrifice will be visited upon the community as a whole.[1] This is a strong argument, because one of the chief immediate effects of taxation is to deprive persons of the necessaries, conveniences, and luxuries of life, while the maxim of the greatest good to the greatest number — or as it works out in taxation, the least sacrifice to the least number — is one of the most widely accepted rules of social conduct. Surveying the ability theory from the positive standpoint of ability to acquire or produce property, we find the testimony almost universal, that as the fortune or income increases, the ability to earn or produce more increases at an accelerating pace. "It is the first thousand that counts," in the language of the successful man who is telling the younger generation how he succeeded.

For generations in this country — indeed, until the second decade of the twentieth century — the American system of taxation was heavily regressive. Under the general property tax, the property of the rich was generally assessed at a smaller proportion of its true value than the property of the poor. And federal taxes, consisting almost wholly of customs and excise duties which are in the main shifted to the consumer, probably bore with more proportionate weight upon the small than upon the large consumer. The introduction of progressive taxes was, under such circumstances, justified as a means of neutralizing the regressivity of the old system.

A progressive income tax was adopted by the federal government in 1913, with rates rising to 7 per cent, and a progressive estate tax in 1916, with a maximum rate of 10 per cent. During the war the maximum rate of the estate tax was raised to 25 per cent, and the maximum rate of the income tax to 73 per cent.

[1] See T. N. Carver, *Essays in Social Justice*, Harvard University Press, Cambridge, 1915, pp. 401–406.

After the war both taxes were greatly reduced, but in 1935 the maximum rate upon net income was brought to 75 per cent through the surtax and one maximum rate upon estates was 20 per cent with an additional estate tax rising to 70 per cent. The problem of high progressive rates is fraught with complicated economic tendencies and unfortunately with great political power. The reduction of the rates following the war resulted in a striking increase in the amount of personal income returned for taxation. Very high progressive rates defeat their own ends. State and municipal bonds, and some of the federal bonds, are exempt from federal income taxation. By investing their money in these bonds and by various other devices, the richer taxpayers can avoid the tax. If a corporation earns $1,000,000 and does not distribute such earnings to its stockholders, the rate is but 15 per cent; but if an individual business man or lawyer earns an equal amount, he is taxed at an average rate much in excess of that amount. The thesis has been advanced that the practice of using surpluses for expansion rather than declaring large dividends in order to escape the high personal income tax rates, which practice was contributed to by the federal laws, was a major impetus to bringing on the last devastating depression. Now, with the federal tax upon surpluses so used there is much concern because the effect may be to retard the use of surpluses to promote recovery. In the former case the business trend was up the prosperity grade and the present situation is one where the surpluses might promote recovery. It would seem that the tax should have been applied prior to the depression and lifted in a hope for recovery. There is ample justification for a reasonable application of progressive rates, both in theory and for the practical purpose of counterbalancing the regressive effects of the excise and property taxes, but they must be applied with due regard to their practical limitations and effects.

The shifting of taxes.

Up to this point we have been speaking as if a tax must remain where it is originally placed. This we know is not always the case. Excise taxes, for instance, are usually levied with the expectation that they will be passed or *shifted* from the business man, who first pays them, to the consumer or some other person. The conditions which control the shifting of taxes must evidently

be considered — at least in a very general way — before we discuss the practical working of the American system of taxation.

The word "shifting" usually refers to the increase of price by which the original payer of the tax attempts to recoup himself. This increase of price is usually accompanied by collateral economic disturbances or dislocations — suggested by the phrase "repercussion of taxes," which is frequently employed in this connection — that are quite as important as the mere change in price. For instance, an excise tax (per unit of product) upon a monopoly may raise the price by as much or even more than the tax itself. But the monopolist nevertheless feels the burden of the tax in reduced profits. When we say that a tax is shifted, then, we do not imply that the original payer evades *all* the evil effects of the tax.

Mobility is the chief factor which controls shifting; and this in turn is largely dependent upon the inclusiveness or scope of the tax, and upon the existence of monopoly or differential advantages. Place a tax upon a person or thing that can easily move to a jurisdiction where such taxes are not imposed, and the tax is very likely to be escaped. Local taxes upon mortgage loans offer a good example of shifting. Such taxes are very likely to raise the interest rate by as much or a little more than the tax rate, the "little more" being explained by the trouble imposed upon the lender in looking after the tax and the risk that the tax rate will be increased. On the other hand, if mortgage lenders are constrained by ignorance or custom or the existence of particularly high rates in this district to keep on supplying the old amounts of loans, the tax will not be shifted. Unless the supply can be or is reduced by the tax, shifting will not ordinarily take place.

Naturally, therefore, the particular nature of the supply is of prime importance. We may illustrate by an excise tax per unit of product upon competitive industries of various kinds. If industries are subject to the law of constant expense, a fixed tax per unit of product will raise the price by just the amount of the tax, in theory. In industries subject to the law of increasing expense, however, the reduction of the supply caused by the tax somewhat reduces the expenses of production per unit exclusive of the tax, and on this account prices in such industries will increase by an amount less than the tax. In industries subject to the law

of diminishing expense, on the other hand, the price will be raised by an amount equal to the tax, plus an amount equal to the increased expense of production per unit caused by the limitation of supply. Mobility, as has been said, is the most important factor in this connection, and it may be restricted or destroyed in a variety of ways. Monopoly limits mobility, and, as we have already seen, the monopolist cannot shift a fixed tax or a proportional tax on net profits unless the tax is so high as to reduce monopoly profits below the amount that could be earned on the same investment in a competitive industry.

If the object of taxation be durable and the tax a special or exclusive one, the price of the object is likely to be reduced by an amount equal to the capitalized value of the tax. Prospective purchasers of land take into account the taxes that are likely to be levied upon it, capitalize these, and subtract their capitalized value from the amount which they would pay for the property if it were not liable to taxation. The apparent result of this *capitalization or amortization of taxes*, as the process is called, is to place the burden of an endless succession of taxes upon the original owner, and relieve subsequent purchasers of any real burden.

Many present-day followers of Henry George find in this principle of amortization at once a justification and a method of securing for society all "economic rent," using the term in the Ricardian sense. Under present conditions, they say, a man who buys land wholly escapes taxation upon it. Consequently, in order to make landowners pay as much as other people, we should have to increase the tax upon land by a rate equal to that paid by the average taxpayer as often — say every thirty years — as the land of the community changes holders. In this way the State could gradually and with justice absorb all "economic rent." [1]

As we have seen, the Ricardian theory of rent is open to grave criticism. The single tax has already been discussed in connection with that theory.[2] We may thus leave that point aside here and note that the reasoning described above is fallacious for three reasons: (1) What the prospective purchaser capitalizes and

[1] See the paper on "The Single Tax" by C. B. Fillebrown in *State and Local Taxation*, Proceedings of the National Tax Association, Vol. I, pp. 286–293.

[2] See Chap. XXII.

deducts is not the entire tax on the land, but the excess of that tax over similar taxes upon other investments open to him. A new purchaser of land does not "buy free of taxes," as is so often stated; what he does is to buy free of any excessive or abnormal tax burden. After the purchase he not only pays taxes in appearance, but in actual fact pays the average tax rate. (2) In so far as this program of the single taxers was anticipated and understood, it would visit the whole burden of the "reform" upon present owners, instead of being distributed over several generations. Subsequent purchasers would discount these periodic increases of the tax and pay to owners for their land only the present value of the rapidly vanishing income from land. Land would be valued as a terminable annuity. (3) This whole doctrine overlooks the inevitable consequence that, if "the selling value of land is an untaxed value" and if "the burden of a land tax cannot be made to survive a change of ownership," these facts would so increase the demand for land that the profits from its purchase and ownership would not exceed profits in other lines of investment. Given plenty of time, active competition, together with a knowledge of the facts of the situation, such inequalities of taxation are inevitably smoothed out by the natural movement of capital toward the taxless field or away from the field in which burdens are particularly severe.[1]

(*References follow Chapter XLI.*)

[1] The reader should become acquainted with a new departure of thought in regard to this subject developed by Dr. Herbert D. Simpson, who has advanced the principle that the conditions assumed in theorizing upon tax incidence and shifting do not exist for periods long enough to warrant reliance upon the prevailing theory about real estate taxes. See President's Conference on Home Building and Home Ownership, Volume II, *Home Finance and Taxation*, Washington, D. C., 1931, pp 107-109, 171-183.

CHAPTER XL

LOANS AND MISCELLANEOUS RECEIPTS

Public credit.

The principal use of the public credit is to meet extraordinary or irregular expenditures. In the case of a great calamity, such as the San Francisco fire, borrowing is obviously necessary and legitimate. Borrowing, also, is plainly warranted for the acquisition or construction of revenue-yielding property or business enterprises. It may be unwise on the part of a government to embark on commercial or quasi-commercial undertakings, but if the revenue obtainable promises to cover all costs, including interest on the capital invested, there is no fiscal objection to borrowing all or part of the capital.

At the other extreme are the ordinary expenditures of government, those which recur with sufficient regularity so that they can be foreseen and estimated in advance. If the state cannot meet these without borrowing, it is a confession that ordinary expenditures are in excess of the disposable surplus of the nation — a condition which means bankruptcy if continued long enough. Obviously, temporary deficits resulting from a failure of ordinary revenue to meet ordinary expenses should not be allowed to accumulate and then be funded as a permanent debt. This is a vice of boss-ridden government, which goes far to explain the rapid growth of American municipal indebtedness in the last half of the nineteenth century.

Midway between the extraordinary and the ordinary expenditures is a class represented by expenditures for school buildings, roads, court houses, and the like, which are not self-supporting but which, if paid for from the ordinary revenue of a single year, might cause a disturbing and perhaps injurious increase in the tax burden. Whether debt should be contracted to meet such expenditures can best be decided in particular cases; but if loans are raised for such purposes, provision should practically always

be made for their amortization or extinguishment, by the time the property wears out or becomes obsolescent, through sinking funds or serial maturities. Great mischief in state and local finances has resulted from the practice of issuing bonds maturing in 20, 30, or even 50 years to improve highways which have to be resurfaced in 5 or 10 years. And in states or large cities, where there are enough schools or highways to regularize capital expenditures for building or construction, *i.e.* where approximately the same aggregate outlay comes to be necessary each year, it is far better in every way to meet such capital costs out of ordinary revenue.

It is common in this country to place restrictions on the issue of local indebtedness, and the constitutions of a few states prohibit or similarly restrict the issue of state obligations. It is entirely proper to impose restrictions upon public indebtedness contracted for purposes which are fiscally non-productive. Such restrictions are most effective when they limit the *increase* of indebtedness, not its absolute amount. On the other hand, few if any restrictions should be placed upon borrowing for the purpose of acquiring income-yielding property, although important projects of this kind should be subject to public approval by referendum. For restrictions place states and cities at a disadvantage as compared with private corporations. They also operate to throw into the hands of private corporations enterprises which cannot be paid for out of one year's revenue and yet might advantageously be acquired by the public. The problem of government ownership should be decided on its merits and not be blocked by purely fiscal obstacles. Rigid limitations, which prevent municipalities from offsetting part of their debt by the value of water works, lighting plants, and other assets which yield monetary return, have no place in a scientific system of public finance.

While not absolutely required by theory, it is expedient as a matter of practical political psychology to make provision for the extinction of all public debts within a reasonable period. The *sinking fund* is the device most frequently used for this purpose. The war loans were so colossal and were floated under such extraordinary conditions, that a sinking fund was probably the only method of amortization that could have been employed. But in general, American experience indicates that the sinking fund is a cumbersome and ineffective method of accomplishing the

desired end. Bonds which automatically mature in recurring installments offer a much better device for the retirement of public debts, particularly the debts of the minor political subdivisions. And it is significant that the federal treasury's able handling of the national debt after the war had as its chief objective the refunding of the debt, so that the maturities would occur with approximate regularity year by year. The serial bond "can usually be placed at a lower rate of interest than a sinking fund obligation. It is free from most of the possibilities of political abuse and manipulation to which sinking funds are exposed. It substitutes a plain and certain for an uncertain or complicated liability; and it compels the administration which contracted the debt to begin its retirement immediately." [1]

Loans and taxes in war finance.

On our entrance into the World War there was much talk about "conscripting wealth" as we later conscripted men; and a number of economists earnestly contended that the entire cost of the war should be paid by taxation. At best this was a counsel of perfection. It is doubtful whether any great war could be financed without inflation. It is certain that no great war can be financed solely by taxation. This is an unfortunate truth, but it is a truth. The United States, in this respect, made the best record of any of the great nations engaged in the war, but of the special expenditures attributable to the war from our entrance to the close of the fiscal year 1920, only about 32 per cent was defrayed from special war taxes.[2] Taking all the belligerents and closing the accounts for most of them in the year 1919, Professor Seligman estimated that the total cost of the war amounted to more than $210,000,000,000; that the aggregate debt of these countries was increased by the war in the amount of $196,000,000,000 (from $28,000,000,000 before the war to $224,-

[1] "Report of the Committee on Increase of Public Expenditures," *Proceedings of the National Tax Association*, Vol. IV, p. 465.

[2] *Annual Report of the Secretary of the Treasury*, 1920, p. 105. The net cost of the war from April 6, 1917, to June 30, 1920, was estimated at $33,455,000,000 and the net war-tax receipts at $10,703,000,000. The net cost of the war, excluding loans to foreign governments, was estimated at $24,010,000,000, and on this basis 44.5 per cent of the special war expenses was covered by war taxes. If we assume that these foreign debts are worth 50 cents on the dollar, it follows that about 37 per cent of the special war expenditures was met by special war taxes. Up to June 30, 1928, the Treasury estimated the total cost of the World War at $36,360,232,063, crediting our foreign obligations at $7,470,000,000. (*Annual Report*, 1928, p. 564.)

000,000,000 at its close); and that accordingly "the war was conducted almost entirely on credit." [1]

It is not difficult to see why the public credit must be extensively used during the great war. It is the task of the Treasury to absorb or obtain control of all the savings of the nation, to the extent that they are not directly applied to war activities, and to augment these savings as much as possible both by encouraging thrift and by discouraging unnecessary consumption and production. This must be done without unduly repressing industries essential to the successful prosecution of the war. But taxation must be by general rule. It cannot be concentrated upon the non-essential industries and entirely lifted from the essential industries. Our sense of justice would prevent such a system of taxation, if it were practicable. And, looking to individual rather than to industrial taxpayers, it would be neither practicable nor just to take from each all the savings that he had. Savings — the purchasing power which the government must secure — are not distributed among individuals in such proportions as to make it possible to seize them by any rule of taxation which is practicable or even conceivable. Taxation is too rude and inelastic a device with which to tap dry every pool of spare purchasing power available among a hundred million people. And obviously, excessive taxation would not always inspire or persuade people to save. To draw out savings and persuade people to save anew, the persuasion of the loan must supplement the coercion of the tax — at least until our methods and machinery of taxation are improved beyond anything now even remotely practicable.

All this is true. But it is equally true that the United States erred, and that the nations of Europe erred grievously, in overstressing loans and understressing taxation during the World War. In Great Britain and the United States, the maximum rates of the income and excess-profits taxes were high enough, probably too high. We imposed income taxes exceeding 72 per cent, and a profits tax with a maximum rate of 80 per cent was used in both countries. But in the middle reaches or brackets of the income tax — *e.g.* for incomes from $5,000 to $50,000 a year — our rates were not on the average one-third as high as those of the British income tax; and neither nation taxed luxuries and semi-luxuries

[1] E. R. A. Seligman, "The Cost of the War and How It Was Met," *American Economic Review* (December, 1919), Vol. IX, No. 4, pp. 739–770.

as severely as would have been both practicable and right. The other belligerents in general used taxation more sparingly than Great Britain and the United States.

It is wise to stress taxation rather than loans in the financing of a great war, although this conclusion is often based upon an economic argument which is really not conclusive. With minor exceptions, the supplies and equipment used in war must be produced during the war. The physical burden of war cannot be "shared with future generations." This is true. But from this truth it is often argued that, as the physical burden of war must be borne by the generation which fights the war, it is the part of wisdom to let the same generation bear the money costs of the war and spare future generations the unnecessary encumbrance of a great war debt. This argument does not touch the practical reasons why loans must be employed. It forgets that the *apportionment* of the payment for war among industrial and individual taxpayers is the essential question, and it assumes — mistakenly — that by taxation the burden could be distributed with as little industrial derangement and as little injustice as it could be by a mixed system of loans and taxation.

Nevertheless, as a matter of emphasis, the economist is right who urges that taxes be stressed in preference to loans. Political experience shows that the nations which make greater use of taxes suffer less from inflation and emerge from the war with better credit, with a better system of taxation, and with less extravagant habits, than those nations which lean upon loans and minimize the use of taxes during war. A great war can be efficiently conducted on a policy of almost exclusive loan financiering. Germany and France afford signal illustrations of this truth. But their condition and experience after the war, when contrasted with those of Great Britain, Belgium, and the United States, offer equally striking illustrations of the folly of leaning too heavily upon public credit. Governments might theoretically be as extravagant and wasteful when their receipts come largely from taxes as when they come predominantly from loans, but in practice they are not. Individuals could hardly borrow from their banks (with the consequent inflation of prices due to the expansion of bank credit) as freely to pay taxes as they borrow on the security of war bonds. In practice, at any rate, they do not. After the war, conceivably, those nations which abstained from

taxation might start in as promptly and vigorously to levy the heavy taxes necessary to liquidate war claims and pay the heavy costs of reconstruction as those nations which developed during the war effective machinery of new taxation — but in practice they do not. War patriotism, war profits, and war extravagance are very real facts. They should be utilized to the uttermost by the tax-gatherer while they are in being.

As a matter of economic analysis, the subject under discussion resolves itself in the end, largely but not wholly, into the questions: Who during the war will pay the taxes? (if the tax policy be followed), and, Who after the war will pay the war debt, interest and principal? (if the loan policy be used). In short, is the tax system enforced during the war likely to be superior or inferior to that employed after the war? No answer applicable to all times and nations can be given to these questions. But if the changes in the American tax system since the World War can be safely used as the basis for reply, these answers must be given: The rates and the proportionate yield of direct taxes levied in accordance with ability to pay will be higher or greater during the war than after the war; the classes subject to the heavier taxes will pay more promptly and freely, with less evasion and less avoidance, during the war than after the war; internal taxes on luxuries and semi-luxuries will be heavier during the war than after the war, but protective customs duties will be heavier after than during the war; and the entire administration of the tax system will be more effective during the war than after its cessation.[1] However, the post-war period is "young yet." Moreover the issues are now complicated by the extenuating circumstances of the depression which are leaving such a mark upon governmental finances.

Form of the public debt.

The form of the public debt is both an interesting and important consideration. The government is a great merchandiser of credit, and in this capacity must maintain a variety of wares, "dress its windows," and consult the tastes of its customers. It is not above utilizing the device of a class price. The postal savings deposits

[1] These answers should not be interpreted as expressing disapproval of the many changes which have been made in federal taxes since the close of the war. On the contrary, the authors believe that many of these changes have been justifiable. But war time is the time to pay war bills, so far as is humanly possible.

draw interest of only 2 per cent per annum, although these deposits may be converted into postal-savings bonds bearing interest at 2½ per cent. For more enlightened savers, it offers treasury certificates or bonds which bear the market rate of interest.

Special importance attaches to the maturities of the debt. The United States adheres to the policy of paying off its debt, and does not issue perpetual or irredeemable bonds. Its long-dated debt is usually optional, one important issue, for illustration, being 25–30 year bonds redeemable at the option of the government at any time between October 15, 1947, and October 15, 1952. Since the beginning of the war, large use has been made of short-dated debt. Tax certificates maturing in three months; treasury certificates maturing in three months, six months, and one year; and treasury notes maturing in two, three, four, and five years, have been issued in enormous volume. During the war they were used to anticipate the huge issues of long-term Liberty Bonds, the certificates being accepted in payment for the bonds when the latter were offered. Liberty bonds are accepted in payment of federal estate taxes, and both certificates and notes are accepted in payment of federal income and profits taxes. Tax certificates are regularly issued a little in advance of the dates upon which income taxes are due, in order that so far as possible income taxes may be paid with such certificates and the strain upon the banks for cash thereby relieved. Since the war, the Treasury has followed a policy of "short-term refunding," by which the public debt, as it falls due, is refunded in the form of short-term notes of early maturity in amounts not too large to be easily handled as they fall due. The purpose of this policy is to avoid the perpetuation of the debt, "keep the finances clean, assure the gradual liquidation of the debt, and put the nation in shape to meet future emergencies. It depends above all else, however, on the maintenance of strict economy in government expenditure and a heavy surplus of receipts over expenditures each year." [1]

Loans and inflation.

The extensive use of short-term obligations by the Treasury, during and after the war, has been severely criticized on the

[1] *Annual Report of the Secretary of the Treasury*, 1922, p. 9.

ground that their constant renewal deranges commercial credits and leads to inflation. Most of the certificates and notes are taken by the banks. Since the establishment of the federal reserve system, the banks frequently had ample surplus reserves, and the possibility of rediscounting this government paper with the federal reserve banks makes it possible to use these reserves freely for the purchase of short-term treasury obligations. They are being bought, it is asserted, not with savings but with manufactured bank credit. The government, it is asserted, ought to have made greater use of the long-term bond during and immediately after the war, selling such bonds continuously "over the counter," if it were necessary, as it was, to obtain fresh credit advances every two or three weeks. Bonds, as opposed to certificates, it is contended, are more likely to be absorbed by genuine investors, and in this way to connote or cause that saving which counteracts the inflationistic influence of credit issues. But bonds, as well as certificates, lead to inflation, especially where the marketing of them is helped and stimulated by the banks. A good example of this is the method which the government has used to finance its deficit during the depression years. When the government offers a new bond or note issue it is mostly subscribed for by the banks for their own investment account. Most of them do not pay for the new securities by drawing checks for them against their own funds. Instead of paying for them in money they simply enter the bonds on their books as new assets and at the same time they enter the amount as a new deposit credit against which the government may draw checks. The funds that have been borrowed by this method consist of new money that is added to that already in existence.

Methods of stimulating the sale of government obligations by making bank credit available at low rates were permitted and encouraged in some of the belligerent countries during or immediately after the war. In this country we facilitated the process by encouraging banks to lend on the bonds at interest rates not exceeding those borne by the bonds, by exempting the promissory notes used in such loans from the ordinary stamp tax, by holding the rediscount rate on government paper below the discount rate on commercial paper, and by exempting the government bonds in large part by taxation. A device of "payment by credit" was also employed in this country, whereby the banks in sub-

stance gave a credit to the federal government on their books in payment for the bonds, treating the amount subscribed as a government deposit on which the bank paid interest at 2 per cent, but receiving from 3¼ to 4¾ per cent from the government on such bonds.

By these methods the colossal war loans were floated without an important hitch and without excessive interference with commercial credits. But they resulted in heavy purchases of bonds with bank credit, especially manufactured for that purpose. Whether this process was necessary or not has been widely debated. Certainly it was preferable to the direct issue of government paper money.

Receipts from government ownership.

Misapprehension is rife concerning the financial aspects of government ownership. Conservative persons often write or speak as if government ownership were sure to involve a financial loss to the government. At the other extreme are many persons who believe that large revenues may be derived from this source. Experience shows that both views are wrong, and normally the receipts from government property and business just about balance the expenditures. The government's expenditures and receipts bulk large in public accounts, and in some countries, such as India, they are of substantial importance. But on the whole government industry just about pays its own way.

