

accelerated pace of the boom and begin to abstain from further expansion of credit. The boom could continue only as long as the banks were ready to grant freely all those credits which business needed for the execution of its excessive projects, utterly disagreeing with the real state of the supply of factors of production and the valuations of the consumers. These illusory plans, suggested by the falsification of business calculation as brought about by the cheap money policy, can be pushed forward only if new credits can be obtained at gross market rates which are artificially lowered below the height they would reach at an unhampered loan market. It is this margin that gives them the deceptive appearance of profitability. The change in the banks' conduct does not create the crisis. It merely makes visible the havoc spread by the faults which business has committed in the boom period.

Neither could the boom last endlessly if the banks were to cling stubbornly to their expansionist policies. Any attempt to substitute additional fiduciary media for nonexistent capital goods (namely, the quantities $p3$ and $p4$) is doomed to failure. If the credit expansion is not stopped in time, the boom turns into the crack-up boom; the flight into real values begins, and the whole monetary system founders. However, as a rule, the banks in the past have not pushed things to extremes. They have become alarmed at a date when the final catastrophe was still far away.⁸

As soon as the afflux of additional fiduciary media comes to an end, the airy castle of the boom collapses. The entrepreneurs must restrict their activities because they lack the funds for their continuation on the exaggerated scale. Prices drop suddenly because these distressed firms try to obtain cash by throwing inventories on the market dirt cheap. Factories are closed, the continuation of construction projects in progress is halted, workers are discharged. As on the one hand many firms badly need money in order to avoid bankruptcy, and on the other hand no firm any longer enjoys confidence, the entrepreneurial component in the gross market rate of interest jumps to an excessive height.

8. One should not fall prey to the illusion that these changes in the credit policies of the banks were caused by the bankers' and the monetary authorities' insight into the unavoidable consequences of a continued credit expansion. What induced the turn in the banks' conduct was certain institutional conditions to be dealt with further below, on pp. 796-797. Among the champions of economics some private bankers were prominent; in particular, the elaboration of the early form of the theory of business fluctuations, the Currency Theory, was for the most part an achievement of the British bankers. But the management of the central banks and the conduct of the various governments' monetary policies was as a rule entrusted to men who did not find any fault with boundless credit expansion and took offense at every criticism of their expansionist ventures.

Accidental institutional and psychological circumstances generally turn the outbreak of the crisis into a panic. The description of these awful events can be left to the historians. It is not the task of catallactic theory to depict in detail the calamities of panicky days and weeks and to dwell upon their sometimes grotesque aspects. Economics is not interested in what is accidental and conditioned by the individual historical circumstances of each instance. Its aim is, on the contrary, to distinguish what is essential and necessary from what is merely adventitious. It is not interested in the psychological aspects of the panic, but only in the fact that a credit-expansion boom must unavoidably lead to a process which everyday speech calls the depression. It must realize that the depression is in fact the process of readjustment, of putting production activities anew in agreement with the given state of the market data: the available supply of factors of production, the valuations of the consumers, and particularly also the state of originary interest as manifested in the public's valuations.

These data, however, are no longer identical with those that prevailed on the eve of the expansionist process. A good many things have changed. Forced saving and, to an even greater extent, regular voluntary saving may have provided new capital goods which were not totally squandered through malinvestment and overconsumption as induced by the boom. Changes in the wealth and income of various individuals and groups of individuals have been brought about by the unevenness inherent in every inflationary movement. Apart from any causal relation to the credit expansion, population may have changed with regard to figures and the characteristics of the individuals comprising them; technological knowledge may have advanced, demand for certain goods may have been altered. The final state to the establishment of which the market tends is no longer the same toward which it tended before the disturbances created by the credit expansion.

Some of the investments made in the boom period appear, when appraised with the sober judgment of the readjustment period, no longer dimmed by the illusions of the upswing, as absolutely hopeless failures. They must simply be abandoned because the current means required for their further exploitation cannot be recovered in selling their products; this "circulating" capital is more urgently needed in other branches of want-satisfaction; the proof is that it can be employed in a more profitable way in other fields. Other malinvestments offer somewhat more favorable chances. It is, of course, true that one would not have embarked upon putting capital goods into them if one had correctly calculated. The inconvertible investments made on their behalf are certainly wasted. But as they are inconvertible, a *fait accompli*, they present further

action with a new problem. If the proceeds which the sale of their products promises are expected to exceed the costs of current operation, it is profitable to carry on. Although the prices which the buying public is prepared to allow for their products are not high enough to make the whole of the inconvertible investment profitable, they are sufficient to make a fraction, however small, of the investment profitable. The rest of the investment must be considered as expenditure without any offset, as capital squandered and lost.