For a period after the war, the federal government offered an apparent exception to this rule. As the result of the war, it was left with a vast quantity of supplies and securities, and in some years very large receipts were received from this source. In 1922, for instance, government property and investments yielded over $500,000. Sales of government property yielded $116,000,000; the Panama Canal produced nearly $12,000,000; the government's share of the earnings of the federal reserve bank amounted to nearly $60,000,000; interest and discount, amounting to $57,500,000, were collected; and investments in the amount of $121,000,000 were repaid. Some of these receipts will continue and probably increase. Thus in 1935 sales of services yielded over $28,000,000; but sales of products amounted to less than $2,400, 000. But the situation of the federal government is abnormal, and the ordinary rule is that government property and

business cannot be expected to make a substantial net contribution to the Treasury. Moreover the federal government would have to conduct many profitable enterprises to counteract its Post Office Department deficit which was $64,000,000 in 1935 and is estimated to be $85,000,000 for 1936.

The public domain.

By domains we usually mean agricultural and mineral land and forests owned by the state and managed in the interest of the public revenue, although we might logically include within the term the streets and other public property of cities, with all the valuable franchises and privileges which go with them. The direct revenue from this source in the United States is not large, and if account be taken of the cost of the public domain and the expense which it has entailed, the net earnings would probably be a minus quantity.

Until a comparatively recent date this was not the case. In early feudal times the king had large estates of his own from the produce of which the government was largely supported, and although he had certain military rights over his subjects, he had very limited rights over their property. Later, the king became a public rather than a private person, and a large part of the crown estate became the property of the public; but even then taxation was relatively unimportant, and the state relied principally in times of peace upon fines, escheats, fees, crown prerogatives (certain dues which the king was entitled to collect as of his own right), and upon the proceeds of the public domain. Blackstone, the great English jurist, writing in 1765, classified taxation among the "extraordinary" revenues of the sovereign; and in some of the German principalities the government was enabled to get along without taxation in times of peace, down to the close of the eighteenth century. Real democracy not yet having been achieved, the people distrusted taxation and resented its imposition, while the sovereign wisely clung to that species of revenue which was independent of the people's caprice. "The public domains," said Bodin, the great political philosopher of France in the latter part of the sixteenth century, "should be holy, sacred, and inalienable either by grant or by prescription."

But as democracy developed and the representatives of the people gained control of the finances, a new policy was everywhere

adopted. If state management was uneconomical and wasteful, and if the government could obtain all the revenue needed by taxation, why preserve the wasteful methods of management? Why not turn public property into private property, to be developed and multiplied through the vitalizing force of individual self-interest? *The great truth was realized that the property of individuals, when subject to taxation and regulation, is no less part of the great patrimony of the state than those lands and forests whose title is retained by the government itself.* This doctrine was generally accepted by the greater countries of the world during the eighteenth century, so that Adam Smith, in defending it in 1776, was able to write that "there is not at present, in Europe, any civilized state of any kind which derives the greater part of its public revenue from the rent of lands which are the property of the state." This philosophy was dominant when our national government was created in 1789 and has guided our national policy ever since.

By exploration and occupancy, war, and various cessions, the federal government acquired after the Revolutionary War a magnificent domain of 2,252,244 square miles. During the greater part of the nineteenth century, these lands were steadily alienated, in accordance with the accepted national policy of expediting the economic development of the country. In the early years of the republic, large revenues were expected from the sale of public land; land was sold in large blocks even though it went to speculators. This was followed by an attempt to sell small holdings to actual settlers, the credit system being used with disastrous results; later (1830) the pre-emption policy was introduced by which *bona fide* home-makers were given certain advantages in purchase; and finally came the Homestead Act of 1862 and other laws by which actual settlers were enabled to obtain homesteads practically free of cost. In addition, our land was freely used as bounties to hasten the development of the country; and enormous grants were made to the states and to corporations for the endowment of education and the subsidization of canal, railway, and other internal improvements.

Our general policy was to give the land away or sell it at low prices in small holdings to actual settlers. In the case of agricultural lands, this policy worked reasonably well so long as the commercial value of the land was not disproportionate to the

expense and sacrifice involved in the work of clearing and settling; but when good agricultural land became scarce, its distribution at less than market value became demoralizing, for much the same reason that a lottery is demoralizing.

In the case of forest land, it became apparent in the last quarter of the nineteenth century that the policy of alienation, whether sound or unsound previously, was then a mistake. Alienation and private ownership were not producing that careful management which conduces to the greatest use and the greatest social good in the long run. Beginning in 1891, forest reserves were established, and in such reserves, from time to time, practically all of the valuable timberland remaining to the government has been placed. Instead of selling forest land, the government is now permitting timber to be cut on its land in such a way as to preserve the forests.

In the case of mineral land, our experience seems to show that the policy of disposing of public land in small holdings free of cost, or at prices far below their value, is demoralizing and wasteful. Broadly speaking, the policy of alienation in small holdings conflicts with the requirements and necessities of modern land utilization. In disposing of our lands, we have tried to balk the corporation and the speculator in order to subsidize the settler and home builder. For instance, we have made the recipients of homesteads and mineral claims swear that they are not acting as agents "for any person, corporation, or syndicate," or "in collusion with any person, corporation, or syndicate, to give them the benefit of the land entered," and that the land is not being secured "for the purpose of speculation." Yet for purposes of grazing and in less degree for mining and lumbering, modern industrial methods require that large tracts of land shall be worked together, and that individual claims shall be consolidated. The core of the difficulty was well described by Theodore Roosevelt when President in these words: "It is a scandal to maintain laws which sound well but which make fraud the key without which great natural resources must remain closed. The law should give individuals and corporations, under proper government regulation and control, the right to work bodies of coal lands large enough for profitable development." And he thereafter recommended laws to authorize the leasing, instead of the complete alienation, of coal, oil, and gas rights, as well as grazing rights on the public

domain. In recent years, increasing use of leasing arrangements has been made both by the federal and the state governments; and in a few decades, these leases will probably yield handsome revenues to some of the states which have adopted them.

In a rough way, our land policy has been a success, as is shown by the almost feverish development of the country in the last century. But in some respects it has signally failed. In the first place, it has not paid: more money has been spent for the purchase, survey, and care of the public lands than has been received from their sale and lease. In the second place, certain kinds of lands, as we have shown, should not have been alienated and they now present the government with part of the vast problem which it is attempting to cope with through the Resettlement Administration. And in the third place, our efforts to give land to the landless have bred corruption, fostered speculation, and endowed private monopoly with public wealth. One has only to recall the convictions of public officers for land frauds, and to read the report of the Public Lands Commission — to which specific reference is given at the end of the chapter — to appreciate the truth of these charges.

Our conclusion may be formulated in the following general rule: only those lands should be wholly alienated whose use and development under private ownership lead neither to monopoly nor to unnecessary exhaustion and waste. Or, in more concrete terms (remembering that the maxim applies only to those lands left to the government, and to the majority of cases, not to every specific case), the rule for agricultural lands should be private ownership and management, for forest lands state ownership and management, for mining and grazing lands state ownership and private management under a lease or royalty system, by which the state shall secure a share of the profits and retain a considerable measure of regulation and control. In disposing of its lands the government should endeavor to charge value received, as gifts of valuable land, or sales at inelastic schedules or prices which place an extreme valuation upon some tracts and an utterly inadequate valuation upon others, lead to speculation and monopoly, having most of the demoralizing features of a public lottery in which the prizes are distributed partly by chance and partly in accordance with the cunning and unscrupulousness of the participators.

Public industries.

In the beginning, let us briefly pass in review the principal classes of industrial enterprise in which the modern state engages for the satisfaction of other than state wants; because, obviously, we are not concerned with enterprises like the government printing office, the government navy yards, and in general, those incidental industries whose products the government consumes but does not regularly sell.

1. First, we find states like Switzerland monopolizing the manufacture of alcohol and certain alcoholic beverages, Japan monopolizing the opium traffic in Formosa, or commonwealths like Ohio engaging in the retail distribution of intoxicating beverages. The purpose of the state in engaging in such industries is primarily sumptuary; it is desired perhaps to regulate the traffic almost to the point of suppression. Ordinarily a good revenue could be secured, but revenue is a very secondary consideration. Prices will be placed above the level of highest net profit, and not improbably the ideal of regulating consumption will be so vigorously pursued that profits will disappear altogether.

2. Secondly, we have the group of so-called "fiscal monopolies." France, for instance, monopolizes the manufacture of matches, cigarettes, and tobacco in general; Japan has recently gone farther than any other country in the creation of fiscal monopolies; while many foreign countries maintain public lotteries — as did many of the American colonies during the eighteenth century. The primary object of the state in undertaking these enterprises is public revenue, gain; and naturally a monopoly price is charged, the price which will yield the greatest net revenue.

3. Next, we have a group of enterprises consisting principally of so-called "natural monopolies," which the state undertakes not for suppression, not for profit, but primarily for regulation — to regulate the quality of the product, as in the case of water; to maintain effectively what have been called "equitable conditions for the prosecution of private business," as in the case of railways; to prevent monopolistic extortion and corporate abuse, as in the case of lighting companies, the post office, the telegraph, and the telephone; or to prevent crime and preserve intact the foundations of commercial prosperity, as in the monopoly of coinage. The charges here are ordinarily adjusted to either the "revenue" or the "cost" principle, that is to say, the

state will either aim to make a fair business profit such as is secured in competitive private enterprises, or it will endeavor approximately to meet expenses by adjusting its charges to the cost of production. England, France, and Germany, in ordinary years, obtain handsome revenues from their respective postal departments, but in the United States the accounts of the Post Office Department usually show a deficit.

4. Finally, we have a large and heterogeneous group of industries which are maintained principally for service, for their educational and developmental influence, not primarily for regulation, and not at all for profit, but "for the public good." We include here not only schools and educational institutions of all kinds, but roads and canals; the savings banks and public pawn shops maintained in several countries of continental Europe; workingmen's insurance; and model manufacturing establishments such as France maintains for the production of tapestries and fine porcelains. In this group charges will sink to a minimum, and in some lines of enterprise, such as education, practically disappear. Revenue here is not only a minor, but is almost a negligible, consideration.

Although we cannot decide in a general way what theory of charges should be followed in particular public industries, it is possible to lay down general rules which will assist us in reaching a correct conclusion in specific cases. Assuming that the industry in question supplies a service rather than a commodity, merely to save words in the discussion, we must first of all inquire: (1) Is the service helpful or harmful in its net social effect? According as it is one or the other, we will incline in our charges toward the gratuity principle of the prohibitive principle. If harmful, however, it is plain that we must not make the charges high enough to encourage smuggling or illicit manufacture. If helpful, on the other hand, we cannot at once decide upon the gratuity principle, but must inquire further: (2) How generally is the service enjoyed? If only a small portion of the community enjoys the service, it would usually be unjust to charge less than cost, because the deficit would be borne by general taxation falling upon the entire community; unless, indeed, the benefit to one restricted class is seen to be of advantage to the whole community in such a degree that the rest of the community is willing to bear the deficit as in the case of public charity.

(3) Assuming that the service benefits the whole community, this is still not sufficient to justify a charge less than the cost of production. The problem is one of comparative costs. We must inquire whether greater benefit would not be secured by charging enough to raise a profit and then distributing that profit through the maintenance of some other gratuitous enterprise, or, if the tax system weighs heavily on the poor, by remitting taxation to the extent of the profit. (4) If all these questions are answered in favor of the gratuity principle, we still must consider what effect gratuitous service will have upon the cost of the service. Will it encourage wastefulness? Free city water, for example, would probably prove impracticable because of waste, but free parks or free education do not lead to inordinate or unnecessary consumption. The question is a vital one, but it is not always to be answered one way, as some critics seem to believe. (5) Closely related to the above is the question of pauperization. Some things the state may safely give away, and some not. The modern city, for example, may give free band concerts, in our view, to the undoubted edification of the community; but in Rome the public games demoralized the populace. (6) Finally, we have to ask what effect gratuitous service will have on incomes. Henry George proposed that our cities should operate the street-car lines gratuitously, and the argument in its favor is far stronger than might be expected on first thought. But what effect would this gratuitous service have upon the incomes of the laboring classes? Take the case of the worker in New York City earning $5.00 a day. Will his wages remain at $5.00, if street-car service is offered free of charge? Will not the migration to New York be increased, so that wages will fall? And may not the gain ultimately fall to owners of house property in the form of enhanced rents?

All these questions must be answered before the tariff of charges can be adopted, and it is plain that the answers will be determined by the particular conditions of time, industry, and place, particularly by the character of the industry. The nearest approach to a general rule, which can be formulated, may be stated as follows: In proportion as a service or commodity tends to the upbuilding of character and personality, we should, so far as fiscal conditions permit, gradually move in the direction of the principle of gratuitous service. If the service or commodity itself

is widely consumed, and is as desirable as any vendible commodities which would probably be purchased from possible revenues yielded by charges for the service, particularly if large consumption is desirable and waste in consumption does not become excessive, the principle of gratuitous service may be recommended.

Paper money.

The methods of government financing discussed above may be characterized as possessing the sound elements of modern public finance, even though there are countless points of conflict expressed in the principles of tax and pay as you go, borrow and tax future generations, or support general governmental services in part by profits secured from governmental industrial operations. Passing from such fields, however, one comes to the much more dangerous operation of providing governmental facilities and services *via* the printing press. As far as the present authors are concerned, the subject of meeting public expenditures by the issue of paper money should not be entertained in a discussion of sound methods of public finance. The broad and serious consequences attached thereto may be readily reviewed by reference to the chapters devoted to discussions of the monetary system.

(*References follow Chapter XLI.*)

CHAPTER XLI

DEBTS AND TAXES IN THE UNITED STATES

Growth of public debts.

Abuse of public credit is responsible perhaps for the gravest economic problems of the post-war period. Swollen by war, the public debts of the world reached proportions which were well-nigh incomprehensible. Our national debt was increased twenty-five fold by the war. The British national debt, about 700 million pounds when war was declared in 1914, rose to more than 8,000 million pounds at the close of the year 1919. The French national debt, about 34 billion francs at the outbreak of the war, rose by 89 billion francs in the year 1919 to a total of 240 billion francs at the end of that year, and continued to increase after the war, until in 1921 it exceeded 300 billion francs. With regard to some of the countries of eastern and central Europe, it has been aptly said: "One may suspect that the governments of these countries do not even know the exact volume of their present debts." [1] For the most part these debts must be repudiated either openly or by debasing the currency in which the obligation is expressed. The best that can be hoped for, in most cases, is that the country involved "will grow up to its debts," until by the growth of wealth and business the burden of the debt service will become bearable.

In the United States the situation had been more reassuring until 1930 when the effect of the depression was felt by the nation's public debt. Between the close of the Civil War and the outbreak of the World War, the burden of the public debt was greatly reduced. The per capita indebtedness of the country was reduced from $82.99 in 1870 to $49.97 in 1912. And compared with the wealth of the country, the showing was even more favorable. According to Census estimates, the public debt covered only $2.58 of each one hundred dollars of the national wealth

[1] Bass and Moulton, *America and the Balance Sheet of Europe*, The Roland Press, New York, 1921, p. 46.

in 1912, as against $2.85 in 1902, $3.06 in 1890, $6.97 in 1880, and $10.64 in 1870. The trend of our federal debt is indicated in Table I which shows the course of that debt, and in a crude way its composition of annual surpluses and deficits in receipts and expenditures. The data are based upon reports of the Secretary of the Treasury in all cases except for the year 1936 which are the estimates incorporated in the President's budgetary summary released on September 29, 1935.

TABLE I. — FLUCTUATIONS OF UNITED STATES PUBLIC DEBT, 1917–1936 [1]

(In Millions of Dollars)

ITEM	MARCH 31, 1917 (LAST PRE-WAR)	AUG. 31, 1919 (POST-WAR HIGH)	DEC. 31, 1930 (POST-WAR LOW)	JUNE 30, 1936 (PRESENT)
Gross debt . . .	1,282	26,597	16,026	33,779
Net balance, general fund . . .	74	1,118	307	2,682
Net debt	1,208	25,479	15,719	31,097

Our conditions of public indebtedness were revolutionized by the World War. While this country was actually in arms, the states and cities patriotically refrained from unnecessary capital expenditures. The cities practically met all of their expenses by taxation, while the states in the fiscal year 1918–1919 actually raised by taxes enough to meet all current expenses and cut down their total indebtedness by approximately $35,000,000. The total interest-bearing debt of the federal government, however, rose from $971,562,590 on June 30, 1916, to $26,596,701,648 at the war debt's peak on August 31, 1919. The interest on the federal debt at the end of the war was greater than the entire cost of running the federal government at the beginning of the war period. From 1920 through June 30, 1930, the public debt was reduced to $16,185,308,000, a reduction of more than $10,000,000,000. Thereafter, however, the impact of the depression was felt and the outstanding debt rose rapidly to $33,778,543,493 on June 30, 1936, an increase of more than $17,077,651,493 in five years period. The level which will obtain on June 30, 1937, and the course to be followed thereafter is at the present a matter of conjecture, and a matter of strong feeling.

[1] *The Recovery Problem in the United States*, The Brookings Institution, Washington, D. C., 1936, p. 658.

TABLE II. — GENERAL BUDGET SUMMARY, 1930–1936 [1]

(In Millions of Dollars)

GENERAL AND SPECIAL ACCOUNTS	1930	1931	1932	1933	1934	1935	1936
Receipts							
Revenues							
Internal revenue	3,039	2,430	1,561	1,604	2,641	3,278	3,513
Customs	587	379	328	251	313	343	387
Miscellaneous	282	293	95	184	153	169	216
Total revenue	3,908	3,102	1,984	2,039	3,107	3,790	4,116
Realization on assets	140	88	22	41	9	10	
Total receipts	4,048	3,190	2,006	2,080	3,116	3,800	4,116
Expenditures							
Legislative, executive, and judiciary	39	41	45	38	32	36	22
Civil departments and agencies	1,005	1,276	1,535	1,076	574	499	720
National defense	699	699	708	668	480	534	765
Veterans' pensions and benefits	754	933	985	863	556	606	2,350
Debt charges —							
Interest	659	612	599	689	757	821	749
Retirements	554	440	413	462	360	573	403
Recovery and relief			768	1,277	4,283	4,262	3,827
Refunds and miscellaneous	152	91	101	70	63	45	44
Total expenditures	3,862	4,092	5,154	5,143	7,105	7,376	8,880
Less debt retirement	554	440	413	462	360	573	403
Total	3,308	3,652	4,741	4,681	6,745	6,803	8,477
Deficit	+ 740	462	2,735	2,601	3,629	3,002	4,361

After the war, the states and local units of government began to increase their debt, while the federal government entered upon a systematic program of reduction. Before the war the annual issue of bonds of states and municipalities had averaged less than one-half billion of dollars; but in 1919 the issue rose to some $770,000,000, which increased to nearly $1,500,000,000 in 1927. According to United States treasury reports the net state and local indebtedness increased 335 per cent from 1913 to 1935, from $3,887,000,000 to $16,895,000,000. State indebtedness had not experienced the federal increases because of the depression, and the increment of new issues over retirements had been reduced. This type of public debt is incurred principally for long-time public improvements, and we find a large part allocated to highway development — 40.4 per cent in 1915 and 56.3 per cent in 1931.

The gross debts (less sinking fund assets) of state and local

[1] *The Recovery Problem in the United States*, The Brookings Institution, Washington, D. C., 1936, p. 669.

governments in the United States mounted from $3,821,897,000 in 1912 to $17,576,839,000 in 1932. In 1935 the local governments possessed a net debt of $16,895,000,000, an increase of over $13,000,000,000 since the pre-war period. The increase of local indebtedness slackened materially with the depression, but this is largely attributable to the limitations imposed on local bodies so that they cannot become indebted for more than a certain proportion of their taxable property. Margins for further borrowing are scarce and falling assessment roles are no encouragement to increasing indebtedness.

Federal Taxation

Use of direct taxes by the federal government.

Until the twentieth century the constitutional limitations which we have discussed previously served to concentrate federal taxation almost wholely upon consumption, since direct taxes when apportioned according to population have shown themselves to be unjust, unproductive, and exceedingly difficult of collection. Congress has made use of direct taxation only five times during the history of the national government. Two million dollars was apportioned in 1798; $3,000,000 in 1813; $6,000,000 in 1815; $3,000,000 in 1816; and $20,000000 in 1861. Except in the tax of 1798, Congress has always permitted any state to assume its quota and raise the money as it saw fit, although provision was made for its collection by federal officers, in case the quota was not assumed by the state government. It would be difficult to exaggerate the unsatisfactory character of such taxation. In no case has the federal government ever collected the full amount of the tax. The taxes levied in 1814–1816 continued to be collected until 1839. The last payments on the direct tax of 1861 were not received until 1888; and in 1891 a law was passed abolishing further collections and authorizing the amounts which had been collected under the Act of 1861 to be returned. Considerable scandal arose out of this refunding act, owing to enormous commissions paid to certain lobbyists for their work at Washington in securing the passage of the law. Until the adoption of the sixteenth amendment, therefore, the federal government relied almost exclusively, in ordinary years, upon customs duties, excises, and similar taxes.

Customs duties.

Among federal revenues, customs duties held the place of first importance for many generations. From the foundation of the federal government until the Civil War, with the exception of a few years, nearly all of the ordinary revenue was derived from customs; and from the Civil War until the World War considerable more than half of the ordinary revenue in the average year was derived from this source. During the World War, however, the import duties showed their undependability, yielding less than 5 per cent of the total tax receipts in the fiscal year 1918. More recently they have been rising rapidly, both in absolute and relative importance, and their yield in the fiscal year 1929 — $602,000,000 — was the largest, with the exception of the year 1927, in the history of the country. Turning to the summary of all federal revenue receipts in Table III it will be noted that this absolute and relative importance was lost by 1935.

Historically, customs receipts in this country have shown a perverse variability, expanding when increased revenue encouraged extravagance and contracting when the country sorely needed additional revenue, as at the present. Between 1791 and 1860 inclusive, the customs receipts actually exceeded the expenditures in thirty-four years; varied between 50 and 100 per cent of the expenditures in twenty-eight years, and fell below 50 per cent in eight years. In 1860, more than 84 per cent of the expenditures were secured from this source, but in 1863 less than 10 per cent, so inadequate is the customs revenue in a serious war when money is most needed. In 1864, Congress made desperate attempts to increase the customs revenue. In the tariff act of that year about fifteen hundred articles were enumerated, and the average rate approximated 50 per cent; yet the receipts dropped from something over one hundred and two millions in 1864 to less than eighty-five millions in 1865, constituting only 6.5 per cent of the total expenditures in the latter year. In 1914, the customs collections amounted to $292,000,000; but they fell to $183,000,000 in 1918. During the history of the national government, the customs revenues have varied with the industrial condition of the country, the prospects of peace or war, the power of the tariff lobby, the prosperity and commercial policy of foreign nations, but almost never in nice accordance with the financial needs of the federal government. Where the tariff is controlled

by revenue rather than protective purposes, as was until recently the case in England it can be made strikingly stable and responsive to the control of the treasury. "The English revenue from this source has kept very near £20,000,000 per annum for the last thirty years. In the period 1815–1895, it has only varied between £24,000,000 and £19,000,000, not withstanding the extensive remissions of taxation." [1] Between 1913 and 1922 the revenue from customs increased from £34,450,000 to £130,052,000. During the period from 1923 to 1931 it varied between £121,401,000 and £123,043,000. The depression years saw a sharp rise in the revenues from customs. The year 1932 marked an increase to £136,152,000, and during the following years it continued to rise until the revenue reached £185,096,000 in 1935.[2]

From the fiscal standpoint, our tariff system is far too *complex and cumbersome.* Whether we tax many imports or few, the major part of the revenue comes from comparatively few imports, so that by extending the list of dutiable articles we merely add to the cost of collection and increase the interference with commerce, without materially augmenting the yield of the tax. Before the World War, Great Britain imposed import duties on less than fifty articles, and nearly all of her revenue from import taxation came from five articles: tobacco, tea, spirits, wine, and sugar. Compared with direct taxes the cost of collecting the import duties is not excessive, yet it exceeds the cost of collecting the internal revenue duties; and in some customs districts the expenses actually exceed the tax collected.

> "There is no better illustration of a complex and incomprehensible revenue system than the tariff legislation of the United States. It levies import duties upon goods that make up the country's exports as well as upon those that constitute the normal imports of the nation's commerce: it taxes raw material as well as the manufactured product, and the manufactured product itself is taxed at many stages in the process of its manufacture; the rate imposed is determined in part by considerations of revenue, in part by the desire to grant 'incidental protection,' and in part for the purposes of prohibiting the import of selected articles; the rules of rating are numerous, overlapping each other in many cases and resulting in a confusion of instructions that necessitates a board of appeal in continuous session; the text of the law makes a book of one hundred and fifty

[1] C. F. Bastable, *Public Finance*, The Macmillan Co., New York, 1903, 3d ed., p. 517.
[2] These data are taken from a table prepared by Louis Gebhart, director of the National Economy League.

pages, while the law and its interpretation used by the officials as a guide in the performance of their duty is a volume of several hundred pages. A law of this sort cannot be comprehended." [1]

Customs duties are either *specific* or *ad valorem*. *Specific duties are levied in proportion to weight or number, without regard to value,* while *ad valorem duties are levied in proportion to the value of the commodities imported.* Ad valorem duties are open to the objection that they offer a greater temptation to fraudulent valuations, and hence make more difficult the work of the customs officers. Specific duties, on the other hand, while they can be more easily administered, are open to the serious objection that they may impose a relatively heavier burden upon the less valuable goods of any class.

From the beginning of the federal government, our customs duties have been in spirit, if not always in effect, protective. Protective duties are imposed in the hope of diminishing imports and substituting in their stead the products of home manufacturers. To the extent, therefore, that they are successful in their purpose, they reduce the customs revenues and justify the statement that there is a fundamental antagonism between the protective and revenue principles. However, the reduction of imports does not signify that the consumers of the articles in question are not taxed. It is obvious that no protection is given unless the price is raised. So long as the price remains higher than it would be if no duties were imposed, the people are taxed to the extent of the difference, the proceeds of the tax going to home manufacturers in the form of an unmeasured, unregulated bounty, whose burden upon the taxpayers is no less real because unperceived. The reply of the protectionists to this is that the bounty is justified because of the resulting stimulus to wages, profits, and business activities in general.

The popularity of customs duties is largely explained by the belief that the foreigner bears the burden of the tax. This disputed question is too intricate to be discussed in detail here. In general, the incidence of import taxes is similar to the incidence of internal sales or excise taxes. When first imposed, the producer or seller may, in a comparatively large proportion of cases, be compelled to absorb or bear them. And in a few exceptional cases they may remain for a long period upon the foreign pro-

[1] H. C. Adams, *Science of Finance*, H. Holt and Co., New York, 1924.

ducer or dealer. But in a large majority of cases, in the long run, they are paid by the consumers as internal sales taxes are paid. In any event, the conclusion appears to be reasonably certain that whatever the extent to which the foreigner can be made to pay the tax, to that extent the tariff fails to replace foreign for home products, in short, it fails to "protect." We cannot have our cake and eat it, too. The more the protection or bounty to home manufacturers, the greater the tax upon the consumer, the less the shifting of the tax to the foreigner, and the less the revenue to the home government. The protectionist is logically deprived of the argument that the foreigner foots the bill.

Principal internal taxes.

A general idea of the principal federal taxes and of the way in which the federal tax system was revolutionized by the World War may be gathered from Table III which contrasts totals for the fiscal year 1915, the fiscal year 1925, and the fiscal year 1935. The figures show or suggest the marvelous elasticity of the income tax and the way in which it displaced customs and

TABLE III. — FEDERAL REVENUE RECEIPTS: 1915, 1925, AND 1935

(In Thousands of Dollars)

SOURCE	1915	PER CENT OF TOTAL	1925	PER CENT OF TOTAL	1935	PER CENT OF TOTAL
1. Internal revenue [a]	$415,681	62.69	$2,583,020	74.46	$3,538,857	85.4
Income tax	80,202	12.10	1,760,538	50.75	1,426,575	34.4
Estate tax	—	—	101,422	2.92	218,781	5.3
Gift tax	—	—	7,518	.22	160,059	3.9
Capital stock and excess profits taxes	—	—	90,003	2.59	109,452	2.6
Alcoholic beverage taxes	223,949	33.77	25,905	.75	505,464	12.2
Tobacco taxes	79,957	12.06	345,247	9.95	501,166	12.1
Stamp taxes	24,130	3.64	49,252	1.42	68,990	1.7
Manufacturers' excise taxes	—	—	140,852	4.06	382,776	9.2
Sundry taxes	7,443	1.12	62,283	1.80	88,945	2.1
Processing taxes (A. A. A.)	—	—	—	—	76,649	1.9
2. Customs	209,787	31.64	547,561	15.79	386,812	9.4
3. Miscellaneous revenues	37,583	5.67	338,297	9.75	216,293	5.2
Total revenues	663,051	100	3,468,878	100	4,141,961	100

[a] Internal revenue other than income tax not adjusted to daily Treasury statement.

other indirect taxes as the principal source of federal revenue. Perhaps the most striking feature of this table is the extent to which the receipts are dominated by certain taxes (those on incomes, estates, and capital stock). These taxes yielded in the fiscal year 1925 nearly 60 per cent of the total tax receipts. On the other hand, the sumptuary excises, tobacco, liquors, etc., remain very important. Financially speaking, prohibition cost the federal government a pretty penny. In 1915, for instance, distilled spirits and fermented liquors yielded nearly $225,000,000; but only about $26,000,000 was collected from that source in the fiscal year 1925, while the repeal of prohibition brought the source back to the government. The amount collected in 1936 aggregated some $505,464,000. While the processing taxes under the Agricultural Adjustment Act yielded some $521,000,000, or 14 per cent of the government's revenue in 1935, the downfall of the act before the Supreme Court leaves a problem of replacement facing the administration.

Income taxes.

The rapid growth of effective income taxation in this country affords an instructive illustration of the triumph of an economic idea over formidable obstacles. The legal barriers which had to be surmounted have already been briefly mentioned, but there were other difficulties to overcome, equally formidable. Income taxes had been on the statute books of certain American commonwealths since the seventeenth century, and had been consistently and continuously ineffective. The tax was generally believed to be too inquisitorial for the American people, schooled by the crudities of the general property tax to evasion of and contempt for tax law. Many authorities had come to the conclusion that the income tax, though "sound in theory," made too many demands upon both the taxpayer and the tax administrator to thrive in American soil.

The mistake of the experts arose rather from an underestimate of the strength of the income tax than from an underestimate of its difficulties. The alleged weaknesses of the income tax were not imaginary. Experience has shown that it is a complex and difficult tax to formulate and administer. Just what items of gross income should be included and what losses, expenses, and other deductions allowed, are questions which bristle with diffi-

culties. It has proved exceedingly difficult to dovetail or articulate the graduated or progressive tax on individuals with the proportional or degressive tax applied to corporations. It has, moreover, some undesirable class features; in 1933 federal income tax returns were made by less than 3 per cent of the population and only 0.8 per cent of the taxpayers had net incomes in excess of $25,000. Those with net incomes of $25,000 and over had total net incomes of $1,497,555,000 or 13.6 per cent of all net incomes reported in 1933.

The tax is predominantly an industrial or city tax, and farmers generally escape, owing to the facts that they usually do not keep books, that much of their income does not find expression in terms of money, and that relatively few farmers receive incomes above the authorized exemptions and deductions. The heavy rates introduced during the war, and recently, tend to promote a large number of intricate devices, so that the law has become almost unbelievably complex, and its application uncertain. Decisions involving hundreds of thousands and sometimes millions of dollars often turn on metaphysical niceties of interpretation; and additional taxes are frequently imposed upon innocent and well-meaning taxpayers three or four years after returns have been made and the taxes paid. However, striking improvements in the administration of the federal tax are being made.

Despite all these weaknesses the income tax has been in many ways a conspicuous success. It showed wonderful elasticity and productivity during the war. It yielded a respectable amount in the fiscal year 1914, but by 1920 its yield had increased more than fifty-fold and in 1925 it represented one-half of the federal revenue. In 1936 the proportion fell to 34 per cent of the federal revenue. The fact that it is only imposed when the taxpayer has some income with which to pay or with which to set aside a reserve to meet the tax is a practical virtue of the greatest importance, although the recent depression has demonstrated that incomes received during a year may not carry over to pay taxes levied three months after the close of the year. For the great majority of taxpayers it imposes, with the rough accuracy that alone can be expected in tax laws, "taxation according to ability." Property taxes pay little attention to the ability of the owner of the property. They fall upon property as such, whether it is free or encumbered by debt; they must be paid by the unsuccessful

as well as by the successful, in lean years as well as in fat years. The income tax, on the other hand, does not affect the very poor at all; it spares the unsuccessful business man, the new business in its developmental stage, and old established enterprises in times of business depression. In the last twenty years practically every large country in the world which did not already have the income tax has introduced it. It is now employed in twenty-nine of the American states, in some of which it provides an indispensable part of state revenue.

Excess profits tax.

During the early years of the war, the need for revenue naturally led to the adoption of special taxes on the profits made by munitions manufacturers. The idea expanded in a short time into taxes on war profits and then to taxes on excess profits. "War profits" were usually measured by the excess of the taxpayer's profits for the taxable year over his assumed normal profits measured as a percentage — *e.g.* 8 per cent — of the invested capital. The rates were high, rising in this country to 80 per cent of the war profits for the year 1918. In 1921, the last year for which the tax was levied in this country, before its revival in the Revenue Acts of 1934 and 1935, it applied only to the profits of corporations in excess of a credit or exemption of $3,000 plus 8 per cent of the invested capital. The rate was 20 per cent on the amount of profits in excess of the exemption but not in excess of 20 per cent of the invested capital.

As a war expedient, the excess-profits tax was strikingly successful. In its second year, 1918, it yielded over $2,500,000,000, probably the largest amount ever produced in any country by a single tax; and the war profits upon which it was laid, and from which it was paid, constituted a source which by every proper test should have been utilized immediately to cover as large a portion as possible of the expenses of the war. But its complexity and inequality could with difficulty be exaggerated. As was pointed out in the chapter on profits, it is impossible to measure normal profits in any simple way; and the American plan of computing normal profits as a flat per cent of invested capital proved even more defective in practice than it was in theory. The measurement was based in the value of the capital originally invested, although earned surplus retained in the business was

included. Later valuations of the capital were in general prohibited. The result was that old corporations suffered greatly in comparison with those which were organized or reorganized at a later date, when prices were higher. Corporations which were conservatively financed suffered in comparison with those which had capitalized their good will, brands, and other intangibles, or which had valued their properties at later and higher prices. Corporations which had plentifully watered their stock in the past derived a distinct advantage from this fact; and until special measures of relief were taken, small corporations were taxed relatively more heavily than large corporations. Owing to the complexities of the tax, the audit of the returns was greatly delayed. Many important cases involving this tax, which was repealed at the close of 1921, still remained open and unsettled in the year 1930. The resulting uncertainty and delay became at times a serious menace to business.

After 1917 the excess-profits tax in this country was confined to corporations and this was the case also in the 1934 and 1935 provisions. It does not touch the individual investor and, with few exceptions, it does not touch investment corporations, which seldom earn at a rate in excess of the credit or exception. Corporations and men who were so wealthy that they could specialize in gilt-edge investments escaped the tax, because absolutely secure investments seldom yield over 10 per cent (the present rate). When the normal exemption is computed as a per cent of value of capital stock, the tax falls upon the more hazardous industries in the years in which they happen to make money. These are fundamental difficulties. Although there are great theoretical possibilities in a business tax confined to "supernormal" profits, the excess profits tax looks for a definition of normal profits in terms which are simple, capable of administration on a wholesale scale, and free from gross inequalities.

The Revenue Act of 1936 was designed for the purpose of raising as much money as possible. The corporate form of business organization appears to have been selected to bear the brunt of furnishing the major portion of additional revenue sought. Since the passage of the act in June, 1936, there has been raging a storm of controversy over Title I. The title in question is a "restatement of the previous income tax law, with the changes necessary to effectuate the imposition of a tax on corporations,

the rate of which will depend on the ratio of the undistributed net income to the entire net income; or stated in another way, on the ratio of dividends to net income." [1] The principle embodied in this provision marks a deviation from precedent. Generally the income tax is imposed on income regardless of how the taxpayer disposes of the proceeds, whereas the corporation undistributed profits tax attaches only when income is not distributed or when it is not disposed of to make it again taxable to the recipient.

The undistributed earnings tax provides that every corporation except banks, insurance companies, and a few other special classes, must pay a tax on that portion of its net income which it does not distribute to shareholders. The tax ranges from 7 per cent on the first 10 per cent of the net income that is not distributed up to 27 per cent of all over 60 per cent of the net income that remains undistributed.

In support of the tax it has been contended that in the past too large a portion of business profits tended to pile up as corporation surplus instead of being returned to the buying public through wage and dividend payments. The result of this condition, some economists say, was that production tended to outstrip buying power, leading to a depression. Supporters of the tax measure also contend that it was needed as part of the recovery program to make more effective the government pump-priming program, and to prevent that program from conferring undue favors on the big corporations at the expense of the rest of the country. Another argument in defense of the tax as a monetary measure was the contention that without it the efforts of the federal reserve authorities to control credit and thus avert a boom and consequent depression might be hampered.

The tax amounts to a penalty on the accumulation of reserves, and therefore many corporations which, in the absence of this law, might have added a large part of their profits to surplus to make up for the inroads of the depression, have voted to pay out all they have made. Within a period of two months, regular and extra dividends, wage increases, and bonuses amounting to about $1,400,000,000 have been approved.[2] It is held in some quarters that the entire payment of 1936 earnings to stockholders is strictly a one-time policy, adopted to avoid tax reprisals which might

[1] The Revenue Bill of 1936, House of Representatives, Report No. 2475, p. 5.
[2] *New York Times*, December 6, 1936.

result from honest misunderstanding of the complicated provisions. There are many who contend that the act is unwise. Most business men and bankers dispute the wisdom of seeking to "manage" the economic system in the fashion implied by the theories underlying the undistributed profits tax. They contend that instead of militating against booms and depressions the tax will tend to accentuate them. In good times it will force corporations to pay out all their earnings, thus further stimulating the boom. In bad times it will force corporations to suspend dividends, cut wages, and curtail expenditures because they will have failed to accumulate large surpluses. More vulnerable than before, the corporation will fail more quickly in future depressions if the tax is maintained, its opponents say. Another argument against the act is that the needs of different kinds of enterprises for reserves differ widely and cannot be fairly dealt with by a flat statutory provision applying the same way to all. Only time will test the validity of the objections to this measure.

Consumption and sales taxes.

The taxes on beverages, spirits, tobacco products, and admissions, although collected from the producer or seller, are for the most part shifted to the consumer and may properly be treated as consumption taxes, although in some degree they fall upon productive or business consumption.

Some critics object to these taxes because they do not conform to the principle of ability to pay. The proper answer to that criticism has been given in a preceding chapter. They have, or the best of them have, the practical, administrative virtues. They are productive, inexpensive to administer, certain, payable piecemeal in minute amounts for the most part, and with some exceptions fall upon articles which are not absolute necessities. Moreover, they now supplement a system of direct taxes which in the main is highly progressive. Their regressivity is neutralized by the progressivity of the system of which they are a subordinate part.

Some of the specific sales taxes imposed during the war, such as those on fountain drinks and certain medicinal articles, were widely evaded. This is likely to happen whenever the article taxed is difficult to define with precision. In such cases the tax should be repealed because it produces a demoralizing and unfair

competition between those who pay and those who do not pay the tax.

The dealers who pay these taxes object to being singled out for taxation when other wares and commodities are not taxed. This objection we think may fairly be dismissed where the tax has been imposed for a number of years and is not otherwise objectionable. Such taxes are shifted to the consumer. The manufacturer or dealer does not really bear them. The industry or article simply serves as a convenient point at which to tap a taxable surplus of the consuming public, the existence of which surplus is revealed by the enormous amounts regularly spent for luxuries, some of them plainly harmful. The imposition of the tax casts no stigma upon the industry. The industry simply serves as a tax gatherer. Such tax gatherers, or such taxes, form an important part of the revenue system of practically every nation, and have done so for centuries. Their justification rests upon the best of all grounds — experience. They are not supposed to conform to tests of equality and uniformity. There is no reason why they should be general or universal. Such taxes should be relatively few in number, imposed upon clearly defined nonessentials of widespread consumption upon which a reasonable rate will yield a large revenue, and collected at that point of manufacture of distribution where the trade or industry is most highly concentrated.

Shortly after the close of the war, those who were subject to the special sales taxes, and the increasing number of those who suffered from the complexities and delays of the income tax, organized a strong movement for the introduction of a general sales tax. The proposal takes different forms. Some propose to tax all sales, others would confine the tax to sales of goods, wares, and commodities (excluding sales of so-called capital assets such as land and securities), while others propose to confine the tax to sales of goods, wares, and commodities made by manufacturers, producers, and wholesale dealers, excluding retailers. Opinions differ also about the purpose of the tax or its proper place in the federal tax system, but the manufacturers' excise taxes ranging from taxes on tooth paste to taxes on automobiles produced about $342,000,000 in 1935.

Historically the sales tax has a dark record, and Adam Smith regarded the *Alcavala*, a Spanish tax on sales, as the cause of the

ruin of the agricultural and manufacturing industries of Spain. But these injurious results were probably due to the very heavy rates at which the tax was imposed in earlier times. Experience with low-rate sales taxes in the Philippine Islands, Canada, France, Germany, and other countries indicates that a carefully formulated sales tax may possess all the great practical virtues which have been associated with the best consumption taxes: high productivity, certainty of obligation, and piecemeal payment.

The principal weakness of the sales tax is that it is not needed by the federal government under ordinary circumstances; and is not suited to the state or local governments. If it were possible to replace the federal income tax with a general sales tax, the proposal would be worth consideration. The sales tax would be so much simpler that many persons might prefer it. But no simplification can be effected by adding to the greater complexities of the income tax the lesser complexities of the sales tax.

Experience makes it amply clear that no single tax could or should be used as the basis for federal revenue. In the tax system of the modern state there will be and should be some taxes on consumption and some taxes based upon ability to pay. The sales tax cannot fill the function of the latter. If we should adopt a sales tax in lieu of the income tax, within a few years popular opinion would force the adoption of a progressive ability tax of some kind to balance the regressivity of the sales tax. This happened in the Philippine Islands, where a few years after the introduction of the sales tax a progressive income tax was placed upon the statute books. If, on the other hand, we disregard ability to pay and judge proposed taxes merely by criteria of certainty, productivity, and simplicity, then a few specific sales taxes on selected commodities are plainly preferable to a general sales tax. They beat the more general sales tax at its own game. Why add to an overloaded tax system, the new administrative burdens of a general tax, requiring supervision of millions of taxpayers, when it is easy to raise all the additional revenue required from a few selected sales taxes which would touch only a few thousand taxpayers and involve little administrative expense?

Notwithstanding a lack of enthusiasm on the part of tax students for a sales tax, tax administrations and certain interests have moved many states into the general sales tax column. At the time of the present writing there are twenty-five states levy-

ing direct taxes upon sales, while the inclusion of those states with quasi-sales tax provisions brings the total to 32. This excludes gasoline sales tax as levied by all states and the federal government. In most cases the tax is looked upon as an emergency source of revenue, but emergency taxes have been known to live on.

Inheritance taxes.

In 1893, when the first edition to this work was written, the inheritance tax was used in only five states, and so strong were the objections to its wide adoption that the senior author felt called upon to point out that unregulated collateral inheritance was an unjustifiable survival of the clan system that was being carried to ridiculous lengths at that time. Since that time, however, inheritance taxation has spread rapidly, being employed in all but three states and the District of Columbia in 1928, and all but the District of Columbia in 1935. With the spread of the tax has come a most significant development of progressive rating and taxation of direct as well as collateral heirs. Today one never hears of the "inherent right" of decedents to control absolutely the disposition of their property in perpetuity, and the right of the legislature to regulate inheritance in behalf of the general social interests is hardly disputed. Andrew Carnegie, for instance, advocated a rate of 50 per cent upon the estates of millionaires.

The inheritance tax is not yet a major tax in this country, as the death duty is in England. In 1925 the states collected $85,894,000 from this source, and the federal government well over $100,000,000 from the estate tax. Owing to the 80 per cent credit for state inheritance taxes paid, the amount of federal collections fell to about $60,000,000 in 1929, though the recent additional estate tax was levied by the federal government with no credits for state taxes paid, the revenue production in 1935 was $140,441,000. The credit allowed by the federal government stimulates the states to increase the rates of their inheritance taxes, so that in general what the federal government loses, the states gain.

The federal tax and the credit in particular are strongly opposed by many sincere people who regard the credit as an officious attempt on the part of the federal government to coerce the states. This question is not easy to decide. It is true that the federal government does not greatly need this tax and it is also

true that the credit exerts a pressure upon the states to adopt rates that will make their tax at least equal to 80 per cent of the federal tax. That much the states can collect without imposing any real burden on their citizens.

We believe, nevertheless, that the federal tax should be retained for some years at least. The greatest evil of taxation in this country at the present time arises from the excessive taxes imposed upon real estate, particularly land owned by farmers, home owners, and small business concerns. The inheritance tax is needed to reduce the burden of the property tax. But the states which would like to do this cannot use the inheritance tax effectively if they must compete with states which impose no inheritance tax at all. Rich men will take up their domicile in the states which offer exemption or impose very light inheritance taxes, — taxes inadequate to reduce the burden of the property tax. We believe that an adequate inheritance or estate tax should be imposed at substantially uniform rates throughout the United States, for the purpose stated. A federal tax at approximately the present rates with a large proportionate credit, impresses us as helpful and possibly indispensable to the maintenance of an adequate inheritance tax. The federal tax and credit are justly subject to many of the criticisms directed against them. But the alternative of repeal is open to even greater objections.

State and Local Taxation

At the time of the present writing great attention is being paid to the federal tax situation, no doubt deservedly, but it tends to draw due consideration away from a much larger and more mismanaged state of affairs — the revenue system of state and local governments, and particularly the latter. Under normal conditions the larger part of the nation's taxation problem rests within state boundaries, and nearly half of it is more closely restricted to local communities.