If one looks at this outcome from the point of view of the consumers, the result is, of course, the same. The consumers would be better off if the illusions created by the easy-money policy had not enticed the entrepreneurs to waste scarce capital goods by investing them for the satisfaction of less urgent needs and thereby withholding them from lines of production in which they would have satisfied more urgent needs. but as things are now, they cannot but put up with what is irrevocable. They must for the time being renounce certain amenities which they could have enjoyed if the boom had not engendered malinvestment. but, on the other hand, they can find partial compensation in the fact that some enjoyments are now available to them which would have been beyond their reach if the smooth course of economics activities had not been disturbed by the orgies of the boom. It is slight compensation only, as their demand for those other things which they do not get because of inappropriate employment of capital goods is more intense than their demand for these "substitutes," as it were. But it is the only choice left to them as conditions and data are now.

The final outcome of the credit expansion is general impoverishment. Some people may have increased their wealth; they did not let their reasoning be obfuscated by the mass hysteria, and took advantage in time of the opportunities offered by the mobility of the individual investor. Other individuals and groups of individuals may have been favored, without any initiative of their own, by the mere time lag between the rise in the prices of the goods they sell and those they buy. But the immense majority must foot the bill for the malinvestments and the overconsumption of the boom episode.

One must guard oneself against a misinterpretation of this term impoverishment. It does not necessarily mean impoverishment when compared with the conditions that prevailed on the eve of the credit expansion. Whether or not an impoverishment in this sense takes place depends on the particular data of each case; it cannot be predicated apodictically by catallactics. What catallactics has in mind when asserting that impoverishment is an unavoidable outgrowth

of credit expansion is impoverishment as compared with the state of affairs which would have developed in the absence of credit expansion and the boom. The characteristic mark of economic history under capitalism is unceasing economic progress, a steady increase in the quantity of capital goods available, and a continuous trend toward an improvement in the general standard of living. The pace of this progress is so rapid that, in the course of a boom period, it may well outstrip the synchronous losses caused by malinvestment and overconsumption. Then the economic system as a whole is more prosperous at the end of the boom than it was at its very beginning; it appears impoverished only when compared with the potentialities which existed for a still better state of satisfaction.

The Alleged Absence of Depressions Under Totalitarian Management

Many socialist authors emphasize that the recurrence of economic crises and business depressions is a phenomenon inherent in the capitalist mode of production. On the other hand, they say, a socialist system is safe against this evil.

As has already become obvious and will be shown later again, the cyclical fluctuations of business are not an occurrence originating in the sphere of the unhampered market, but a product of government interference with business conditions designed to lower the rate of interest below the height at which the free market would have fixed it.⁹ At this point we have only to deal with the alleged stability as secured by socialist planning.

It is essential to realize that what makes the economic crisis emerge is the democratic process of the market. The consumers disapprove of the employment of the factors of production as effected by the entrepreneurs. They manifest their disapprobation by their conduct in buying and abstention from buying. The entrepreneurs, misled by the illusions of the artificially lowered gross market rate of interest, have failed to invest in those lines in which the most urgent needs of the public would have been satisfied in the best possible way. As soon as the credit expansion comes to an end, these faults become manifest. The attitudes of the consumers force the businessmen to adjust their activities anew to the best possible want-satisfaction. It is this process of liquidation of the faults committed in the boom and of readjustment to the wishes of the consumers which is called the depression.

But in a socialist economy it is only the government's value judgments that count, and the people are deprived of any means of making their own value judgments prevail. A dictator does not bother about whether or not the masses approve of his decision concerning how much to devote for current

9. Cf. below, pp. 793-795.

consumption and how much for additional investment. If the dictator invests more and thus curtails the means available for current consumption, the people must eat less and hold their tongues. No crisis emerges because the subjects have no opportunity to utter their dissatisfaction. Where there is no business at all, business can be neither good nor bad. There may be starvation and famine, but no depression in the sense in which this term is used in dealing with the problems of a market economy. Where the individuals are not free to choose, they cannot protest against the methods applied by those directing the course of production activities.