Consideration of the increase of revenue collections or of tax collections alone during the last twenty years would represent but a repetition of the increases already indicated for governmental expenditures and indebtedness, but the study is not complete without an analysis of the specific sources of state and local revenue. In Tables IV and V we have arranged the sources of revenue drawn upon by these units of government as

reported in the *Financial Statistics of States* and *Financial Statistics of Cities* for the respective years. In the case of the states we can summarize the collections in actual amounts as well as percentage distribution because there is no change in the units concerned. For the local units of government, we have comparable data for but those cities whose population was more than 100,000,

TABLE IV. — STATE REVENUE RECEIPTS: 1915, 1925, AND 1932

(In Thousands of Dollars)

SOURCE	1915	PER CENT OF TOTAL	1925	PER CENT OF TOTAL	1932	PER CENT OF TOTAL
General property	$185,876	40.54	$358,602	24.14	$323,477	14.65
Special taxes	82,871	18.09	235,864	15.88	333.667	15.11
Poll taxes	3,198	.70	3,930	.27	5,321	.24
Business and non-business license	93,598	20.43	508,974	34.27	979,385	44.36
Special assessments and special charges	2,269	.51	31,176	2.10	26,060	1.18
Fines, forfeits, and escheats	2,028	.44	7,314	.49	5,833	.26
Subventions, grants, etc.	7,383	1.61	143,492	9.66	281,316	12.74
Highway privileges, rents, and interest	28,071	6.13	67,063	4.52	87,996	3.99
Earnings of general departments	50,223	10.96	118,732	7.99	154,701	7.01
Earnings of public service enterprises	2,716	.59	10,096	.68	10,179	.46
Total	$458,233	100	$1,485,242	100	$2,207,935	100

TABLE V. — SOURCES OF REVENUE RECEIPTS IN CITIES OVER 100,000 POPULATION

(Percentage Distribution in 1915, 1925, and 1933)

SOURCE	1915	1925	1933
General property	61.13	63.92	64.33
Special taxes	1.40	2.50	.77
Poll taxes	.12	.12	.09
Business and non-business license	5.99	2.50	3.44
Special assessments and special charges	8.12	6.89	2.38
Fines, forfeits, and escheats	.44	1.15	.27
Subventions, grants, etc.	3.90	4.98	12.34
Highway privileges, rents, and interest	6.55	5.23	4.39
Earnings of general departments	2.44	2.68	2.49
Earnings of public service enterprises	9.91	10.03	9.50
Total	100	100	100

and since the base has grown we can only use a percentage distribution with any meaning. The data presented in these schedules are most significant to the present tax situation and merit close study by readers interested in such present day problems.

General property tax.

The key to the revenue system of our state and local governments, and by far the most important tax collected in the United States, is the general property tax, which supplied about 55 per cent of all revenue collected in the United States in 1931, whether by federal, state, or local units, or more than three-fourths of the taxes collected by the state and local units. The most important characteristic of this tax is suggested by the word "general," — *the tax is levied in theory upon nearly all property, real and personal, in the hands of the people.*

Though the administration of the property tax differs in many details among the states, it is the usual custom for assessors in each community to prepare complete statements of all kinds of taxable property owned by the people of the community. In some states the assessors receive from all residents sworn "lists" of property owned and subject to tax. By the terms of the law the property is supposed to be rated at its true full value, though, by the acknowledged practice of assessors and courts of review, the real rates vary widely from state to state, from community to community, and from individual to individual. On the basis of the property valuations thus made, the state and local governments levy direct taxes at a rate fixed from year to year according to fiscal needs. The tax is then collected by local officers, and of the whole amount the portion levied by the county and state is passed on to the designated officers usually after each minor political division has set aside its share.

As yet few economists who have written upon the subject, and few state officers who have had to do with the administration of the tax, have ever been able to speak of it except in terms of the severest condemnation. Naturally, then, there is now a strong tendency to work away from this form of taxation. Some of the many serious faults which the general property tax has everywhere shown call for comment and explanation.

1. *Unjust apportionment.* — The first of the defects of the tax appears in the apportionment of the state's or other juris-

diction's share of the tax over smaller taxing units included within the larger. Each community has a narrow, selfish interest in reducing its assessment below a full value level so that it may escape its just share of a tax levy. The same mean struggle is especially frequent between city and county districts. To correct the evil, boards of equalization are usually appointed, but experience has shown that such boards usually do their work in a most perfunctory way. Although earnest study of assessments may and sometimes does secure a substantially just apportionment between county and county, this equalization does not correct the glaring inequalities within particular counties, and even within single assessment districts.[1]

2. *Inequality.* — In the second place, the general property tax has proved grossly inequitable in laying an undue proportion of its burden upon real property, allowing various forms of personal property to escape with a slight tax or with no tax at all. Real estate usually represents 80 or more per cent of the general property tax base, so that in effect the general property tax is a real estate tax. A secondary result of this inequality is that the rural districts bear a disproportionate burden, since the greater part of the tax-escaping personalty is owned in the cities. Similarly, the available evidence indicates that, in most places, large properties are assessed on the average at a lower proportion of true value than small properties within the same class, while it is also found that properties associated with large voting power will receive heavy consideration over those coupled to a minor voting power.

3. *Temptation to dishonesty.* — It follows from the evils already described that the general property tax leads to a shocking amount of dishonesty, perjury, bribery, and other forms of corruption. Indeed, as one writer has expressed it, "The general property tax has gone far toward making perjury respectable and even virtuous."

4. *Fundamental theoretical defects.* — The most fundamental defect of the general property tax is found in the fact that it is an incongruous mixture of *real* and *personal* taxes. Real estate, in a great majority of states, is taxed at its situs, irrespective of owner-

[1] See Herbert D. Simpson, *Tax Racket and Tax Reform in Chicago*, Institute for Economic Research, Inc., Chicago, 1930; C. B. Pond, *Full Value Real Estate Assessment as a Prerequisite to State Aid in New York*, New York State Tax Commission, Albany, 1931.

ship or the tax-paying ability of the owner. The personal obligation of the owner to support the government under which he immediately lives is met practically everywhere by that part of the tax which falls upon personal property, personal property paying at the domicile of the owner.

This distinction between real and personal property is artificial, inequitable, and illogically applied. Personalty, as a measure of ability to pay taxes, should be accurately computed by offsetting liabilities against assets, so that the taxpayer would pay only upon net assets. Yet no state grants full and complete exemption of debts; only a few states permit the subtraction of debts from personalty; the rest either refusing any abatement for debts whatsoever or limiting the abatement to subtraction of debts from money, or money and credits, or other restricted classes of personalty. Moreover, many states manipulate their definitions of real property in the most discreditable manner, causing many kinds of double taxation. To take a single illustration; most states tax the stock of foreign corporations held by resident citizens, whether the corporation pays full taxes at its situs or not. Many of these states tax their own or domestic corporations at full value, thus endorsing the theory that a corporation should be taxed as a business unit where the business is carried on. Nevertheless, they attempt to tax the stock of foreign corporations when the stock is the only thing they can reach.

Modifying the general property tax. — This brief outline of the evils connected with the general property tax furnishes us with the key to reform. By far the greatest reform that could possibly be accomplished would result from placing the work of assessment on a scientific basis, by appointing expert assessors under civil service protection, who would give their whole time to the business and hold their places during good behavior. We shall undoubtedly keep the real estate tax. Scarcely anyone advocates its abandonment or believes that it would be possible to get along without it; and with trained assessors it would be possible to make a substantially fair assessment of real property. Yet even the assessment of real estate is in most places today markedly unequal. We spend a great deal of time thinking out ambitious fiscal reforms that will remedy the present system by revolutionizing it, overlooking the fact that the remedy for the deepest and widest evil lies within our reach, neglected and

unavailing, not because we are ignorant of its potency, but because we lack the will resolutely to apply it.

At the same time, no assessor, however expert and well paid, can ever be expected to assess all kinds of personal property with even approximate accuracy. To persist in the attempt to assess all the property of every person is simply to debase public morality and convince assessors that nothing short of divine wisdom will enable them to satisfy the requirements of the law. In short, the more intangible forms of personal property, if not all personal property, should be exempted from taxation, and the loss be made up by the introduction of simpler and more workable taxes. Probably the best substitute is an income tax.

The personal property tax on business and commercial concerns, with its impossible requirements of stock valuations, taxation of book accounts, bill receivable, and credits generally, should be replaced by a tax on gross earnings or net income. We should then have, in place of the general property tax, a tax on real estate, a business tax, and a personal tax measured by net income. Although the real estate tax would in appearance take no cognizance of mortgages or debts secured by the property and no account on the surface of the ability of the owner, it would not in reality wholly violate the canon of taxation according to ability. The man buying land on contract or subject to a mortgage would take into account the fact that he would be called upon to pay taxes upon the whole value of the property, irrespective of debt or incumbrance, and the price would be adjusted accordingly. Or, if he mortgaged his land after he had acquired ownership, he would be indemnified in most cases for paying all the taxes, by receiving a lower rate of interest on his mortgage than he would be enabled to secure if the creditor were liable for taxes upon that part of the property covered by the mortgage. Real taxes, which take no cognizance of the financial status of the owner, are not inequitable when they are consistently applied and supplemented by a separate system of personal taxation.

The movement toward modifying the general property tax with its inequitable burden upon real estate has been under way for some two decades. The growth of state revenue collection has not fallen particularly upon real estate; Table IV indicates a retreat by the states, in proportion at least from the real estate taxes, for which they have turned to income taxes, sales taxes,

gasoline taxes, license fees, etc. But the state taxes upon real estate never approached the weight imposed by local governments, and we find from Table V that the local reliance upon this form of property has increased even in the face of seeking necessary readjustments. "The field for real estate tax relief is in the local taxing jurisdictions" and therein there has been no relief.

It is not possible in the limited space available for this subject in a general outline of economics to touch upon many important movements which are now taking place, but it is seriously recommended that the reader should become acquainted with the more recent literature which is suggested at the close of the chapter.

A Balanced Revenue System

There are, on the mainland of the United States, forty-eight separate sovereignties in addition to the federal government, and the resulting conflicts of jurisdiction give rise to the deepest defects of our revenue system. As a remedy for this evil, many authorities recommend a division or separation of revenues, by which certain taxes would be assigned to the federal government, others to the states, and still others to the local governments. This plan is usually referred to as the "segregation or separation of the sources of revenue."

The benefits that might be derived from a thoroughgoing system of segregation are many. But the trend of events suggests that readjustment must, in the main, be sought along other lines. The boundaries between state and federal finance become more indistinct with the passage of time. Both federal and state governments have recently adopted income taxes and inheritance or estate taxes. The state governments in recent years have made increasing and successful use of excise and sales taxes theretofore used almost exclusively by the federal government. In state finance, similarly, there seems little disposition to separate clearly the sphere of state and local taxation. On the contrary, it is being recognized in increasing degree that to finance the state governments by corporation and indirect taxes which do not touch the great mass of citizens directly, stimulates extravagance on the part of the state legislature, and, in fact, leads to the reintroduction by the state of direct taxes on general property. Furthermore, there are some manifest advantages in the joint

use of the same tax by several divisions of government. The central or large jurisdiction not only finds it possible to employ expert aid, which the local government could not afford to hire, but it has a broader, more impartial point of view which serves to check local selfishness. Local authorities, on the other hand, frequently have a helpful knowledge of important facts and conditions which are likely to escape the agents of the central government. Joint use of the same tax also permits a wise compromise between central efficiency and the American demand for "local self-government."

A certain amount of segregation is, however, not only expedient but plainly necessary. Thus, the use of import and export duties is confined by the constitution to the federal government. In the domain of commonwealth government also there are certain enterprises, such as sleeping car companies, whose property or business is so difficult to localize that by common consent such companies are reserved for state taxation. For the same reasons, certain other corporations, such as telephone, telegraph, insurance, freight line, and equipment companies, should be, and rapidly are being, set aside for state or central taxation; and in the case of most "state-wide" public utilities there is obvious need for central assessment. In the past, it was common to assess separately the property of railways and similar public utilities in every tax district (including townships and even school districts) in which they operated, and this absurd practice is still followed in some backward states. Many of the important properties of such corporations cannot be intelligently valued without reference to the earnings or success of the business as a whole and this, as well as considerations of administrative simplicity, makes valuation or assessment as a unit obviously desirable. When the central valuation is once made, it is possible in some cases to distribute or apportion the valuation to counties or other large local subdivisions; but it is impossible to localize some businesses satisfactorily, and minute subdivision is in all cases undesirable.

Much that has been said above about state *versus* local assessment applies, in the case of interstate corporations, to the question of federal *versus* state assessment. Without federal control each state is tempted to select that form of taxation and to adopt that method of dividing or allocating corporate property

and business for purposes of taxation which is most beneficial to itself. Under such circumstances some interstate corporations are taxed upon more than 100 per cent of their property or business, while others take advantage of the absence of authoritative central control to assign, in their own accounting systems, excessive proportions of property and business to those jurisdictions in which taxes are lightest.

While federal regulation is justified by the same logic which sanctions state regulation of local taxation, it is very doubtful how far federal regulation can or should go. If the national government should require some form of federal incorporation for companies engaged in interstate commerce, it is possible that it would have power thereafter to prescribe the methods by which such interstate companies should be taxed under state law. This has been done in the case of national banks, although the power of the federal government to control taxation of national banks is clearer and probably greater than its potential power to limit the rate of taxation of ordinary business corporations engaged in interstate commerce. But if the proposed federal regulation were elastic enough to permit the rate of taxation to vary in each state with the average level or burden of taxation in that state, and vigorous enough to suppress double or multiple taxation, it would represent a great readjustment.

One important readjustment, however, could be accomplished at once. Some federal agency should at the earliest practicable date be directed to formulate and enforce some simple plan of allocating the revenues and expenses of interstate corporations to the several states in which they operate. This is required not only for the fair assessment of state income taxes, but for the valuation of the properties of interstate corporations, as these properties can never be satisfactorily appraised without taking their earnings into account.

For reasons which appear in the preceding discussion, it would be misleading to formulate any clear-cut division of taxes among the federal, state, and local governments. A few forms of revenue will unquestionably be reserved for the use of one branch of government, but the pressure of increasing expenditure is likely to force a joint use of such major revenues as taxes on real estate, income and inheritance taxes, excise and stamp duties; and for these the ideal is joint administration, in which the relative

impartiality and vigor of central administration may be supplemented and perfected by the more intimate knowledge of local officials.

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PART VI

RECONSTRUCTION OF THE SOCIAL ORDER

CHAPTER XLII

RECONSTRUCTION OF THE SOCIAL ORDER

SOCIALISM — ITS DEVELOPMENT AND THE EVOLUTION OF DIFFERENT TYPES

Socialism defined.

Socialists seek the establishment of industrial democracy through the instrumentality of the State. Our political organization is to become also an economic industrial organization. Socialism contemplates expansion of the business functions of government until the more important businesses are absorbed. Private property in income-yielding capital and land which is used for exploitation is to be abolished. Socialists make no war upon capital, but they do object to the dominance of the private capitalist. They desire to socialize capital and to abolish capitalists as a distinct class. Their ideal, then, is not, as is supposed by the uninformed, an equal division of existing wealth, but a change in the fundamental conditions governing the acquisition of incomes.

Socialists usually hold that labor creates all exchange value, land and capital being merely passive factors of production; the owners of the latter ought not to receive a share of the product except as they are personally useful members of the community. Labor is the active factor, and all production is carried on for the sake of man. Land and capital are merely the tools of man. Socialists admit that the owners of these tools must receive a return for them when industry is organized as it is now; hence they desire that these tools should become public property. They wish to make of universal application the command of the Apostle Paul, "If a man will not work, neither let him eat."

The foregoing characterization applies to most persons who have been called socialists, but the genus contains a number of species which should be distinguished.

Utopian socialism.

The group of Utopian socialists contains those who have become impressed with the evils of the present competitive system and propose the collective ownership of the means of production as a remedy, in much the same spirit with which a physician writes a prescription to cure his patient. There have been many attempts to show how smoothly things would proceed if men could only be persuaded to adopt the collective ownership of land and capital. Utopian socialism is sometimes called "rationalistic," as contrasted with "evolutionary" or "scientific." It depicts an imaginary ideal state of affairs in which men behave "reasonably," so that unhappiness and injustice are banished. It really demands a fairly complete reconstruction of human nature, although some of the Utopian socialists argue with considerable justification that many of the faults of man as he is today are the products of our faulty economic and social institutions, and would disappear with the passing of those institutions.

As an example of this class we may take Robert Owen. He lived during the Industrial Revolution in England, being himself a successful manufacturer. He saw with his own eyes the evils of unrestricted competition, and was filled with an earnest desire to better the condition of the working classes. He is remembered chiefly as a factory reformer in connection with the successful New Lanark experiment and promoter of voluntary co-operation, but he regarded such efforts as not sufficiently radical and thoroughgoing. He thought human nature must be reformed by careful training from childhood in an atmosphere of association, instead of in the self-seeking commercial atmosphere which surrounded his own life. He spent his large fortune in an attempt to carry out his ideas regarding the reconstruction of society. Among his projects was the founding of a colony at New Harmony, Indiana, where private property and competition were not to exist. After a struggle of two years, the experiment ended in complete failure, as have most other similar enterprises. In this group would also be placed Fourier, Cabet, Bellamy, and

others. Some writers, like Louis Blanc, occupy a position intermediate between the Utopian and later socialistic movements.

Marxian socialism.

The Marxian socialists call themselves "scientific," as distinguished from the idealistic writers just mentioned. They insist that they have no cure-all for the ills of society. Socialism in their eyes is only an explanation *of what* is happening and a forecast of what must inevitably happen in the future. The private capitalistic system is breaking down and the logical result must be the collective ownership of the means of production as the next stage in social evolution. They say that setting aside all question of "ought" or "desirability," collective ownership is coming, and we might as well adjust ourselves to it.

Karl Marx (1818–1883) and his friend and collaborator, Friedrich Engels (1820–1895), were the founders of this type of socialism, the origin of which may properly be dated from their joint *Communist Manifesto* of 1848.[1] The basic elements of the Marxian philosophy are: (1) the labor theory of value, and (2) the economic interpretation of history. The labor theory of value has been briefly considered in an earlier chapter. Upon it Marx built the doctrine of surplus value, according to which the income of the capitalist class is not a payment for "waiting" or for any other productive service, but results from the fact that through their ownership of the means of production capitalists can compel laborers to work for more hours than are needed to produce what they receive as wages. From this "surplus value" of the additional product is derived the capitalist's income.

The economic interpretation of history makes the struggle for a living the factor which determines political, legal, and religious institutions, as well as those of art, literature, philosophy, and accepted codes of morals. Economic self-interest, expressing itself in one way or another according to differences in modes of production and exchange, is held to be the stuff from which history is made. Marx and Engels made this particular phi-

[1] The Marxian doctrines respecting value and distribution were closely paralleled by those of Karl Rodbertus, a very able German socialist. Similar views had already been advanced by the Frenchman, P. J. Proudhon, and by certain English writers, notably William Thompson, who had given a socialistic twist to doctrines derived largely from Smith and Ricardo.

losophy of history serviceable to the cause of socialism by putting particular stress upon the way in which self-interest expresses itself as class-interest. Thus the economic interpretation of history was made to lead to the doctrine of the class struggle. In the words of the *Communist Manifesto:*

> "The history of all hitherto existing society is the history of class struggle. . . . In the earlier epochs of history we find almost everywhere a complicated arrangement of society into various orders, a manifold gradation of social rank. . . . 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 ones. Our epoch, the epoch of the bourgeoisie, possesses, however, this distinctive 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 classes directly facing each other: Bourgeoisie and Proletariat. . . . The advance of industry, whose involuntary promoter is the bourgeoisie, replaces isolation of the laborers due to competition by their involuntary combination due to association. The development of modern industry, therefore, cuts from under its feet the very foundation on which the bourgeois produces and appropriates products. What the bourgeoisie therefore produces, above all, are its own gravediggers. Its fall and the victory of the proletariat are equally inevitable."

Looking backward, the bourgeoisie, or capitalistic middle class, was depicted as having originated in the medieval towns and as having finally gained the ascendancy over the privileged feudal orders. Looking prophetically forward, it was pictured as decreasing in numbers and growing in wealth and power, with the proletariat or laboring class increasing in numbers but becoming increasingly impoverished. The gulf between the two classes would widen until the workers, coming to realize their class interest and their potential power, would arise in revolt — either violent or peaceful — and would establish the socialistic regime. Because of this exceedingly important aspect of its doctrines, Marxian socialism is often called revolutionary, or scientific-revolutionary, socialism.

As a matter of fact the word "revolutionary" describes this type of socialism better than "scientific." Marx's economic theories are exceedingly intricate, and his philosophy of history is full of inconsistencies and contradictions. But the doctrine of surplus value, however unscientific it may be, constitutes a proc-

lamation that injustice reigns in the world today. And the doctrine of the inevitable class struggle has been found to exercise a fascinating compulsion over the imaginations and emotions of men. It is for such reasons, and not because of its "scientific" qualities, that Marxian socialism has attained its present enormous following.

Types of moderate socialism.

Although socialism looks toward the expansion of the economic functions of the state, most socialists think that the coming of socialism would be attended by the replacing of existing forms of government by new types. The socialist state, they hold, would be controlled by the "hand and brain workers"; it would be decentralized as far as possible; its legislative and administrative machinery would be "democratized"; and its "coercive" powers would be minimized, — for socialists profess to believe that with a different economic system less coercion would be needed. Some socialists anticipate a dual system of government, one branch dealing with political and the other with economic affairs.

State socialism is a term frequently used to designate the views of those who favor an extension of the economic functions of existing governments. Its adherents include those who favor extending government ownership and increasing considerably the amount of governmental supervision over private industry. Marxian socialists of the more extreme type are generally opposed to state socialism on the ground that it strengthens the existing "capitalistic state." One reason why Bismarck supported a moderate program of state socialism in Germany was that it helped to retard the growth of revolutionary socialism.

The members of the British Fabian Society sometimes designate their doctrines by the name of *administrative socialism.* Their avowed aims include "the extinction of private property in land" and "the transfer to the community of the administration of such industrial capital as can conveniently be managed socially," together with an elaborate program of labor legislation, tax reform, and political reorganization. Organized in 1889, the Fabian Society has never had more than a few thousand members — largely "intellectuals" — but it has had a very marked influence upon the progress of socialism and the labor

movement, as well as upon British politics. Among its leading members are Sidney and Beatrice Webb, Bernard Shaw, and Harold Laski. Education, co-operation, and gradual change instead of revolution are fundamental tenets of the Fabian creed. Such younger Fabians as Professor Laski, however, have become increasingly impatient with the philosophy of "gradualism" of the older Fabians.[1]

There are other types of moderate socialism, but their likenesses are more important than their differences. In fact, in their more moderate wings, most types of socialism meet at a common point. Thus there are many among the Marxian socialists who believe that some of Marx's doctrines need to be revised, especially his pessimistic prophecies. Moreover, instead of waiting for the final revolution, all but the most extreme sects of Marxian socialists have come to give their active support to "opportunistic" measures, accepting gladly what small gains can be secured from time to time, even at the hands of the "capitalistic state." Practically, the views of the more conservative socialists of different countries do not differ greatly. Allowing for differences in national conditions and national problems, the program of the Social Democratic party of Germany prior to the rise of the Nazi regime was strikingly similar to that of the Fabians.

The following words of the late Jean Jaurés — a very able and influential French socialist — on the method of realizing the socialist ideal are of interest in this connection:

> "All Socialists, indeed, some openly, others with infinite precautions, some with a mischievous Viennese good-nature, declare it to be untrue that, taken as a whole, the economic material condition of the proletariat is getting worse and worse. It must be conceded, after taking account of the tendency to sink and the tendency to rise, that in the immediate reality of life, the tendency to sink is not the stronger. Once this has been granted, it is no longer possible to repeat after Marx and Engels that the capitalist system will perish because it does not insure to those whom it exploits the minimum necessities of life. It follows from the same admission that it has also become puerile to expect that an economic cataclysm, menacing the proletariat in its very existence, will bring about, by the revolt of the instinct of self-preservation, the 'violent overthrow of the bourgeoisie.'
>
> "It is not by an unexpected counter-stroke of political agitation that the proletariat will gain supreme power, but by the methodical

[1] Harold J. Laski, *The State in Theory and Practice*, Viking Press, New York, 1935.

and legal organization of its own forces under the law of the democracy and universal suffrage. It is not by the collapse of the capitalistic bourgeoisie, but by the growth of the proletariat, that the Communist order will gradually install itself in our society." [1]

Since Jaurés wrote these words, the World War, the Russian revolution, the rise of Fascism, the serious crises in capitalist countries, and the lamentably meager progress made by some of the minority socialist governments when in office have all tended to develop among socialists an increasing impatience with passive "gradualism," and have encouraged a program of change which, while still peaceable, would be relatively rapid and aggressive.

The strength of socialism.

Socialism makes perhaps its strongest claim for sympathetic consideration in its plea, first, for a scientific organization of the productive forces of society, and second, for a just distribution of the social income. It is said that the present production of economic goods is small in proportion to population, but the socialist replies: "Naturally enough. Competition is wasteful. Two railways are built where one would suffice. Two trains run parallel between two cities where one would serve the public equally well. Three times as many milk wagons, horses, and drivers are required to serve the people as would suffice if the milk business were organized like the mail distribution in cities. Look at the shops, wholesale and retail, and see the waste of human force. Without competition, the dry goods business and the grocery business could be carried on with a third of the present expenditure of energy. Reflect on all the idle classes in modern society. Socialism would set everybody to work, and, making each dependent on his own exertions for success, would stimulate all energies." The argument is a telling one, but it does not prove its point unless we grant that the present waste and idleness cannot be suppressed or greatly diminished without a departure from the fundamental principles of our present industrial order, or that its waste and idleness are not counterbalanced by advantages which would be lost under a socialistic regime.

[1] J. Jaurés, *Studies in Socialism* (trans. from French by M. Minturn), Putnam's Sons, New York, 1906, pp. 167–169.

The socialist criticism of the present regime is especially severe in the matter of unemployment. There are always some men able and willing to work who are seeking employment, and periodically, with the coming of crises and depressions, the lack of employment becomes widespread. Again, it is urged that today goods are made for sale, not for use, as they would be under the socialistic regime. Adulteration, deception, and "cheap and nasty" goods are the direct outcome of a system of private capitalism. In the socialistic state we are told that the business of the shopkeeper would be to help you find what you really need; at the present time it is to his interest to persuade you to buy what you do not need or what will give him the greatest profit. The spirit of competition is to the socialist simply warfare. In every business establishment a good deal of effort and expenditure is devoted, not to the production of goods, but to finding a market for them. Ability to sell is quite as essential to success in modern business as the ability to turn out good products.

As to what constitutes "justice" socialists are not wholly agreed, nor are they clear respecting the precise ways in which justice is to be secured under socialism. A few socialists have advocated an almost mechanical equality, but most would regard the question of a precise standard for the distribution of income as not of present importance. They simply agree that the present system of distribution is unjust. Laborers, skilled mechanics, inventors, poets, authors, engineers, and factory managers, they allege, are the real producers, but they do not receive the maximum rewards.

Justice is a strong plea in the socialist philosophy. It cannot be claimed that each one's income is at present in proportion to his services to humanity. But there is nothing distinctively socialistic about the desire for distributive justice. It is a feeling that actuates those who work for the control of monopolies, for tax reform, for regulation of inheritances, and for labor legislation. The socialist simply differs in his proposed method of attaining his ideal.

The weakness of socialism.

1. Strong as may be the foregoing indictment of the existing industrial system, it is not sufficient to indicate that socialism is to be the necessary or the desirable alternative. The modern

machine age is little more than a century old, and some of its most important developments are very recent. The dire predictions made by Marx and his followers on the strength of some of the earliest phenomena of the factory system have not been borne out; similarly, the evils of today may possibly be very largely eliminated without departing from our fundamental institutions. In short, the first weak point in the socialist's position is that he attempts to predict the course of economic evolution too far in advance. That we shall have a juster distribution of wealth in the future, and that we shall eliminate many of the present wastes of production seems probable, but that this will be accomplished by a thoroughgoing socialistic organization is as yet unproven. It is desirable to have ideals to work toward, but we should not pin our faith now to a future method for attaining them. Socialism at its best is an abstract and vaguely-defined ideal. Real progress consists of the specific and definite steps forward that we are able to take from time to time in accordance with a well-comprehended set of guiding principles.

2. The socialist underestimates the efficiency of the present system. In particular, he fails to see the significance of the great and smoothly-working system of economic co-operation that has resulted from giving opportunity to free individual enterprise. Much may be wasted, but much is also produced. The present regime is continually offering more and more to the mass of the people. Their standard of life is continually rising. Our economic world is, on the whole, improving, although with recurrent recessions. In other respects also, the socialist is too pessimistic with respect to the present. He sees all of the starvation, misery, luxury, and extravagance, but he passes by the millions of comfortable homes scattered throughout the land. He does not see that even if the chance for ownership of a large independent business for the ordinary man is smaller, the things which he can enjoy, if he is of average intelligence and energy, are really much greater in amount and variety than ever before in the world's history.

3. The socialist underestimates the importance of individual responsibility. This quality, given free play, has given the world much of incalculable value which might never have been created under a system of collectivism.

4. The socialist underestimates the importance of free enterprise in industry. The possibilities of free and spontaneous development should be safeguarded from governmental routine to every possible extent. A characteristic of free enterprise is that it seeks profits at the risk of loss. The socialist forgets the losses and sees only the rewards accruing to business success. In short, in an almost blindly obtuse way, he misses the one most essential characteristic of what he calls the "capitalistic" system.

5. Perhaps the most frequently-mentioned objection to socialism is the danger to liberty. Under socialism, there would be simply the public sphere of employment, and there is reason to fear that the inability to escape from the public sphere would compel submission to onerous and tyrannical conditions imposed by the administrative heads of the business in which one might be engaged. The socialists reply that this objection refers to liberty in the negative sense of freedom from interference rather than in the positive sense of the power to have and to enjoy goods, yet there is good reason for fearing the tyranny of the majority. Those in whose hands political *and* economic control centered would have tremendous power, however they might be selected or appointed. Even as a consumer one has today a large freedom of choice and action, which he enjoys by virtue of the competition of producers and dealers. This is not lightly to be abandoned. Competition, however imperfect, gives freedom to the individual as producer and consumer. Socialism offers instead a regimented scheme of life, with the individual subordinated to the State. Socialism rests on compulsion; the present economic order, with all of its defects, rests in no small part upon free agreement. As in the religious sphere in the past, so in the economic sphere in the future, we may find that compulsory co-operation carried so far as is inherent in socialism is incompatible with human nature.

6. The Marxian socialists may be criticized for the importance which they attach to the economic interpretation of history, for the validity of that proposition does not establish the validity of the socialist contention. Even if it be true that our social life is a reflex of our economic activity, it still does not necessarily follow that our economic development tends inevitably toward socialism. The doctrine of the class struggle also does not give an accurate account of existing conditions. We have a laboring

class and a capitalist class, it is true, but there is also a considerable class, perhaps large enough to hold the balance of power between the other two, which does not sympathize exclusively with either laborers or capitalists. Moreover, we have still other classes, separated by lines that cut across those separating the capitalists and the laborers. Race is, for example, the basis of a social classification that lessens the unity and cohesiveness of the laboring class. The existence of these other class divisions may tend to detract somewhat from the much heralded results that may flow once economic distinctions disappear.

Thus far we have treated socialism as a broad general concept including many different types. What is common to them all is the collective ownership of the instruments of production with the consequent abolition of the private receipt of rent, interest, and profits. In other words, property as such must not yield private income. The ownership of land and capital being public, the gains from ownership are socialized, that is, they are diffused among the community.

Socialists differ among themselves as to the extent to which private property is to be abolished. Generally they admit the ownership of personal property, for example, household furniture, heirlooms, etc., but the ownership must not extend so far as to permit the existence of a class of owners living from ownership.

We have treated Marx as a socialist and generally his adherents are called Marx Socialists. Marx, however, called himself a communist and that epoch-making document in the history of Socialism is called the *Communist Manifesto.*

The type of socialism developed by the followers of Marx is so distinctive it is best to follow their own terminology and call it communism.

Communism

Communism today.[1]

Communism is like socialism in respect to the ownership and control of the instruments of production; income from privately owned property must cease and all must earn a livelihood by

[1] Communism has meant many different things, one of them of purely historical interest. The student would do well to read the excellent article on Communism by Max Beer in the *Encyclopaedia of the Social Sciences* in which will be found a description of the various social idealisms and schemes for a complete or partially reconstructed social order from the time of Christ onward. At present Communism is Marxian.

personal services. As all are workers the society established knows only one class. The classes now, it is held, are inherent in capitalism and with the abolition of capitalism classes disappear and we have a classless society.

It seems paradoxical that we should have two groups and parties both socialists and yet actually antagonistic, so bitterly fighting each other at times that they engage in bitter warfare, although occasionally they strive to get together in a united front against the present economic order.

Although rigid distinctions are difficult to make, socialism tends more towards moderation in its tactics than communism. The former is more definitely a middle-class movement, the latter is more strictly proletarian in its appeal.

The socialists as we generally find them emphasize education, political action, and progressive social and economic reform, within the existing social order, and hope for the peaceful establishment of socialism. On the other hand, in the words of Marx, "The emancipation of the laboring classes must be accomplished by the laboring classes." [1] As the *Communist Manifesto* states: "The Communists scorn to conceal their views and purposes. They declare openly that their aims can be obtained only by a violent overthrow of the existing social order, that the ruling classes will tremble before a communist revolution. The proletarians have nothing to lose except their chains. They have a world to gain. Proletarians of all lands unite." The militancy and fierceness of these words are in decided contrast to the milder utterances of the conservative socialists, for example, the Fabian Socialists in their early day, before some of them fell under the influence of Russian communism. Compare these words with anything that John Stuart Mill ever wrote, even after he avowed himself a Socialist. Or to come down to our own day, compare these words with the writings of Norman Thomas and Harry W. Laidler, the former the socialist candidate for the Presidency in 1936, and the latter the socialist candidate for the governorship of New York State in that same year.

The communists of our day advocate action, strikes, and especially the general strike. They bore from within. They

[1] From the platform of the International Workmen's Association, adopted at its first meeting in London, 1864. See Ely's *French and German Socialism in Modern Times*, p. 183.

form nuclei or cells in labor unions and elsewhere, and even the army. They advocate conspiracy and aim to secure their ends by means which are considered unethical by current morality, which they scorn. Marx's theory of revolutionary tactics is still adhered to and violence is resorted to whenever it is deemed necessary by his followers.[1]

The socialist movement, on the other hand, in the words of Harry W. Laidler "has based its tactics on the hope that socialism would be brought about through the growing power of the workers organized in labor unions, in political parties, in co-operative societies, and in educational groups. They have striven for the day when the labor and socialist parties in the advanced countries of the world would become majority parties in Parliament and through legislative action enforced by trade and industrial unionism would proceed to transform industry from private to public control."

The communists of the Marxian type, the only communists that today really count, believe in cataclysm, or complete collapse of the present social order. Capitalism failing to give jobs and bread, the masses turn necessarily to a different economic order. They will then find leaders in every sector of industry, in the government, in the army, and in the Civil Service. These trained and disciplined leaders will then organize the masses and overthrow by force the existing order and introduce communism. The non-proletarians will be removed, replaced completely, even liquidated. The dictatorship of the proletariat will be established. This is what has occurred in Russia, which today is the one great country of the world in which communism has been established and is in action. There is no pretense of freedom of speech, the press, or assembly. The advocates of communism look upon the absolute state under proletarian dictatorship as a temporary phase to be succeeded by more democratic government with liberty of thought and action. This will come about when the population has been thoroughly educated, trained, and disciplined by communism. New habits of thought, new customary modes of action, new ideologies will then have become

[1] Cf. Earl Browder's debate on communism with Everett Dean Martin in the *Forum* for November, 1936; also various articles by Mr. Browder in the *New Masses*. The *New Masses* is the outstanding organ of the communists in the United States. It is well written, concise, and clear-cut. It can be recommended as source material for those who want to know what communism means to its modern advocates.

so much part and parcel of the very life of the people, that all danger of counter-revolution will have passed. Communism, as seen in Russia, is necessarily totalitarian, just as fascism in Germany and Italy is totalitarian, only more so. All agencies of thought and action must be brought into a unitary harmony. Little religious liberty can be tolerated. No free experimentation in education is permitted, because lack of co-ordination in these spheres would, it is held, destroy the essential economic unity. All social forces must be intended to solve the problems of the communist state so as to provide what we call the abundant life for all.

It is not now possible to tell precisely what is happening in Russia and, still less, to tell what is going to happen. The reports that reach us from Russia are conflicting and Russian communism is still very new. The growth of communism in Russia has taken place exactly according to the program of Marx as interpreted and applied by Lenin and Stalin. Temporary concessions have been made, but these have been only strategic retreats for a forward movement at some later time.

The peasants, just as was expected, offered the greatest resistance to communism. Collectivization of farms has steadily advanced and the peasants are being brought into the communistic scheme. This required force and bloodshed. The "kulaks," the larger and wealthier farmers, have been liquidated. They have been sent to labor camps. They have been killed when recalcitrant and generally have been reduced to a miserable state. On the other hand, it seems clear that the peasants are becoming more and more reconciled to the socialized farming.

It is said that the masses in Russia enjoy more material comfort than they did under the Czar. Apparently this is true, although the standard of life is still low as compared with the United States.

Education has taken great strides, and illiteracy is being replaced by literacy. The young are being taught to read and write. Scientific research is in some fields making noteworthy progress, but all education and research must be in accord with the principles of the totalitarian society. It is all held down to a rigid conformity to the indwelling ideas of communism. Propaganda with brute force is used to suppress all movements of the spirit which are out of harmony with the ideology of communism. Within these limits there is encouragement of literature

and art, and communist writers are highly honored, and splendidly remunerated. Religion is looked upon as "The opium of the people," designed to keep them subservient, while they are exploited by the capitalists so that they may remain weak slaves.

A new constitution has been published and a more democratic form of government is promised. Will this come about? Will Stalin, or some future Stalin, relinquish dictatorship? The answer to these questions will be given by the future.

In the meantime, communism has a very small but determined minority of adherents in our own country. On the other hand, to most Americans it is abhorrent. The Catholic Church is officially arrayed against it and is carrying on a very determined opposition to its spread. No one can speak for the Protestant Churches because they are not united in one organization. It is doubtless true, however, that the vast majority of Protestants share the views of the Catholic Church. There are, however, a few radical preachers and economists who are sympathetic to communism as it is in Russia. They feel that the excesses which have accompanied it are an inevitable accompaniment of revolutionary movements and that a better order than the world has ever seen so far will issue from it. "You cannot fry an omelet without breaking the eggs." The communists believe that the omelet will be worth more than all the broken eggs.

Fascism

Fascism is a reconstructed social and economic order. It has resemblances to socialism and communism and it also has differences which are more marked than the resemblances. It is like both in that it is a new order in its foundations and in the super-structure built on those foundations. It embraces all social relations and in this respect it is far more radical than socialism, when socialism is reduced to its essential features as in this work. We could conceive of socialism as a pure economic order, leaving religion, the family, and culture to the citizens to work out apart from interference with government.

The concept, as well as the practice, of fascism as seen in the two fascist States, Italy and Germany, is so complex and so intricate that it is hard for those who live in a modern capitalistic and democratic country, like England and the United States, to grasp.

Let us then take up one by one the elements that, compounded together, give us a Fascist State. Analysis must precede synthesis.

Fascism is totalitarian; that is, it is all-embracing so far as social relations are concerned. As conceived by the Fascists it is something far more than economic. They say it is, first of all, "spiritual." It is concerned with the family, art, science, and religion, all of which must be united into a harmonious entity. While there may be differences in these particulars, they must not be so fundamental and far-reaching as to impair the essential unity that is the totalitarian quality of the State.

Fascism is intensely national, not universal. It magnifies the *state* until it is something noble, beautiful, sacred. It is all-controlling. The individual exists for the *state* and in the *state* he finds fulfillment. The glory of the individual is the *state.* To quote from Mussolini's "The Doctrine of Fascism": "For the Fascist, all is comprised in the State and nothing spiritual or human exists — much less has any value — outside the State. In this respect Fascism is a totalising concept, and the Fascist State — the unification and synthesis of every value — interprets, develops, and potentiates the whole life of the people."

The following quotations from Mr. Lawrence Dennis, considered by many to be the leading American fascist, are illuminating. They show how it appears to one brought up in our own country with an American background and with an American training at Harvard University:

> "Liberalism says, that government is best which governs least. Fascism holds that government is best which is most efficient in the achievement of its acknowledged ends. Liberalism idealizes the policeman state, supposedly umpiring with impersonal neutrality the playing by individuals of a certain game, the rules of which were written chiefly in the interests of the propertied trading classes. Liberalism insists that the playing of this game constitutes welfare, liberty, personal security, and, in short, the good life for every one, or almost every one. The unifying principle is a supposed contract or pact to play the game according to the rules. Fascism finds these postulates in large part factually untrue and ethically as well as aesthetically repulsive. Instead of regarding the state as a necessary evil, or a lesser evil than anarchy, fascism prefers to find the state noble and beautiful, the synthesis of the highest cultural or spiritual values of the group as well as the most powerful and efficient nexus of agencies for the realization of these values.

"Philosophically fascism cannot validate its values by divine revelation, natural law or human reason. Fascism says that facts are normative, will is the great selector of values, reason is but the instrument or means of their realization, might makes right, and fitness to survive can be proved only by surviving. As a practical matter, of course, the scheme of values or social objectives gets formulated and modified from time to time under fascism very much as under liberalism or communism, — by an elite of leadership. In this respect, fascism differs from liberalism or communism mainly in admitting frankly the role of leadership. Liberalism has never been leaderless, but it has consistently sought to relieve the leaders, as much as possible, of responsibility, while, at the same time, affording them the largest personal rewards.

". . . while communism glorifies the rule of the proletariat and idealizes the gradual withering away of the state, communism, in operation, is aggressively building up the strongest attainable national state, exactly like fascism. In one case the unifying principle is called the nation, and, in the other, it is called the proletariat. In both cases, there is a nation which faces the other nations as potential enemies. In the case of communism, to inevitable international war there is added inevitable class war within each nation. Marxism, of course, preaches peace on earth after all the capitalists have been put to the sword like the Philistines were supposed to be dealt with by the Children of Israel. The unifying principle of group solidarity is much the same in liberalism, fascism, and communism, except that communism makes the capitalist at home, as well as the foreigner abroad, an outsider, and except that, whereas nations can be at peace with each other for long periods, the communist nation can never be at peace with capitalists at home or abroad."

From all this it necessarily follows that Fascism means a thoroughly planned society, planned far more minutely than anything that has been discussed by advocates of planning in the United States.

Fascism does not believe in equality but accepts inequality in the powers of men and insists on a hierarchical social structure. Leaders are the gifted men, the "elite," to employ a word constantly recurring in fascist literature. To use a statement of the Saint-Simonians who, with some exaggeration, have been called the first modern Fascists: "They believe in the natural inequality of man and regard this inequality as the very basis of association as an indispensable condition of social order." [1]

[1] See Chapter 4 of Ely's *French and German Socialism* on "Saint-Simon" in which striking points of resemblance as well as differences between the Saint-Simonians' planned society and Fascism as seen in Germany, and especially in Italy, are described. Could Mussolini have been ignorant of the writings of Saint-Simon and his followers?

Inevitably a Fascist state must be organized like an army with all its gradations of rank. In Italy the general-in-chief is the Duce, and in Germany the Führer. Fascism is for all; otherwise it is not totalitarian. A place must be found for every citizen, which means jobs for all. As a cornerstone of fascism, rewards must be in proportion to services, and rank in the State in accordance with capacity. Fascism retains private property in land and generally in the instruments of production outside the field of natural monopolies, like railways, public utilities, etc. However, all the natural resources, the human resources, all the great aggregation of capital, must be used and used well or the State will compel the correct use by regulation or even by the replacement of the present owners with others. The owners who refuse to subordinate their wishes to the commands of their supervisors which are made in the general interest must be replaced or punished severely. If the refusal takes on any taint of rebellion, death is the probable penalty.

Mussolini has not hesitated to "crack down" — a familiar American phrase — on the bankers and big industrialists whenever he felt it necessary to do so in the interest of fascism. Those who suppose that either in Germany or Italy fascism is an organization created for bankers and big capitalists simply show that they do not know what is going on in those two countries. The most that can be said is that such magnates may have accepted fascism in lieu of that which they feared still more, communism.

Fascism favors the largest possible production so that there may be the greatest national dividend to be distributed among the citizens. We find, in Italy especially, a wonderful development of natural resources, marshes drained, fertility of the soil improved, forests developed, etc. Mussolini has attempted to demonstrate the dignity of labor as he saw it by pitching hay, wielding the spade, etc. In Germany young men are organized in military fashion, carrying spades on their shoulders instead of the rifles which they may carry later. Rich and poor, all must work according to the tenets of fascism.

The Fascist state in Italy is called the Corporate State. The industries of Fascist Italy are organized in groups or classes, embracing both employer and employee. There must be no destructive conflict but all concerned must work toward the common end of the production of wealth and the benefit of all.

It resembles the old gild system which once flourished in parts of Europe. This is akin to the syndicalist theory, the syndic being a group organization, a trade union, with the chief legislative and regulating body consisting of representatives of the syndic. In Italy the Corporation is the unit and representatives of corporations replace the former Parliament, which was based on individualism in votes.[1]

The following quotation gives the Resolution drafted by Mussolini and approved by the National Council of Corporations on November 13, 1933:

> "The National Council of Corporations defines the Corporation as the instrument which, under the aegis of the Government, carries out the integral, organic, and unitarian regulation of production with a view to the expansion of the wealth, political power, and well-being of the Italian people;
>
> "It affirms that the number of corporations to be formed for the main branches of production should, generally speaking, be in keeping with the real needs of the country's economy;
>
> "It decides that the general staff of each corporation shall include representatives of government departments, of the Fascist Party, of capital, labour, and of technical knowledge;
>
> "It assigns to the corporations as their specific tasks: conciliation, consultation — compulsory on problems of major importance — and the promulgation, through the National Council of Corporations, of laws regulating the economic activities of the Nation;
>
> "It leaves to the Fascist Grand Council the decision on the further developments, of a constitutional and political order, which would result from the effective formation and practical working of the Corporations."

It will be noticed that the Dictator, the Duce, keeps in his hands the right to intervene at any time and anywhere. Thus unity is preserved. Fascism emphasizes duties rather than rights. Labor is said to be a social duty. Fascism is strenuous in its stress on discipline rather than liberty. Although fascism is new, ancient society, and especially the Jews, were far more fascistic than democratic or socialistic. There are comparatively few advocates of fascism in England, and perhaps a still smaller number in the United States.

What is here given may be called the quintessence of fascism, the indwelling idea. There has been an attempt to present it

[1] Paul Einzig, *The Economic Foundations of Fascism*, Macmillan, Ltd., London, 1934, pp. 28–29.

without criticism. As it is found in practice there is much that is revolting to most people in the United States and in England. We do not like the drastic suppression of freedom, the persecution of the Jews in Germany, the concentration camps and the harshness shown to all hostile elements. Especially do we dislike the glorification of war which we fear may be as destructive of our civilization. We view with alarm the attitude of Fascism toward war as stated in the following words of Mussolini:

> "As far as the general future and development of humanity is concerned, and apart from any mere consideration of current politics, Fascism above all does not believe either in the possibility or utility of universal peace. It therefore rejects the pacifism which masks surrender and cowardice. War alone brings all human energies to their highest tension and sets a seal of nobility on the peoples who have the virtue to face it. All other tests are but substitutes which never make a man face himself in the alternative of life and death. A doctrine which has its starting-point at the prejudicial postulate of peace is therefore extraneous to Fascism.
>
> "In the same way all international creations (which, as history demonstrates, can be blown to the winds when sentimental, ideal, and practical elements storm the heart of a people) are also extraneous to the spirit of Fascism — even if such international creations are accepted for whatever utility they may have in any determined political situation.
>
> "Fascism also transports this anti-pacifist spirit into the life of individuals. The proud squadrista motto 'me ne frego' ('I don't give a damn') scrawled on the bandages of the wounded is an act of philosophy — not only stoic. It is a summary of a doctrine not only political: it is an education in strife and an acceptance of the risks which it carried: it is a new style of Italian life. It is thus that the Fascist loves and accepts life, ignores and disdains suicide; understands life as a duty, a lifting up, a conquest; something to be filled in and sustained on a high plane; a thing that has to be lived through for its own sake, but above all for the sake of others near and far, present and future."