7. The Gross Market Rate of Interest as Affected by Deflation and Credit Contraction

We assume that in the course of a deflationary process the whole amount by which the supply of money (in the broader sense) is reduced is taken from the loan market. Then the loan market and the gross market rate of interest are affected at the very beginning of the process, at a moment at which the prices of commodities and services are not yet altered by the change going on in the money relation. We may, for instance, posit that a government aiming at deflation floats a loan and destroys the paper money borrowed. Such a procedure has been, in the last two hundred years, adopted again and again. The idea was to raise, after a prolonged period of inflationary policy, the national monetary unit to its previous metallic parity. Of course, in most cases the deflationary projects were soon abandoned as their execution encountered increasing opposition and, moreover, heavily burdened the treasury. Or we may assume that the banks, frightened by their adverse experience in the crisis brought about by credit expansion, are intent upon increasing the reserves held against their liabilities and therefore restrict the amount of circulation credit. A third possibility would be that the crisis has resulted in the bankruptcy of banks which granted circulation credit and that the annihilation of the fiduciary media issued by these banks reduces the supply of credit on the loan market.

In these cases a temporary tendency toward a rise in the gross market rate of interest ensues. Projects which would have appeared profitable before appear so no longer. A tendency develops toward a fall in the prices of factors of production and later toward a fall in the prices of consumers' goods also. Business becomes slack. The deadlock ceases only when prices and wage rates are by and large adjusted to the new money relation. Then the loan market too adapts itself to the new state of affairs, and the gross market rate of interest is no longer disarranged by a shortage of money offered for advances. Thus a

cash-induced rise in the gross market rate of interest produces a temporary stagnation of business. Deflation and credit contraction no less than inflation and credit expansion are elements disarranging the smooth course of economic activities. However, it is a blunder to look upon deflation and contraction as if they were simply counterparts of inflation and expansion.

Expansion produces first the illusory appearance of prosperity. It is extremely popular because it seems to make the majority, even everybody, more affluent. It has an enticing quality. A special moral effort is needed to stop it. On the other hand, contraction immediately produces conditions which everybody is ready to condemn as evil. Its unpopularity is even greater than the popularity of expansion. It creates violent opposition. Very soon the political forces fighting it become irresistible.

Fiat money inflation and cheap loans to the government convey additional funds to the treasury; deflation depletes the treasury's vaults. Credit expansion is a boon for the banks, contraction is a forfeiture. There is a temptation in inflation and expansion and a repellent in deflation and contraction.

But the dissimilarity between the two opposite modes of money credit manipulation not only consists in the fact that while one of them is popular the other is universally loathed. Deflation and contraction are less likely to spread havoc than inflation and expansion not merely because they are only rarely resorted to. They are less disastrous also on account of their inherent effects. Expansion squanders scarce factors of production by malinvestment and overconsumption. If it once comes to an end, a tedious process of recovery is needed in order to wipe out the impoverishment it has left behind. But contraction produces neither malinvestment nor overconsumption. The temporary restriction in business activities that it engenders may by and large be offset by the drop in consumption on the part of discharged wage earners and the owners of the material factors of production the sales of which drop. No protracted scars are left. When the contraction comes to an end, the process of readjustment does not need to make good for losses caused by capital consumption.

Deflation and credit restriction never played a noticeable role in economic history. The outstanding examples were provided by Great Britain's return, both after the wartime inflation of the Napoleonic wars and after that of the first World War, to the prewar gold parity of the sterling. In each case Parliament and Cabinet adopted the deflationist policy without having weighed the pros and cons of the two methods open for a return to the gold standard. In the second

decade of the nineteenth century they could be exonerated, as at that time monetary theory had not yet clarified the problems involved. More than a hundred years later it was simply a display of inexcusable ignorance of economics as well as of monetary history.¹⁰

Ignorance manifests itself also in the confusion of deflation and contraction and of the process of readjustment into which every expansionist boom must lead. It depends on the institutional structure of the credit system which created the boom whether or not the crisis brings about a restriction in the amount of fiduciary media. Such a restriction may occur when the crisis results in the bankruptcy of banks granting circulation credit and the falling off is not counterpoised by a corresponding expansion on the part of the remaining banks. But it is not necessarily an attendant phenomenon of the depression; it is beyond doubt that it has not appeared in the last eighty years in Europe and that the extent to which it occurred in the United States under the Federal Reserve Act of 1913 has been grossly exaggerated. The dearth of credit which marks the crisis is caused not by contraction but by the abstention from further credit expansion. It hurts all enterprises—not only those which are doomed at any rate, but no less those whose business is sound and could flourish if appropriate credit were available. As the outstanding debts are not paid back, the banks lack the means to grant credits even to the most solid firms. The crisis becomes general and forces all branches of business and all firms to restrict the scope of their activities. But there is no means of avoiding these secondary consequences of the preceding boom.