What is the future of Fascism? The answer to this question takes us beyond the province of this work into the realm of prophecy. So far as the authors are concerned we believe in social reform, in the evolution of democratic capitalism as found in the United States and England. We do feel it essential, however, that our readers should understand what socialism, communism, and fascism mean to the advocates of these three schemes for the reconstruction of the social order. We must understand

these ideals and ideas if we are to cope with them. By the light of these philosophies we can more clearly understand and appreciate our own.

Other Schemes for a Reconstructed Social Order

At the present time there are three chief plans for a reconstructed social order. They are the three that we have just discussed in the preceding section, namely, socialism, communism, and fascism. These three plans are present forces of the greatest social moment. There are other plans, however, which are chiefly of historical significance. These plans still have advocates and possibly may again play their role in social ideologies.

The most important of these plans is anarchism. It had a following in the United States in the 'eighties of the last century and, to some extent, later. It was probably stronger in Chicago than anywhere else. There the agitation culminated in the Haymarket riot when a bomb was tossed, into a crowd, killing, among others, several policemen. It was attributed to the incitement of the anarchists, several of whom were hanged. Among these was August Spies who doubtless was the leader of them all. This drastic action weakened anarchism greatly and it has gradually almost wilted away in the United States.

It has had more influence in the Latin countries of Europe than elsewhere, but little is known there of it, except in Spain where it seems to play a role of some significance in the present civil war of that country.

Anarchism

In contrast with the socialists, the anarchists hold that the ideal arrangement is that men should freely and spontaneously form co-operative groups. The anarchists attack government and deny the right of one man to exercise authority over another, or of a majority to have power over a minority. Freedom, independence, self-reliance, non-compulsion, are what appeal to them. Such an ideal contains nothing reprehensible, but its complete attainment is impossible. Some governmental compulsion seems necessary with human nature as it is or is ever likely to be. Kropotkin, one of the most famous anarchists,

described his ideal society, based on voluntary association, in these terms:

> "This society will be composed of a multitude of associations federated for all the purposes which require federation; trade federation for productions of all sorts, — agricultural, industrial, artistic; communes for consumption, making provision for dwellings, gas-works, supplies of food, sanitary arrangements, etc.; federations of communes, among themselves, and federations of communes with trade organizations; and finally, wider groups covering all the country, or several countries, composed of men who collaborate for the satisfaction of such economic, intellectual, artistic, and moral needs as are not limited to a given territory. All these will combine directly by means of free agreements between them, just as the railway companies or the postal departments of different countries cooperate now, without having a central railroad or postal government, — even though the former are actuated by merely egotistic aims, and the latter belong to different and often hostile states; or as meteorologists, the Alpine clubs, the lifeboat stations in Great Britain, the cyclists, the teachers and so on, combine for all sorts of work in common, for intellectual pursuits or simply for pleasure." [1]

Many persons class anarchists and socialists together as simply dangerous persons. One thing they do have in common is their discontent with existing conditions. In general, this reaction is far more violently expressed by the anarchists who think the present social and economic order is hopeless and must be destroyed. But in the final analysis the anarchists are socialists in the broadest sense of the term. They hold that with the state gone, by voluntary action men will organize a society without private ownership of the means of production. Rent, interest, and profits would cease, they say, without the authority of the state to enforce their collection from the workers.

Anarchists differ among themselves. The "communist-anarchist" Kropotkin advocated revolutionary tactics, as did Bakunine and Stirner. The "philosophical anarchists," such as Tolstoi, have advocated a peaceful policy of non-resistance. Godwin and Proudhon may be called anarchistic theorists.

Syndicalism

Syndicalism is more akin to anarchism than to socialism. The term is derived from the French word for labor union. The syndicalists believe that the emancipation of the working classes

[1] *Memoirs of a Revolutionist*, Houghton Mifflin, 1899, pp. 398–399.

is to be achieved, not through control of present government, but by means of, first, the control of industry and, second, government by labor unions. Like the Marxian socialists they emphasize the class struggle, but advocate "direct action," as contrasted with political methods. They attack the state by ignoring it. Under "direct action" they include the use of the general strike and of other militant tactics, such as sabotage and the boycott. They are extremely pessimistic with respect to the outlook for the laboring classes. This doctrine had its highest development in France about 1908, and exercised for a while a dominant influence upon the French General Confederation of Labor. There is some resemblance between the doctrines of French syndicalism and the policies of the Industrial Workers of the World — a loosely organized American industrial union made up very largely of migratory or "casual" laborers. The tactics of syndicalism are condemned by the American Socialist party.

Some of the ideas of syndicalism have entered into Italian Fascism and apparently in the early days of Fascism there was a direct connection between leaders among the Industrial Workers of the World in the United States and the adherents of Mussolini.[1]

Gild Socialism

This was a relatively recent development in England in 1930 when the last edition of the present work appeared. In one aspect, it represents an attempt to find a middle road between the "tyranny of collectivism" and the planless anarchy of syndicalism. In another aspect, it reflects the same romantic idealization of the industrial system of the later Middle Ages which one finds in the writings of John Ruskin and William Morris. Its economic theory was for a while substantially Marxian, but some of its spokesmen have developed a new analysis, in which emphasis is put upon the evils inherent in present methods of financing industry. For the most part, however, its criticism of the present economic order is directed at: (1) the wage system, which involves the "commodity theory of labor," and makes the laborer merely a passive tool; (2) "industrial autocracy," robbing the laborer of independence and of the power of self-direction and self-expression; (3) "production for profit instead

[1] See Chap. VI on "Socialism, Communism and Fascism" in the *Great Change* by Ely and Bohn, especially pp. 84–129, by Bohn.

of for use"; (4) resting the ownership of property upon other grounds than the social "function" performed by property and its owners. With industry "restored" to the control of the workers, the worker, it is held, could find pleasure in doing good work and producing beautiful things. The general scheme of political and economic organization which the gild socialist envisages is not greatly unlike that described by the anarchist Kropotkin, in the passage quoted above in treating anarchism. There is the important difference, however, that the gild socialists looked toward a planned rather than a spontaneous scheme of organization, the central political state remaining, perhaps, as a "distributor of functions" to the different consumers' and regional associations and to the various industrial gilds. The details of the scheme are hazy and incomplete — a charge which could be brought with even more force against other types of socialism — and difficulties suggested by such words as demand, markets, risk, invention, economic change, and the like have not been squarely faced. Gild socialism has no present political importance. Its strength is not in its constructive program, but in its criticism of the present economic order, which it attacks at some of its weakest points. But progress is not to be made by mere destructive criticism, useful as that may be as a preliminary to positive programs. No scheme of economic reform has a chance of success which does not emphasize efficiency in production and which is not concrete in its basic proposals.

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PART VII

THE DEVELOPMENT OF ECONOMIC THOUGHT

CHAPTER XLIII

THE DEVELOPMENT OF ECONOMIC THOUGHT

I

Economics as we now know it has been a continuous growth. We cannot understand what it is unless we understand this. In some of the natural sciences it may be that history has little significance, consisting, so it has been said, of a history of mistakes. In economics and the social sciences the case is very different. The social sciences are more like a living organism that has grown continuously. The student of economics should have some general idea of its development. It is on this account that we give in brief outline the general development of economics from early time up to the present. There are volumes dealing entirely with the history of economic thought, for example, Haney's *History of Economic Thought*, which, in the most recent edition, appeared in 1935.

This brief sketch will bring out what we often call the "high spots" in the development of economics. The one who reads it will not ask, "Who was Adam Smith?" which was the question put to the writer by a graduate of one of our colleges who had specialized in economics.

Economic thinking, as distinguished from economics as a separate discipline, has its roots in the earliest days of social existence. Writings on economic subjects are also found in the most ancient literature. Therefore, even a brief sketch of the development of economic thought must begin with fragments appearing in early literature, although in point of time the science of economics is relatively young.

Economic ideas in the ancient world.

Before the rise and spread of the money economy, economic ideas were interwoven with moral, religious, and philosophical concepts, and were usually subordinated to the latter. The

Mosaic law, together with Rabbinical interpretations and regulations, contained strict prohibitions against various forms of usury,[1] speculation, adulteration, and monopoly. The sacred laws of the Hindus regulated many economic activities. Among these peoples religious aims and considerations dominated the major phases of existence, and economic analysis was confined chiefly to the elaboration and application of the religious codes.

Greece.

The great Athenian philosophers gave more attention to economic affairs, and approached them in a more realistic and inquisitive manner. They wrote treatises upon the subject, and also discussed many important economic concepts in their works on ethics and politics. Although they viewed economics chiefly as the art of household management, their thoughts exerted a pervading influence upon all later developments of the subject.

Plato's *Republic* depicted an ideal society based on complete communism of wives, children, and property (restricted to the higher classes) with the state exalted above the individual. His *Laws* was more practical, in that it recognized and made allowances for existing institutions. He perceived the fundamental importance of human wants and the advantages of exchange and specialization of labor.

Aristotle's *Politics* was remarkably influential, in economics as in other fields, for it was carefully studied by theologians of the Middle Ages, and through them entered into the thought and life of their time; and the thought and life of their time have entered in a thousand ways into the institutions of the twentieth century. While Plato tacitly accepted slavery, Aristotle actively defended the institution, describing the slave as an "animated tool," and insisting that slave labor was necessary in order that the ruling classes might have leisure for statecraft, art, and literature. Aristotle also fully appreciated the advantages of the separation and specialization of occupations, and understood that a certain amount of traffic and exchange was necessary; but both writers shared the common prejudice against trade and commerce. What one man gained in exchange, they thought, some other man lost; and to live by trade was in their eyes

[1] "Usury" in the ancient sense referred to the taking of interest, but as most loans were for consumption purposes, its meaning should not be confused with that of interest in the modern sense.

despicable. Aristotle defended the institution of private property, and formulated ideas about money and its functions that still influence men's thinking about those subjects, but condemned interest-taking because, as he expressed it, "money is barren."

Perhaps the most characteristic quality of Greek economic thought is the thorough subordination of economic to ethical and political considerations. The purpose of life, in their view, was self-knowledge or self-realization, not the acquisition of riches; they refused to regard wealth as an object of fundamental importance to either the individual or the state. Plato, in certain parts of his writings, even defends the ascetic idea that human wants are to be satisfied, not by the improvement of productive processes, but by the repression of the wants themselves.

Rome.

While the economic institutions of the Romans and the manifestations of their character in economic life will repay investigation, they were not remarkable for independent thought. Their economic ideas, like their philosophical doctrines, were borrowed from the Greeks, and show the same general characteristics. Commerce and trade were held in contempt, particularly when carried on in a small way. Interest-taking was thought by some to be "as bad as murder." Agriculture was esteemed worthy of the noblest citizens, and a "return to the soil" was frequently recommended in later Roman times as a cure for the prevailing degeneracy.

The Stoic philosophy revolved about the concept of a rational law of nature, to which man should adjust himself. Its influence in the economic sphere tended to emphasize the control or suppression of wants rather than the enlargement of production or the correction of maladjustments in distribution.

Most important as sources of Roman economic ideas were the writings of the jurists, especially in their treatment of "natural law," private property, contract, and usury. Their development of the science of jurisprudence was an enduring contribution to the institutional framework of society, and thus to the later development of economic thought.

Christianity.

To the economic thought of the time Christianity brought the revolutionary ideas of the dignity of toil and the equality of

men before God. The philosophy of the Stoics had brought analogous ideas to the attention of the restricted intellectual world of the day, but Christianity extended and popularized those ideas. The clergy were encouraged to earn their livelihood by manual labor, and laymen were exhorted to free their slaves as soon as they had become Christians. With respect to money and trade, however, the effect of Christianity was to strengthen and impress the teachings of Aristotle.

The Middle Ages.

As the power of the Church increased, its economic ideas found formal expression in the treatises of the schoolmen and medieval theologians who expounded the church or canon law. In the latter was embodied a definite system of economic thought which was largely theoretical and intended originally for the guidance of the ecclesiastical courts, but was widely applied in secular affairs through the power of the confessional, the pulpit, and the wide jurisdiction of the ecclesiastical courts.

The doctrines of the canonists were based chiefly upon Biblical injunctions against usury and the pursuit of wealth. The early Christian fathers even condemned the institution of private property and set up the ideal of communism among the faithful. This, however, was only an ideal, and private property was early recognized by them as a necessary evil resulting from the fall of man. As an ideal, it found practical expression in the doctrine that the maintenance of the poor was not a matter of philanthropy, but a binding obligation, as emphasized in the works of Thomas Aquinas (1225–1274), the most distinguished canonist.

Following the Greek and Roman philosophy, and in accordance with the scriptural attitude toward wealth, the "scholastics" viewed agriculture and handicraft as greatly superior in relative productivity to trade and commerce. They considered the benefit derived by one party to an exchange transaction to be obtained at the expense of the other party, and favored minute regulation of prices to prevent excessive profits. Their central doctrine of "just price" was to the effect that every commodity has one true value, depending upon its customary cost of production, including labor cost.

Upon similar ethical grounds, usury was condemned by the canonists. The Church forbade interest-taking by the clergy

in the fourth century, and by the laity in the twelfth century. Later, the prohibition was widely embodied in the civil law as well. However, the expansion of trade and industry gradually compelled the Church to alter its attitude toward interest, and it was legalized in England in 1545. By this time the teachings of the canonists were fast giving way to the doctrines of mercantilism, and the spread of exchange brought about a differentiation between the concept of commercial interest as legal, and that of excessive or oppressive usury as illegal.

Mercantilism.

Before the close of the sixteenth century, the temporal power of the Church had been undermined by the development of the great modern monarchies, and in economic thinking religious considerations were gradually, although never entirely, replaced by political necessities. The problem of the universal establishment of the Kingdom of God upon earth gave way to a newer problem, that of the maintenance and aggrandizement of rival states. The latter were in pressing need of ready money with which to build navies and support armies. How to increase public revenue and national wealth became the absorbing questions of the time.

The mercantile system (also called Colbertism, restrictive system, and commercial system) obtained from the early part of the sixteenth century until late in the eighteenth century, and its influence is still felt. It was not the product of a well-defined school of political economists, but comprised the political and economic policies advocated by writers and statesmen which prevailed during the period. Most prominent among these statesmen were Colbert of France, Frederick the Great of Prussia, and Cromwell of England. Serra, an Italian, presented a moderate and systematic statement of their views in 1613 in a work entitled *A Brief Treatise on the Causes which make Gold and Silver abound in Kingdoms where there are no Mines.* In England, Thomas Mun wrote a valuable treatise from the standpoint of the mercantilists in 1664, called *England's Treasure by Foreign Trade: or the Balance of our Trade the Rule of our Treasure,* while Sir James Steuart's *An Inquiry into the Principles of Political Economy,* published in 1767, may be regarded as closing the development of the theory of mercantilism.

The principal characteristics of mercantilism were the efforts to increase the stock of precious metals within the country, to maintain a favorable balance of trade, to increase the population, and to foster manufactures, if necessary at the expense of agriculture. In attempting to apply these theories, statesmen turned instinctively to the law, that instrument with whose use they were most familiar, and multiplied statutory restrictions until mercantilism became practically synonymous with governmental promotion through regulation. Toward the end of the eighteenth century, however, the commercial position of England became so strong that many of her industries found themselves crippled and smothered by the very laws which had protected their infancy, and a reaction against mercantilism set in. This reaction took the form of a movement in favor of agriculture and against governmental interference in economic and industrial affairs. In obedience to the needs of a new epoch, political economy lent itself to propaganda in support of the doctrine of commercial liberty.

The physiocrats.

The reaction against mercantilism found its first thorough and scientific expression in the works of the French physiocrats. Quesnay (1694–1774), a physician, Gournay (1712–1759), a merchant and administrator, and Turgot (1727–1781),[1] the statesman, were their three principal authors. Politically, the physiocrats taught the doctrine of natural laws and rights, and proclaimed the maxim of *laissez-faire,* that government should not interfere with private enterprise. Economically, they exalted the importance of agriculture, and maintained that manufactures and commerce (which merely change the form or position of raw materials) are barren and unproductive, though useful when subordinated to agriculture, but that agriculture alone yields a net surplus — *produit net* — over the expenses of production.

Many of the other doctrines of the physiocrats follow logically from the primacy they accorded to agriculture. Holding that agriculture is the sole ultimate source of wealth, they maintained that the revenue of the State should be raised by a single direct tax levied upon land. All taxes must be derived eventually

[1] Turgot did not count himself a member of the economic sect or school which gave their views the name of "physiocracy," but his economic doctrines are very much like theirs.

from land income anyway, and it was better that the landlord should pay them at once than that they should pass through five or six stages, with various profits increasing their amounts at each stage. Naturally the physiocrats were ardent champions of free trade. They encouraged the consumption of agricultural products, in order that the *produit net* might be increased, and were generous champions of the importance and rights of the down-trodden peasantry. "Pauvres paysans, pauvre royaume; pauvre royaume, pauvre roi," was the borrowed motto of Quesnay's *Tableau Économique*, the most important treatise of the physiocratic school.

Adam Smith (1723–1790).

In 1776 Adam Smith published his *Inquiry into the Nature and Causes of the Wealth of Nations*, the most influential economic treatise ever written. His opinions to some extent resembled those of the physiocrats, but were further developed and modified by his Scotch training and broad scholarship. In his book are found the doctrines of free trade, non-interference, and natural laws, yet all stated more guardedly than in the writings of the physiocrats. Although he did not regard agriculture as exclusively productive, he was partial toward it, for in this branch of production, he said, "nature labors along with man." He emphasized the importance of permitting each individual to follow his own self-interest as a means of promoting national prosperity, but was not unmindful of the existence of altruistic motives in mankind. He accorded full recognition to the motives of sympathy and kindness in his *Theory of Moral Sentiments*.

He stressed the importance of labor as the source of national wealth, and his treatment of the division of labor and its advantages was notable. Labor was the original cause and measure of value and its wages a principal component of the cost of production which determined value in a modern society, together with the interest on capital and the rent of land. Germs of nearly all modern economic theories are to be found in his work, although many of them were not developed by him.

The net result of Smith's teaching was to strengthen and emphasize the *laissez-faire* trend of economic thought in his time. "Two conceptions," said Arnold Toynbee, "are woven into every argument of the *Wealth of Nations*, the belief in the supreme

value of individual liberty, and a conviction that man's self-love is God's providence, that the individual in pursuing his own interest is promoting the welfare of all." In its method, the *Wealth of Nations* combines shrewd analysis with a masterly command of economic facts.

Economic thought in the nineteenth century.

The group whose economic philosophy prevailed during the first half of the nineteenth century is variously designated as the classical, Ricardian, English, or orthodox school. The earlier authors of this period were Jeremy Bentham (1748–1832), Thomas Robert Malthus (1766–1834), David Ricardo (1772–1823), James Mill, and John Ramsay McCulloch. In all of these writers are found the utilitarian philosophy, a deductive method, and the feeling that the outlook for the mass of the laboring classes was not a too hopeful one.

Utilitarianism.

Bentham's great work was the formulation and propaganda of the utilitarian ethics, with its famous first principle or goal of social action — the greatest happiness of the greatest number. He believed that men desire pleasure and seek to avoid pain; that they can calculate a net balance of utility between alternative courses of action; and that their rational decisions so attained should and could govern their choices and actions. Holding that the national interest is but the sum of all individual interests, he thus arrived at the conclusions that "natural" rights are non-existent, and that *laissez-faire* is the best policy for the state and for the individual. He thus supplied a basis of rational utilitarianism for the strengthening of *laissez-faire* theories.

Malthus.

Among the followers of Smith, Malthus and Ricardo are distinguished by the gloomy implications which may be drawn from their principal contributions to economic theory. Malthus, in his celebrated *Essay on the Principle of Population*, called attention to the constant pressure of population upon the available means of subsistence, and held in its first edition that this circumstance tended to maintain the lower classes of society in continued and hopeless poverty. It is therefore futile for govern-

ment to give poor relief, or for trade unions to attempt to better the condition of their members, since such expedients can be only temporary in their effects upon the standard of living of the working classes. The implication of the ever-present specter of starvation at the fringe of society is evident.

Ricardo.

Ricardo was perhaps the first to emphasize adequately the important problem of the distribution of wealth. The backbone of his distributive system was the Malthusian law of population. Ricardo believed that as population increased, society would be forced to resort to poorer and poorer soils in order to obtain food; as this took place an increasing share of the product of industry would go to the landlord in the form of economic rent. The division of the remaining product between labor and capital, in Ricardo's view, was determined largely by the standard of living; the laborer would receive enough to purchase the necessaries and conveniences required to support him and his family in their customary style of living, while the residue would go to capital in the form of interest and profits. Profits were thus the "leavings of wages." With the passage of time and the settlement of a country, Ricardo held that rent would absorb a larger and larger share of the product, wages a constant or slowly increasing amount, while the share of capital would dwindle both absolutely and relatively.

Ricardo's principal work was his *Principles of Political Economy and Taxation*, published in 1817. In it Ricardo elaborated, although he did not originate, his doctrine of rent, which was accepted by economists for nearly a century and still has its adherents. His ideas in general had a markedly pessimistic tinge. Rent, he said, is due to the niggardliness, not to the bounty, of nature. His theory of distribution emphasized the natural diversity of interest between wage receivers and profit makers, and the antagonism between the interests of landowners and those of all other classes of society. He also made contributions of lasting importance to our knowledge of monetary phenomena and of international trade. Ricardo was remarkable for his skillful use of the abstract-deductive method, and it is noteworthy that this distinction should attach, not to a professional scholar, but to one of the most successful brokers of his day.

The optimists.

The Malthusian doctrine of population was tinged with pessimism, and so also was the Ricardian theory of distribution. In opposition to these classical writers, there developed about the middle of the nineteenth century a system of thoroughgoing economic optimism, presented most ably in the works of Henry Carey (1793–1879) in the United States and Frederic Bastiat (1801–1850) in France. Their ideas were colored by a strong belief in the existence of a beneficent law of nature and of a harmony of interests among the various classes of society, and they leveled strong criticism at the Ricardian and Malthusian doctrines and their implications.

Carey held that land is a part of capital, and believed that both labor and capital would receive increasing rewards as society progressed, but that labor's share would increase faster than that of capital; thus he considered that the different classes would advance toward an equality and harmony with one another. He attacked the Ricardian rent theory (which proceeded from the premise that the best and most fertile land is cultivated first, and that the poorer land is taken up later) by observing that the poorer land was cultivated first, the best last. This led to his conclusion that labor becomes increasingly more productive, and that the principle of diminishing returns was fallacious.

Carey also attacked the Malthusian principle of population, partly on religious grounds, and partly because of his idea of the increasing productivity of labor. He argued that as population increases, the division and specialization of labor is more highly developed, and that labor becomes thereby more efficient. He also believed that man's control over nature increases constantly, with the assistance of association. Consequently, he held that reproduction costs constantly decrease, giving labor an increasing advantage over "stored labor" or capital.

Bastiat held views similar to those of Carey, and was probably more influential than the latter, although less original. He adhered strongly to the desirability of *laissez-faire* policies, believed firmly in free trade and advanced many telling arguments against protectionism, and defended the existing order against socialist and anarchist attacks.

According to Bastiat, there is no economic rent. The landowner does not receive an unearned income. Rent is simply a

return for past investments of capital. The profits on capital also, according to him, are simply a return on past labor, and relatively to wages, a diminishing return, because it is a peculiarity of labor stored-up in those products which we call capital, that it continually diminishes in value as compared with present labor. Thus, while capital's return may gain absolutely, labor's share gains both absolutely and relatively. As in Carey, reproduction costs determine value.

As Bastiat denied the existence of pure economic rent in the Ricardian sense, he also denied the truth of the Malthusian theory of population, holding that there was no proof of a tendency of population to press upon the means of subsistence. The history of Western civilization during the first three decades of the twentieth century has borne out Bastiat's contention in so far as we now have a relative surplus of food products as compared with effective demand. The evils that man experiences come, according to Bastiat, from man's interference with the natural harmonies. Nature works things out well, and this is the best of all possible worlds if only Nature can be permitted to have her way.

Senior.

Although a follower of Smith, and to some extent of Ricardo, William Senior (1790–1864) made several independent and significant contributions to the Classical doctrines. He is to be credited with the rational justification of interest as a return on capital, as embodied in his "abstinence" theory. In discussing costs of production, he saw wages as the reward of labor for its pain and sacrifice attendant upon productive efforts, and then placed capital upon a par with labor by explaining interest as a reward for the loss of satisfaction borne by the saver when he abstains from immediate consumption. Senior also clarified further the nature of economic theory by insisting upon the exclusion of moral and political considerations, and by able and searching critical analysis of the work of his predecessors.

Say.

Among the foreign disciples of Smith, Jean Baptiste Say (1767–1832) was outstanding. As teacher and writer he did much for the spread of the *laissez-faire* doctrines, in France and elsewhere. He also formulated the famous "theory of markets,"

according to which the act of production automatically creates an equivalent demand for goods, therefore rendering impossible a condition of "general over-production." In the field of classification and arrangement, his principal treatise originated the treatment of the subject under the division of Production, Distribution, and Exchange; the division of income under rent, wages, and profits; the separation of the factors of production as natural agents, labor and capital; and the subdivision of the latter factor into entrepreneurship and capital. In his treatment of value, he gave weight to utility, and criticized the labor-cost value theory of Smith, holding that the latter's concept of costs was too restricted.

Rau and von Thünen.

In Germany the Classical School received its best expression and highest development in the economic treatises of Karl Heinrich Rau (1792–1870) which appeared in several editions from 1826–1828. This book gives us a comprehensive treatment of German economic thought in the period before the new ideas of the Historical School became dominant. It is the Classical School as found in Germany. It is realistic, based on German life, and includes the three main parts found in nearly all German books and economic treatises, viz., theory, practical applications (agriculture, commerce, etc.), and public finance. Johann Heinrich von Thünen (1783–1850), in his "The Isolated State" (1826), developed a balanced marginal productivity analysis of interest and wages, and constructed a theory of rent similar to Ricardo's, although with greater emphasis on the location of land as a cause of differential returns. He favored state activity for social reforms.

The individualists.

Among the groups of critics of the classical doctrines which appeared during the nineteenth century, Lord Lauderdale (1759–1830) and John Rae typified the thought of the least radical opponents of the school. Their principal service lay in their corrective emphasis upon the distinction between "public wealth" and "private riches," in contrast to Adam Smith's assumption of the identity between the self-interest of individuals and the national wealth. These writers pointed out that individual wealth depends often for its increase upon scarcity, which

decreases the national wealth, and they saw therefore a natural conflict between them. While accepting the philosophy of individual freedom, they sought to limit its scope and render its evil effects less harmful by means of government activity in certain of its phases.

Simonde de Sismondi (1773–1842) was also an advocate of state regulation and social reforms, including planning and security legislation to offset the evils of freely competitive enterprise. He believed in an equilibrium of economic forces, which gave way periodically to a state of disequilibrium, caused by underconsumption and exaggerated by various types of friction in the economic sphere. As a remedy, he proposed the restriction of inventions on the ground that they led often to lower wages and unemployment.

The nationalists.

The industrial and commercial leadership of England during the period following the publication of Adam Smith's *Wealth of Nations* excited criticism of his work on the ground that it advocated trade policies for all countries which were best suited to the advantage of England. These attacks on the universal free-trade doctrines of the Classical School appeared most vigorously in Germany and the United States — both industrially inferior to England.

The reaction against the English economists began earlier in the United States than in England or Germany. In the early part of the nineteenth century, emphatic dissent from the English doctrines was voiced by a group of American publicists, among whom may be mentioned Alexander Hamilton, Daniel Raymond, Matthew Carey, Hezekiah Niles, and Friedrich List. Hamilton's work and views are well known; Niles and Matthew Carey were pamphleteers of note in the first third of the nineteenth century; and List, who planted the seeds of the German nistorical school, unquestionably obtained some of his distinctive nationalistic views about political economy in the United States, and first formulated them in his *Outlines of American Political Economy*, published in 1827.

Daniel Raymond was the least well known of this group, and yet was author of the first American treatise on political economy in which a distinctively American system of economic thought

is suggested. His first book, *Thoughts on Political Economy*, appeared in 1820; a second edition, under the title *Elements of Political Economy*, appeared in 1823, and was reprinted with slight changes in 1836 and 1840. The essence of Raymond's system is found in his concept of wealth. Wealth, he maintained, is not an aggregate of exchange values but the opportunity to acquire the material comforts of life by labor. The English political economy, in Raymond's view, was a study of private as opposed to political or national economy. Raymond emphasized the distinction between individual and social wealth, and maintained that the laws of wealth laid down by Adam Smith were inapplicable to a nation conceived as a unit. The interests of particular individuals, or of particular classes, he argued, do not always coincide with the interests of the nation as a whole. The latter, he concluded, will be best advanced by developing all the national powers to their widest possible extent. He was thus a warm advocate of protection as opposed to free trade.

Matthew Carey's son, Henry C. Carey (1793–1879), by far the most influential of the early American economists, was influenced by the teachings of Raymond. Carey was an earnest champion of protection, an indefatigable critic of classical trade doctrines. The keystone of his economic system is the doctrine of association. The increasing mastery of man over nature, or the increase of wealth, Carey held to be dependent upon the increasing efficiency resulting from a compact and homogeneous population, in which agriculture and manufacturing are conducted side by side, in which the "home market" idea is carried out in the most complete way, and in which the association of industrial and social units is most intense and intimate. The economic philosophy of Carey was inimical to free trade at every point.

In Germany, Adam Müller (1779–1829) formulated a philosophy of economic nationalism, in which he held that the state is superior to the individuals composing it, and that a strong national economy was the proper goal of government activity. As a means to this end, he advocated protection to industries and other limitations upon trade.

Friedrich List (1789–1846), a German who emigrated to the United States and later returned to Germany, was a vigorous advocate of nationalism and protectionism. He developed a

treatment of the economic life-stages of nations, and from it argued the necessity of protecting "infant industries" throughout the period of a nation's transition from the agricultural to the industrial stage. He criticized universal free trade by pointing out the possible danger to a nation of the international division of labor in case of wars and other disturbances, and, while admitting that a loss in exchange values might be incurred by protectionism, he considered the sacrifice to be justified by the gain in educational values.

Early socialism.

With the development of the Industrial Revolution and the factory system, its attendant evils springing from the increasing degree of separation of the capitalistic and wage-earning classes began to evoke much criticism of the classical school's basic premises of private property and unlimited competition. The removal of these institutions and the substitution of socialism and communism began to be seriously advocated by various groups.

Saint-Simon (1760–1825) sought the abolition of existing social strata and their replacement by a nationally-organized industrialism with three classes — the intellectuals, the artists, and the workers. Conflict between groups and individuals was to be replaced by co-operative exploitation of natural resources; the losses and maladjustments of production and consumption due to unregulated competition were to be avoided by a thorough reorganization of society. He recognized the existence of individual inequalities, and favored rewards according to merit.

Robert Owen (1771–1858) and Charles Fourier (1772–1837) believed in voluntary association as a means of attaining social reform, and proposed the formation of small communities organized for co-operative effort. They stressed the value of better education and environment for the development of man's natural goodness.

Louis Blanc (1813–1832) also proposed association, in the form of social workshops, but looked to the state to initiate and support them. He desired that each man might be provided by the state with the opportunity of attaining his highest and most perfect development, and accordingly advocated a division of the product of industry based upon needs.

Pierre-Joseph Proudhon (1809–1865), forerunner of anarchist theory, attacked the institution of private property most bitterly, and saw in it the chief instrument of capitalistic exploitation of the wage earners. He advocated the abolition of rent, interest, and profits, and proposed that the right of property ownership be based solely upon labor. As a practical means of attaining this end, he suggested the establishment of an exchange bank, which would issue paper money for goods at prices proportioned to the labor-time required for their production. Credit was to be granted freely to producers, enabling them to command the necessary instruments of production, and eliminating the functions of the capitalist and the landlord.

John Stuart Mill.

In England, John Stuart Mill (1806–1873) may be considered as the culminating figure of the classical school of political economy. He closed one period in the development of economic science and began another. He started, under the influence of his father, James Mill, as a thoroughgoing follower of Ricardo, preserving the old doctrines of value, rent, wages, and profits, and advocating *laissez-faire* as a general principle of political expediency. But in his later years, Mill advocated the diffusion of property through the regulation and taxation of inheritances, endorsed the appropriation of the future unearned increment of land by the state, and emphasized an important distinction between the production and distribution of wealth. "The laws and conditions of the production of wealth partake of the nature of physical truths. There is nothing optional or arbitrary in them. . . . It is not so with the distribution of wealth. That is a matter of human institutions only. The things once there, mankind, individually or collectively, can do with them as they like. . . . The distribution of wealth, therefore, depends upon the laws and customs of society. The rules by which it is determined are what the opinions and feelings of the community make them, and are very different in different ages and countries; and might be still more different, if mankind so chose."

The old and the new doctrines contained in Mill's *Principles of Political Economy* were not in complete harmony, yet the result is one of the most influential and valuable works of modern times. His principal contribution to economic thought was his

restatement and clarification of the theories of the classical economists, tempered with his recognition of socialist and other criticisms of the system of *laissez-faire*.

Scientific socialism.

The Utopian socialism represented by French and English writers, some of whom have been mentioned above, was not accorded any considerable degree of success or popular favor, and was replaced after 1848 by the so-called "scientific" socialism, as originated and developed by Rodbertus, Marx, and Engels.

Carl Rodbertus (1805–1875) conceived of society, as an interdependent community based upon the increasing necessity of cooperation and division of labor, and advanced the doctrine that the natural resources became economic goods only by the expenditure of human labor. Therefore, goods ought to exchange for each other in proportion to the amounts of labor necessary to produce them; that they do not so exchange is due to the privileged position of landlords and capitalists, who are able to exploit the laboring classes. Ascribing to this aspect of social organization the evils of poverty and commercial crises, he advocated state intervention in distribution, for the purpose of enforcing a more equable distribution of economic goods, in accordance with the relative amounts of labor expended in their production.

Karl Marx (1818–1883), most influential of modern socialists, is known especially for his doctrines of surplus value and the class struggle, and for his "materialistic interpretation of history." His theory of value was drawn from those of Adam Smith and Ricardo, but he stated it in a more extreme form, and with some modifications: the quantity of labor socially necessary for production determines exchange values. However, employers are able to obtain the services of laborers for a wage which merely enables the latter to subsist and reproduce themselves, retaining the "surplus" value as profits. This exploitation of labor, together with the separation of labor and the ownership of the means of production which characterizes the capitalist system, results in a distinct and increasing degree of separation between the "property-owning" and "propertyless" classes (the bourgeoisie and the proletariat), which, he believed, would continue until the latter class would violently expropriate the former, and institute a socialist regime. Marx emphasized in his method

the economic forces which he considered were the underlying causes of historical change and evolution.

The historical school.

This particular line of thought was independently developed in Germany in the middle of the nineteenth century by three young Germans, Roscher, Knies, and Hildebrand, who vigorously assailed the doctrines of the classical school. They went back of the old premises — self-interest, private property, demand and supply — and tried to trace the historical development of economic life, coming to the conclusion that economic policies were not absolutely, but only relatively, right. They denied that economic science can discover laws which hold true for all times and places. They emphasized the importance of inductive methods, and of the study of legal institutions, custom, and ethics in their relation to economic life. Most members of the school entertained a strong sympathy for the policies of reform. Gustave Schmoller, the leader of the later or "younger" historical school, put especial stress upon careful, painstaking, detailed investigations of different phases of the economic life of the past and the present as a necessary preliminary to the construction of a real economic science.

Owing to the political ferment in Germany during the infancy of the historical school and the formation of the German Empire, when this action against the classical economists was at its height, German political economy of the last half of the nineteenth century was impregnated with a striking nationalistic spirit which separated it even further from the cosmopolitanism of English writers. The creation of a new state is almost invariably attended by the enactment of restrictive legislation, looking to the amalgamation of the diverse elements incorporated into the new state and the protection of its industries from foreign competition. *Laissez-faire*, under these conditions, is particularly difficult to maintain. The new national economy of Germany seemed to voice these political necessities. Like the classical economics of England, it was a creature of its own time and its own environment.

The Austrian school.

The protests against the classical economists which we have been considering were directed largely against the scope they

gave to economics and the methods they used. The Austrian economists represent a reaction not against their methods, but against some of their conclusions, and particularly against their theory of value. The great contribution of the Austrian school is the marginal utility theory of value, which has been most assiduously applied in economic analysis by a group of Austrian economists, among whom may be specially mentioned Menger, Wieser, Sax, and Bohm-Bawerk. But the marginal utility theory of value was advanced almost simultaneously, about 1871, by the English economist Jevons and the Austrian economist Menger.[1]

The Austrians have been a leading force in producing what is not inaptly termed a renaissance in theory. The classical theory put the emphasis upon supply or the conditions of supply, maintained that in the long run cost of production determines value, and found the ultimate measure and explanation of value in the pain and sacrifice of labor. The Austrians maintain the utility, the pleasure, or satisfaction derived from consumption is the ultimate cause and measure of value; they emphasize demand as the English economists emphasized supply; and hold that value determines cost of production and not the cost of production value. Capital, they conclude, receives its value from the finished product instead of giving value to that product. The work of this school has tended to put the consumer in the place primarily occupied by the capitalist as the center of discussion in economic theory and to emphasize a short-time rather than a "long-run" view of economic processes. The work of the Austrians has had a profound influence upon economic writing in the United States, and especially upon the work of John Bates Clark (1847–).

About the same time Jevons and Menger published their theories stressing the influence of demand on value, Walras, a French economist, then teaching in Switzerland, extended the marginal utility theory beyond its primitive simplicity and founded the School of Lausanne. He looked upon value as caused by neither cost of production nor marginal utility but as the resultant of the simultaneous and mutual interaction of these two forces.

[1] In reality the marginal utility theory had been explained many years before this by a number of obscure writers whose ideas, however, never affected the main current of economic thought.

Alfred Marshall.

In England a similar reaction to the controversy between the cost of production theorists and the marginal utility theorists took place. Alfred Marshall (1842–1924), who is regarded as one of the most authoritative exponents of current economic theory, wrote: "The 'cost of production principle' and the 'final utility' principle are undoubtedly component parts of the one all-ruling law of supply and demand. Each may be compared to one blade of a pair of scissors."[1] It is to be observed that the Walrasian and the Marshallian solutions are not identical, for while Marshall, to prove his point, simply equates the marginal utility to the consumer with the marginal disutility to the producer for any one small limited group of commodities, Walras and his followers construct a series of equations showing that the balance between the consumer's marginal utility and the producer's marginal disutility is dependent, for any one commodity, upon the manner in which balances are established for all other commodities.

Marshall emphasized the interdependence of economic phenomena, while contributing careful studies of their separate categories. He resolved many of the disputes in theory which were current during the period, by selecting and synthesizing prevailing theories and explanations of economic problems. He aimed to utilize the best parts of the contributions of all schools of thought and method, and succeeded in lending a new completeness and realism to the structure of economic theory.

II[2]

Let us review and summarize the ground we have covered and bring the story in brief outline down to date. In our sketch of the Development of Economic Thought, we first reviewed briefly economic ideas in the ancient world because these ideas as they come down to us through the Greeks, the Romans, and Christianity are still living forces in shaping our thought and in developing our policies.

Many illustrations could be given — for example, the great English statesman of the last century, William E. Gladstone, said that Aristotle was one of the two or three men from whom

[1] A. Marshall, *Principles of Economics*, Macmillan, London, 1920, 8th ed., p. 820.

[2] This is a brief summary of the preceding section. The experience of many years and the advice of teachers show us the importance of such a review.

he had learned most. The Greeks were the greatest original thinkers of the ancient world and possibly of all time. The Romans were men of action rather than thought, but they framed a code of laws which have profoundly influenced jurisprudence even up to our own day.

Christianity gave us new motives and ideas, especially the ideal of universal love. It has been like a leaven, constantly at work in our economic and social life. The goal set by this Christian ideal of universal love is far above anything that the world has been able to attain, but it has guided us slowly toward the economic and social ideals which we cherish today. It expresses itself in "utopias," and in more sober plans, aimed at the ideal of universal peace and prosperity in the brotherhood of man.

In the Middle Ages we find another type of organization of economic society in the gilds, from which we still have something to learn. Then there were the modern economists, beginning with the physiocrats. Their philosophy was based upon a concept of Nature as God — all-beneficent and operating to produce peace and prosperity for all if given the opportunity. Nature is good. Nature takes the place of God, but man is evil and should not interfere with the order of Nature. Here we have an expression of what is essentially an old theology except the all good God is called the all good Nature. Nature is bountiful and is the source of wealth.

Adam Smith follows the physiocrats as the one who finally formulated economics as we know it today. He corrected the one-sidedness of the physiocrats and rounded out their ideas into a system. For this he is justly called "the father of economics." He was a canny Scotchman and a careful observer, and found many exceptions to the general rule of a *laissez-faire* policy based upon the bounty of Nature. What he did especially was to put labor in the foreground as the prime source of wealth. He still held, however, to the idea that Nature is bountiful and that by following our own natural impulses in the Natural Order, we should have the greatest attainable prosperity. His book is called *The Wealth of Nations* and the title itself is a reflection of his optimism.

In Malthus we find the beginnings of pessimism. He examined the causes of the poverty of nations, and found in the growth of human population a tendency to outstrip the productivity of

natural resources, — in other words, a pressure of population upon the food supply and supplies of material wealth coming from the land. He later qualified his pessimism, holding that it was possible, through self-restraint or wiser institutions, to keep population within the possible limits of material production which depended upon Nature.

Ricardo was the next great name in the development of economic thought. He took his premises from Smith and Malthus, and developed by logical processes a marvelous system of economic theory. He emphasized the niggardliness of Nature in his theory of rent. Rent is an unearned increment due to natural scarcity. Men take up good land and when that becomes scarce, poor land, and then the better land receives a rent because Nature is niggardly. Labor has wages sufficient for living according to the laborer's standard of life, which tends downward; but against this downward tendency Ricardo saw the possibility of making a successful struggle. But the struggle must be a hard one and the prospects of labor are none too bright. If it is to hold its own in the struggle for the standard of life, the gains of capital must decrease while the landowners continually gain in their favored position.

Omitting lesser lights, we come next to John Stuart Mill, who stood between the old and the new. He held to the possibility of controlling the growth of population and establishing institutions which would bring about a growth of prosperity for all classes of society. This is most clearly brought out in his treatment of the Probable Futurity of the Laboring Classes.[1] In fact, the entire fourth book dealing with the influence of the progress of society on production and distribution may well be read in this connection. On the whole, he gives us not an optimistic but a sober picture of hope for a good future society to be attained by hard struggle. John Stuart Mill wavered between the old and the new — the old and somber picture of the present and the future of society, and the new and hopeful one based upon an improvement of human beings operating through better institutions. In the end he became a moderate Socialist, taking the position that private property and contract must be brought under social control with socialized property largely, but not fully, replacing private property.

[1] J. S. Mill, *Principles of Political Economy*, Book IV, Chap. 7.

The next great English name is that of Alfred Marshall, who rounded out the English classical economics, and gave it expression almost in final form. He absorbed into his system new ideas wherever he found them, taking a good deal from Socialism and going so far as to believe in the abolition of poverty as an attainable goal in some more or less distant future. He also took over from the Austrian economists new ideas of value — the marginal utility concept. But labor costs enter in limiting supply, and according to Marshall utility and costs are the "two blades of the scissors."

In England since the time of Marshall we have no one outstanding man to be placed with the great leaders we have mentioned. We have many excellent theorists who must be considered in anything like a complete history of economic thought. John A. Hobson and, more recently, John Maynard Keynes and a number of others dispute many of the conclusions of Marshall and have had a great deal of influence upon policies. The tendency of most of these modern English writers is in the direction of Socialism and a greater intervention of government.

The next great movement to be considered in the development of economics took place in Germany. No one can understand modern economics who does not know something about the German Historical School founded in the middle of the last century. This was a realistic school. These writers introduced ideas of relativity and evolution, opposing classical ideas such as cosmopolitanism and perpetualism. There necessarily follows an emphasis upon nationalism. National economics replaces universal or cosmopolitan economics. Policies must be based upon conditions of time and place and economics must be realistic. Moreover, economic theory must direct policies toward a humanitarian end. Man takes the inner place and not Nature. The beginning and end of economics is man.

Next follows in this great stream of thought the Austrian economists who reacted against the tendency to resolve economics into economic history. They enlarged the premises of economics by fruitfully following deductive methods.

Early in the United States we find two great streams of thought. In the universities and in certain organs of opinion we find a very rigid development of English deductive methods, without the qualifications made by the great English writers already

mentioned. Their economics was cosmopolitan and stood for perpetualism. Free trade, for example, was right at all times and in all places, and was based upon the natural right to buy and sell freely. Each one must promote his own interests, and social classes, as Professor William Graham Sumner of Yale taught, "owe nothing to one another." The book of Sumner entitled *What Social Classes Owe Each Other* gives a classical expression to these ideas.

On the other hand, statesmen and journalists such as Alexander Hamilton and Horace Greeley developed economic thought as a natural outgrowth of American conditions. We find also a school of economists who developed their thought independently. They were nationalists rather than cosmopolitans and took their ideas of Nature from American conditions. Natural resources were abundant and labor was scarce. Moreover, men did not in their exploitation of natural resources go from the good to the inferior soils. Henry C. Carey was outstanding in this school of thought.

The modern development of economic thought becomes a very intricate subject. Now there are hundreds and thousands of men working in this field and we should be obliged to mention hundreds of names if we were to include all those who have made some particular contribution to economic thought. The best way to know something about what is happening now and what has been happening for the last fifty years is to give attention to the professional organizations of economics. As economics branches out, covering one specialized field after another, banking, railways, land economics, and many others, the field has become so vast that no one man can be a great outstanding figure, mastering the whole with his own original thought and scholarship.

Therefore, instead of listing names, we mention organizations. The student who would know what is going on must be referred to their publications and activities. In Germany we may mention the organization called *Verein für Socialpolitik* ("Union of Social Policies"). It is an organization which included most of the leading economists in Germany, and corresponds in a rough way to the old Historical School represented by Schmoller, Brentano, and, for a time, Adolf Wagner, who were all humanitarians. Most of these broke away completely from the English classical economists. Their purpose was to study problems of labor and capital with a view to improvement.