As soon as the depression appears, there is a general lament over deflation and people clamor for a continuation of the expansionist policy. Now, it is true that even with no restrictions in the supply of money proper and fiduciary media available, the depression brings about a cash-induced tendency toward an increase in the purchasing power of the monetary unit. Every firm is intent upon increasing its cash holdings, and these endeavors affect the ratio between the supply of money (in the broader sense) and the demand for money (in the broader sense) for cash holding. This may be properly called deflation. But it is a serious blunder to believe that the fall in commodity prices is caused by this striving after greater cash holding. The causation is the other way around. Prices of the factors of production—both material and human—have reached an excessive height in the boom period. They must come down before business can become profitable again. The entrepreneurs enlarge their cash holding because they abstain from

10. See below, p. 784.

buying goods and hiring workers as long as the structure of prices and wages is not adjusted to the real state of the market data. Thus any attempt of the government or the labor unions to prevent or to delay this adjustment merely prolongs the stagnation.

Even economists often failed to comprehend this concatenation. They argued thus: The structure of prices as it developed in the boom was a product of the expansionist pressure. If the further increase in fiduciary media comes to an end, the upward movement of prices and wages must stop. But, if there were no deflation, no drop in prices and wage rates could result.

This reasoning would be correct if the inflationary pressure had not affected the loan market before it had exhausted its direct effects upon commodity prices. Let us assume that a government of an isolated country issues additional paper money in order to pay doles to the citizens of moderate income. The rise in commodity prices thus brought about would disarrange production; it would tend to shift production from the consumers' goods regularly bought by the nonsubsidized groups of the nation to those which the subsidized groups are demanding. If the policy of subsidizing some groups in this way is later abandoned, the prices of the goods demanded by those formerly subsidized will drop and the prices of the goods demanded by those formerly nonsubsidized will rise more sharply. But there will be no tendency of the monetary unit's purchasing power to return to the state of the pre-inflation period. The structure of prices will be lastingly affected by the inflationary venture if the government does not withdraw from the market the additional quantity of paper money it has injected in the shape of subsidies.

Conditions are different under a credit expansion which first affects the loan market. In this case the inflationary effects are multiplied by the consequences of capital malinvestment and overconsumption. Overbidding one another in the struggle for a greater share in the limited supply of capital goods and labor, the entrepreneurs push prices to a height at which they can remain only as long as the credit expansion goes on at an accelerated pace. a sharp drop in the prices of all commodities and services is unavoidable as soon as the further inflow of additional fiduciary media stops.

While the boom is in progress, there prevails a general tendency to buy as much as one can buy because a further rise in prices is anticipated. In the depression, on the other hand, people abstain from buying because they expect that prices will continue to drop. The recovery and the return to "normalcy" can only begin when prices and wage rates are so low that a sufficient number of

people assume that they will not drop still more. Therefore the only means to shorten the period of bad business is to avoid any attempts to delay or to check the fall in prices and wage rates.

Only when the recovery begins to take shape does the change in the money relation, as effected by the increase in the quantity of fiduciary media, begin to manifest itself in the structure of prices.

The Difference Between Credit Expansion and Simple Inflation

In dealing with the consequences of credit expansion we assumed that the total amount of additional fiduciary media enters the market system via the loan market as advances to business. All that has been predicated with regard to the effects of credit expansion refers to this condition.

There are, however, instances in which the legal and technical methods of credit expansion are used for a procedure catallactically utterly different from genuine credit expansion. Political and institutional convenience sometimes makes it expedient for a government to take advantage of the facilities of banking as a substitute for issuing government fiat money. The treasury borrows from the bank, and the bank provides the funds needed by issuing additional banknotes or crediting the government on a deposit account. Legally the bank becomes the treasury's creditor. In fact the whole transaction amounts to fiat money inflation. The additional fiduciary media enter the market by way of the treasury as payment for various items of government expenditure. It is this additional government demand that incites business to expand its activities. The issuance of these newly created fiat money sums does not directly interfere with the gross market rate of interest, whatever the rate of interest may be which the government pays to the bank. They affect the loan market and the gross market rate of interest, apart from the emergence of a positive price premium, only if a part of them reaches the loan market at a time at which their effects upon commodity prices and wage rates have not yet been consummated.