In our own country the American Economic Association was established in 1885. Its statement of principles, adopted at that time, reads as follows:

> "1. We regard the state as an agency whose positive assistance is one of the indispensable conditions of human progress.
>
> "2. We believe that political economy as a science is still in an early stage of its development. While we appreciate the work of former economists, we look, not so much to speculation as to the historical and statistical study of actual conditions of economic life for the satisfactory accomplishment of that development.
>
> "3. We hold that the conflict of labor and capital has brought into prominence a vast number of social problems, whose solution requires the united efforts, each in its own sphere, of the church, of the state, and of science.
>
> "4. In the study of the industrial and commercial policy of governments we take no partisan attitude. We believe in a progressive development of economic conditions, which must be met by a corresponding development of legislative policy."

This statement of principles, it is well to emphasize, was not regarded as binding upon individual members. It simply represented in a general way the views and purposes of those who were the leaders in the new organization and who were in revolt against the old classical school of England and the United States. Perhaps the most fundamental things in the minds of the founders were the ideas of evolution and relativity and the purpose to help economics contribute its part to making this a better world.

Its statement was dropped in a few years and since then the American Economic Association simply includes economists of all shades of opinion who favor unhurried and scientific research. There are no other lists of outstanding American economists which would have equal significance. Following is a list of the presidents of the American Economic Association with the title of the presidential address of each.

President	*Meeting*	*Vol.*	*Title of Paper*
Francis A. Walker	2nd	III — 1888	Efforts of the Manual Laboring Class to Better Their Conditions
Francis A. Walker	3rd	IV — 1889	Recent Progress of Political Economy in the United States
Francis A. Walker	4th	VI — 1891	The Tide of Economic Thought

President	*Meeting*	*Vol.*	*Title of Paper*
Francis A. Walker	5th	VIII — 1893	The New Economics (William W. Folwell, acting president)
Charles F. Dunbar	6th	IX — 1894	Page 43: Professor Dunbar unable to attend; presidential address to be printed later; could not find where
John Bates Clark	7th	X — 1895	Report missing from this volume
John Bates Clark	8th	Econ. Studies I — 1896	The Theory of Economic Progress
Henry C. Adams	9th	II — 1897	Economics and Jurisprudence
Arthur T. Hadley	10th	III — 1898	Not present; could not find address
Arthur T. Hadley	11th	IV — 1899	The Relation between Economics and Politics
		Third Series	
Arthur T. Hadley	12th	I — 1900	Economic Theory and Political Morality
Richard T. Ely	13th	II — 1901	Competition: Its Nature, Its Permanency and Its Beneficence
Richard T. Ely	14th	III — 1902	Industrial Liberty
Edwin R. A. Seligman	15th	IV — 1903	Economics and Social Progress
Edwin R. A. Seligman	16th	V — 1904	Social Aspects of Economic Law
Frank W. Taussig	17th	VI — 1905	The Present Position of the Doctrine of Free Trade
Frank W. Taussig	18th	VII — 1906	The Love of Wealth and the Public Service
Jeremiah W. Jenks	19th	VIII — 1907	The Modern Standard of Business Honor
Jeremiah W. Jenks	20th	IX — 1908	The Principles of Government Control of Business
Simon N. Patten	21st	X — 1909	The Making of Economic Literature
Davis R. Dewey	22nd	XI — 1910	Observation in Economics
		American Economic Review	
Edmund J. James	23rd	I — 2	The Economic Significance of a Comprehensive System of National Education
Henry W. Farnam	24th	II — Sup. 1	The Economic Utilization of History

President	*Meeting*	*Vol.*	*Title of Paper*
Frank A. Fetter	25th	III — Sup. 1	Population or Prosperity
David Kinley	26th	IV — Sup. 1	The Renewed Extension of Government Control of Economic Life
John H. Gray	27th	V — Sup. 1	Economics and the Law
Walter F. Willcox	28th	VI — Sup. 1	The Apportionment of Representatives
Thomas N. Carver	29th	VII — Sup. 1	The National Point of View in Economics
John R. Commons	30th	VIII — Sup. 1	Economic Reconstruction: Foreign and Domestic Investments
Irving Fisher	31st	IX — Sup. 1	Economists in Public Service
Henry B. Gardner	32nd	X — 1	The Nature of our Economic Problem
Herbert J. Davenport	33rd	XI — 1	The Post-War Outlook
Jacob H. Hollander	34th	XII — 1	The Economist's Spiral
Henry R. Seager	35th	XIII — 1	Company Unions vs. Trade Unions
Carl C. Plehn	36th	XIV — 1	The Concept of Income, As Recurrent, Consumable Receipts
Wesley C. Mitchell	37th	XV — 1	Quantitative Analysis in Economic Theory
Allyn A. Young	38th	XVI — 1	Economics and War
E. W. Kemmerer	39th	XVII — 1	Economic Advisory Work for Governments
T. S. Adams	40th	XVIII — 1	Ideals and Idealism in Taxation
Fred M. Taylor	41st	XIX — 1	The Guidance of Production in a Socialist State
Edwin F. Gay	42nd	XX — 1	Historical Records
Matthew B. Hammond	43rd	XXI — 1	Economic Conflict as a Regulating Force in International Affairs
E. L. Bogart	44th	XXII — 1	Pushing Back the Frontiers
George E. Barnett	45th	XXIII — 1	American Trade Unionism and Social Insurance
William Z. Ripley	46th	XXIV — 1	Presidential address given by Abbott Payson Usher, entitled Liberal Theory of Constructive Statecraft
Harry A. Millis	47th	XXV — 1	The Union in Industry: Theory of Collective Bargaining
John M. Clark	48th	XXVI — 1	American Economics: Past Achievements and Present Prospects

A few of those who founded the American Economic Association are still active and the lines of development up to the present for the most part appear very soon. Mention will be made of a few of the earliest publications. The functions of the state, in relation to public utilities, were discussed in Dr. Edmund J. James' monographs on "The Relation of the Modern Municipality to the Gas Supply" (in Volume I of the *Publications of the American Economic Association*) and on "The Railway Question" (in Volume II). The principle of competition, as a regulating factor in the sphere of industry, was ably examined in a monograph published in Volume I by Professor Henry C. Adams, entitled "The Relation of the State to Industrial Action." In this monograph Professor Adams reached the conclusion that competition may generally be relied upon to regulate, in the interests of society as a whole, those industries where conditions of "constant returns" or "diminishing returns" prevail. So far as businesses conducted under conditions of either constant or diminishing returns were concerned, Professor Adams maintained that the entrepreneur's struggle for superior success was usually "a struggle to depress the cost of rendering services rather than to raise the price of services rendered." But a third class of industries existed, he said, — those conducted under conditions of increasing returns. Businesses conducted under conditions of increasing returns, he maintained, could never be regulated by free competition, "because it is easier for an established business to extend its facilities for satisfactorily meeting a new demand than for a new industry to spring into competitive existence." Thus, in the third instance, we have, he said, a case of natural monopoly, where state regulation and control is an imperative necessity if the general welfare of society is to be considered.

It is noteworthy that both Professor E. J. James and Professor Adams arrived at similar conclusions, though by different routes, namely, that public utilities must be subjected to public control.

In this same Volume I we find two monographs on co-operation; one by Albert Shaw, entitled "Cooperation in a Western City," and the other by Edward W. Bemis, entitled "Cooperation in New England." In Volume II we find another monograph on the same subject, Amos G. Warner's "Three Phases of Cooperation in the West," and also a "Historical Sketch of the Finances of Pennsylvania" by T. K. Worthington. These monographs

on co-operation and the one on the finances of Pennsylvania were written by students of the senior author when he was in the faculty of the Johns Hopkins University, and, in their insistence on observation, they show the influence of the German Historical School. All the founders of the American Economic Association, whether their writings tend to be deductive or inductive, have taught their students to use the "Look and See" method. In Volume III, Professor J. B. Clark published his essay on "Capital and Its Earnings," which contains the essentials of his entire economic system. In the same volume the first President, General Walker, presented a paper on the "Efforts of the Manual Laboring Class to Better Their Conditions." In this paper General Walker showed that, although the workers had "as real, as large, as vital a part to perform in securing a just and beneficial distribution of the product of industry," as the employers, it was, nevertheless, unquestionably true that every permanent increase of wages depended also upon the accumulation of capital for industrial uses.

As time goes on we find an increasing use of statistics, and statisticians appear of outstanding note who have a growing influence upon our thought and our activities. We may mention the name of Dr. Willford I. King of New York University, the former President of the American Statistical Association, whose outstanding work is "The Wealth and Income of the People of the United States."

It is no longer felt that we may indulge in easy generalizations regarding the distribution of wealth and income; we must know the facts. We are no longer satisfied with easy generalizations based upon familiar observations and the facts as we know them through individual observation. What is new is that we have through the development of statistical bureaus and organizations, very largely governmental, new possibilities of gathering the facts. It is an old spirit manifesting itself in a new environment.

Within the American Economic Association new tendencies have developed and we have what may be called new schools of thought. One of these is the Institutional School, of which the most outstanding name is Thorstein Veblen and the best modern exponent, John R. Commons. The founders of the American Economic Association laid emphasis upon institutions and their flux as necessary to the understanding of economic life, an idea

derived from our German teachers and especially from Karl Knies of Heidelberg. The old economists in the early part of the nineteenth century took property and contract for granted, like the air we breathe. But in the study of the history of economic life we found it was undergoing a continual change and that every change had its influence upon the entire economic structure. Consequently they could not be taken for granted; they had to be examined. The senior author, like other economists, in his earliest writings laid emphasis upon these fundamental institutions as well as upon custom and habits of men reflecting the economic life. Also he emphasized constant evolution and relativity.

What Thorstein Veblen did was to take these institutions and to add to their number. He also sought a broader basis of economics in philosophy and, like the senior author, he started out in philosophy as his major. He went farther afield than any of the economists in his day in the study of all the sciences having to do with human behavior, anthropology, psychology, language, race, etc. But Veblen was an iconoclast and a satirist. He did not know exactly what his social goal was. But certainly he wanted something different from what existed and there is a destructive element found in all his writings. Perhaps a contrast will bring out more clearly the differences between Veblen and some earlier institutionalists. From an ethical point of view the senior author deprecated as strongly as anyone could the luxurious expenditure with the purpose of bringing about better ethical practices in the use of wealth. Veblen spoke of "ostentatious display" and "conspicuous consumption" of the parasitic classes living on the income derived from the toil and moil of the masses.

Professor Commons is more constructive than Veblen and in his address before the American Economic Association on "Institutional Economics" at the meeting in New York in December, 1935, he gave the best exposition of institutional economics as it appeared and the one most easily understood by the general reader. He goes much farther into his search for institutions and examination of them than the older institutionalists. He especially emphasized public institutions and chief of all, our Supreme Court. The State is the greatest of institutions. Commons' works show a consistent development of theory

from what was taught him at Johns Hopkins University, when he was a student, to the present time. He illustrates perhaps better than anyone else the fact that Institutional Economics as taught by him and men like Professor J. M. Clark of Columbia is simply an evolution of the old German historical school.

He learned that economics does not deal with the production, consumption, or exchange of wealth, as taught by some of the English classical school, but deals with relations among men. This thought finds expression in Ely's *Introduction to Political Economy in 1889* in the preparation of which Commons was a valuable assistant, and is found in all subsequent editions of the *Outlines of Economics*. Economics is a science then of human relations. In our economic policies economics is evolutionary and relative. It has relation to particular countries at particular times. In his address before the American Economic Association in December, 1935, Professor Commons said:

> "This should be named a nationalistic theory of economics, instead of individualistic, cosmopolitan, or communistic. It parallels the trend toward nationalism the world over during the past fifty years, especially since the World War. This nationalistic theory of value, under the sovereignty in America of the Supreme Court, I describe as an institutional theory of economics. In order to correlate it with the maximum net-income economics of the past one hundred and sixty years, I name an institution collective action in control of individual action. It may be unorganized collective action, which is the meaning of custom, or organized collective action like that of a corporation, a co-operative, a trade union, or the state itself. If organized, it necessarily acts through executive, legislative, and judicial organs, whether combined or separated. There are other meanings of institutions, as I know, but I find that this meaning of collective action fits the facts of my experience."

It necessarily follows that social control plays and must play an ever increasing role in economic life. In this connection mention should be made of Professor J. M. Clark's work on social control. In the United States our Supreme Court has the final word on social control. That is the supreme social institution according to Commons. Commons said:

> "The Court therefore becomes in economics a superior branch of both the federal and the state regulations differing mainly in its procedure."

In social control reasonable value limits legislative prices. Commons says of this,

> "Reasonable value is welfare economics as conceived by the Supreme Court."

In this brief survey we cannot mention other organizations in England and elsewhere which followed the establishment of the American Economic Association.

Last of all we may mention the institutes which were established especially in Germany and the United States. In Germany we have Das Institut für Konjunktforschung, Berlin (for the study of business cycles), Das Institut für Weltwirtschaft, Kiel (for the study of world commerce). In the United States mention may be made of three institutes: The Institute for Economic Research, formerly the Institute for Research and Public Utility Economics established in Madison, Wisconsin, in 1920; then the National Bureau of Economic Research, of which perhaps the outstanding figure is Professor Wesley C. Mitchell; finally the Brookings Institution of Washington, of which the outstanding figure is Harold G. Moulton. These institutes were established because the field of economics was becoming so vast it was felt by their founders and supporters that men must work in groups to master and promote theories and policies. The institutes may also be said to mark the beginning of a new type of approach to economic problems. They take up all that is good in the old historical school. They are realistic and analytical. They advocate a thoroughgoing use of all the instrumentalities of modern research in our field. If it is going too far to speak of these institutes as forming a new school, at any rate they deserve attention by the student.

We have not gone into the development of economic thought in the new Italy and the new Germany, where there is no freedom of expression of economic ideas. Such expression of the freedom of teaching and learning which so characterized the Germany of the nineteenth century has disappeared. When thought and discretion are thus ordered, science and truth disappear.

In the United States there are now many of the outstanding German economists who have been exiled from Germany or have left voluntarily to find a freer atmosphere. In some cases they found a refuge in the New School for Social Research in

New York City — the "University in Exile." There we find men like Professor Emil Lederer and Professor Gerhard Colm who are carrying on their activities as economists just as they would have done were they still living in Germany. Probably in this New School one can find the best expression of German economics of today.

In the scientific journals one finds the most recent and best expression of economic thought. In our country we have among others the *Quarterly Journal of Economics* of Harvard University; the *American Economic Review;* the *Journal of Political Economy,* published by the University of Chicago; the *Political Science Quarterly* of Columbia University; the *Journal of Land and Public Utility Economics,* in which one finds the most recent thought on land economics; and *Social Research, an International Quarterly of Political and Social Science,* of the New School for Social Research in New York. In England we find the *Economic Journal of the Royal Economic Society,* of which John Maynard Keynes is editor.

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APPENDIX

SUGGESTIONS FOR STUDENTS AND TEACHERS

APPENDIX

SUGGESTIONS FOR STUDENTS AND TEACHERS

Some teachers of economics rely chiefly upon classroom discussion of assignments in a textbook, supplemented, perhaps, by other reading requirements. Others make large use of lectures and of problems and brief reports assigned in connection with particular subjects discussed in the class. Some require the student to write one or more longer essays or themes on specific topics. In this book specific references have been appended to each chapter. The aim has been to list only books and papers that have value in themselves and that have a direct bearing upon the subject matter of the respective chapters. References to parallel discussions in other elementary textbooks have, for the most part, been avoided, the aim being to enable the student to extend his inquiries by reading more advanced and comprehensive treatments of particular problems.

There is no one "best way" of teaching economics, for the methods used must depend very largely upon the size of the classes and the maturity of the students. It has been the experience of the writers that whatever the relative degree of emphasis put upon lectures, classroom discussions, and assigned problem work of different sorts, mastery by the student of one book on general economics, or at least of so much of it as treats of fundamental economic principles, is an essential part of every introductory course in the subject. When pressed for time, the teacher using this book may find it desirable to omit all of it save Part II, "Principles and Problems." When more time is available, it may be deemed wise to include discussions of certain subjects not treated in this volume. "The economic problems of municipalities," "the control of public utilities," "the elements of statistical method," "the problems of poor relief," "the general principles of market organization," are a few among many possible supplementary topics.

Valuable suggestions on the teaching of elementary economics will be found in various papers and discussions printed in the *Journal of Political Economy*, in the *Quarterly Journal of Economics*, and in the *American Economic Review*.

The problem of making an adequate amount of supplementary reading available to students in large classes has been made easier to solve by the publication of volumes of excerpts, designed for this particular use. (W. W. Hamilton, *Current Economic Problems;* L. C. Marshall, C. W. Wright, and J. A. Field, *Materials for the Study of Elementary*

Economics; C. J. Bullock, *Selected Readings in Economics;* F. A. Fetter, *Source Book in Economics;* H. Taylor, *Contemporary Economic Problems;* S. H. Patterson and K. W. Sholz, *Economic Principles of Modern Life;* Atkins and others, *Economic Behavior.*) Similar volumes have been made up of material on special economic problems. References to many of these will be found among the reading lists appended to the different chapters in this book.

Other American textbooks in economics of college grade are: R. T. Bye, *Principles of Economics;* F. S. Deibler, *Principles of Economics;* L. D. Edie, *Economics; Principles and Problems;* Fairchild, Furniss, and Buck, *Elementary Economics;* F. B. Garver and A. H. Hansen, *Principles of Economics;* W. Kiekhofer, *Economic Principles, Problems and Policies;* L. A. Rufener, *Principles of Economics;* S. H. Slichter, *Modern Economic Society;* W. Spahr and others, *Economic Principles and Problems;* F. M. Taylor, *Principles of Economics;* and J. R. Turner, *Introduction to Economics.*

Among English books, Alfred Marshall's *Principles of Economics* occupies a peculiarly authoritative position. It is characterized by an unusually intimate grasp of the facts of modern economic life and by a rare degree of ability in critical analysis. It attempts to reconcile many of the modern developments in economic analysis with the fundamental tenets of the political economy of David Ricardo and John Stuart Mill. Marshall's *Principles* is difficult for any but the mature student, and his own attempt at an abridgment, his *Economics of Industry,* is distinctly inferior to the larger work. Two excellent books that are based in large measure on Marshall's *Principles* are S. J. Chapman, *Outlines of Political Economy,* and A. W. Flux, *Economic Principles.* The comprehensive English work of J. S. Nicholson, *Principles of Political Economy,* 3 vols., is even more conservative in matters of economic theory than is Marshall's. Edwin Cannan's *Wealth* is a small manual with an original and suggestive point of view. One of the most notable Classic English works is P. H. Wicksteed's *The Common Sense of Political Economy.*

Encyclopedias.

Professor E. R. A. Seligman and Alvin Johnson are co-editors of a comprehensive encyclopedia which constitutes an up-to-date, general reference book covering all the social sciences. It consists of fifteen volumes, published from 1930 to 1934, and represents "an endeavor to include all of the important topics in politics, economics, law, anthropology, sociology, penology and social work." *The Encyclopedia of Social Reform,* edited by Bliss, is useful in its special field. Although published in the early eighties, some of the articles in Lalor's *Cyclopedia of Political Science, Political Economy, and United States History* (3 vols.) remain of value. *The Cyclopedia of American Government,* edited by McLaughlin and Hart, may be consulted on topics in public finance and related fields.

Periodicals.

Many of the most important contributions to economics appear in special periodicals devoted to the subject. In the United States there are the *Quarterly Journal of Economics*, the *Journal of Political Economy* (monthly), and the *American Economic Review* (the organ of the American Economic Association, quarterly). *The Political Science Quarterly*, the *Annals of the American Academy of Political and Social Science* (monthly), *The American Political Science Review* (quarterly), the *American Journal of Sociology* (bi-monthly), and *Social Research* (published by the New School for Social Research, monthly), frequently publish papers that are of importance for the student of economics. Limited to more specialized fields are the *Journal of the American Statistical Association*, the *Journal of Land and Public Utility Economics*, the *Harvard Business Review*, the *Monthly Labor Review*, and the *Review of Economic Statistics*.

In England the principal economic periodicals are the *Economic Journal* (the quarterly organ of the Royal Economic Society), the *Journal of the Royal Statistical Society* (quarterly), and *Economica* (three numbers a year). The economic journals of the various countries of continental Europe, although of great value to the specialist, are too numerous to mention here.

The "trade journals" of different industries and in the fields of banking and insurance are often useful to the special students in these fields. In particular the periodicals dealing with the general conditions of business and the money market are often indispensable. *The Commercial and Financial Chronicle of New York* (weekly) and the *Annalist* may be specially mentioned on account of the completeness and accuracy of their statistics of money market conditions. For London the *Economist* and the *Statist* occupy a similar position. The Annual Financial Review contains convenient compilations of the more important statistics that have appeared in the *Commercial and Financial Chronicle* during the preceding year. Such annuals as the *Statesman's Year Book* (London), the *World Almanac* (New York), and the *American Year Book* are often useful for reference purposes.

Reference to the enormous output of articles on economic subjects in periodicals of a more general or popular type is now easy by using the "cumulative indexes" and "readers' guides" that will be found in most colleges and public libraries. *The Industrial Arts Index* is particularly helpful because it contains references to articles in the social sciences. These articles are, of course, of very uneven quality and must be used discriminatingly.

Books in special fields.

The references given in connection with the different chapters in this volume are sufficient to enable one to make a fairly thorough study of the different subjects treated in these chapters. Many of the books referred to contain more elaborate bibliographies on their special subjects.

The student should, of course, be familiar with the use of the card catalogue of a modern library. In using such a catalogue, it should be remembered that the library classification of books by subjects is very rarely entirely satisfactory, so that one should exercise one's ingenuity in searching under different subjects. The Library of Congress has printed in pamphlet form lists of books and articles on various practical economic problems, and is often able to furnish, at a small price, shorter typewritten lists of references on other subjects. Short annotated bibliographies are issued by different state legislative libraries and municipal reference libraries. A very complete list of new books in various fields of economics is published quarterly in the *American Economic Review* and the *Royal Economic Journal.*

Government publications.

The student should acquire some familiarity with the use of government documents as first-hand sources of information. Aside from statutes and the proceedings of legislative bodies these publications include: (1) annual reports of different administrative departments and bureaus; (2) reports of special investigations made by the permanent bureaus or by special commissions; (3) records of the hearing before legislative committees of inquiry. A record of the enormous output of the publications of the federal government is contained in the *Monthly Catalogue of Public Documents*, published by the Superintendent of Public Documents, Washington. This has an annual index, and a comprehensive Document Catalogue is also published for each Congressional period. The Superintendent of Public Documents also issues a *Weekly List of Government Publications* which is distributed free of charge upon request to the issuing authority. The *Check List of Government Documents* is convenient to use in locating regular or routine documents published before 1910. *The Annotated Tables of and Consolidated Index to the Congressional Series of United States Public Documents* may also be used for the same purpose. Poore's *Descriptive Catalogue of the Government Publications of the United States, 1774–1881*, is useful in locating irregular or obscure publications of various sorts. In nearly every congressional district there is a public or college library which is an official depository for federal documents and has a nearly complete set of those published in recent years. Current documents may sometimes be obtained without charge from the departments or bureaus issuing them, or from the Representative or Senator from one's district or state. They can always be purchased at low prices from the Superintendent of Documents. The Superintendent of Documents issues price lists of the publications in different special fields.

The Library of Congress publishes a *Monthly List of State Documents.* Bowker's *State Publications* (three parts) give a fairly complete list up to about 1900. The *Monthly Bulletin of Statistics*, issued by the League of Nations, gives a convenient summary of such current statistical information as has international significance.

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