Such were, for example, the conditions in the United States in the second World War. Apart from the credit expansion policy, which the Administration had already adopted before the outbreak of the war, the government borrowed heavily from the commercial banks. This was technically credit expansion; essentially it was a substitute for the issuance of greenbacks. Even more complicated techniques were resorted to in other countries. Thus, for instance, the German Reich in the first World War sold bonds to the public. The Reichsbank financed these purchases by lending the greater part of the funds needed to the buyers against the same bonds as collateral. Apart from the fraction which the buyer contributed from his own funds, the role that the Bank and the public played in the whole transaction was merely

formal. Virtually, the additional banknotes were inconvertible paper money.

It is important to pay heed to these facts in order not to confuse the consequences of credit expansion proper and those of government made fiat money inflation.

8. The Monetary or Circulation Credit Theory of the Trade Cycle

The theory of the cyclical fluctuations of business as elaborated by the British Currency School was in two respects unsatisfactory.

First it failed to recognize that circulation credit can be granted not only by the issue of banknotes in excess of the banks' holding of cash reserves, but also by creating bank deposits subject to check in excess of such reserves (checkbook money, deposit currency). Consequently it did not realize that deposits payable on demand can also be used as a device of credit expansion. This error is of little weight, as it can be easily amended. It is enough to stress the point that all that refers to credit expansion is valid for all varieties of credit expansion no matter whether the additional fiduciary media are banknotes or deposits. However, the teachings of the Currency School inspired British legislation designed to prevent the return of credit-expansion booms and their necessary consequence, depressions, at a time when this fundamental defect was not yet widely enough recognized. Peel's Act of 1844 and its imitations in other countries did not attain the ends sought, and this failure shook the prestige of the Currency School. The Banking School triumphed undeservedly.

The second shortcoming of the Currency Theory was more momentous. It restricted its reasoning to the problem of the external drain. It dealt only with a particular case, viz., credit expansion in one country only while there is either no credit expansion or only credit expansion to a smaller extent in other areas. This was, by and large, sufficient to explain the British crises of the first part of the nineteenth century. But it touched only the surface of the problem. The essential question was not raised at all. Nothing was done to clarify the consequences of a general expansion of credit not confined to a number of banks with a restricted clientele. The reciprocal relations between the supply of money (in the broader sense) and the rate of interest were not analyzed. The multifarious projects to lower or to abolish interest altogether by means of a banking reform were haughtily derided as quackery, but not critically dissected and refuted. The naive presumption of money's neutrality was tacitly ratified. Thus a free hand was left to all futile attempts to interpret crises and business fluctuations by means of the theory of direct exchange. Many decades passed before the spell was broken.

The hindrance that the monetary or circulation credit theory had to overcome was not merely theoretical error but also political bias. Public opinion is prone to see in interest nothing but a merely institutional obstacle to the expansion of production. It does not realize that the discount of future goods as against present goods is a necessary and eternal category of human action and cannot be abolished by bank manipulation. In the eyes of cranks and demagogues, interest is a product of the sinister machinations of rugged exploiters. The age-old disapprobation of interest has been fully revived by modern interventionism. It clings to the dogma that it is one of the foremost duties of good government to lower the rate of interest as far as possible or to abolish it altogether. All present-day governments are fanatically committed to an easy money policy. As has been mentioned already, the British Government has asserted that credit expansion has performed "the miracle...of turning a stone into bread."¹¹ A Chairman of the Federal Reserve Bank of New York has declared that "final freedom from the domestic money market exists for every sovereign national state where there exists an institution which functions in the manner of a modern central bank, and whose currency is not convertible into gold or into some other commodity."¹² Many governments, universities, and institutes of economic research lavishly subsidize publications whose main purpose is to praise the blessings of unbridled credit expansion and to slander all opponents as illintentioned advocates of the selfish interests of usurers.

The wavelike movement affecting the economic system, the recurrence of periods of boom which are followed by periods of depression, is the unavoidable outcome of the attempts, repeated again and again, to lower the gross market rate of interest by means of credit expansion. There is no means of avoiding the final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as the result of a voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved.

The only objection ever raised against the circulation credit theory is lame indeed. It has been asserted that the lowering of the gross market rate of interest below the height it would have reached on an unhampered loan market may appear not as the outcome of an intentional policy on the part of the banks or the monetary authorities but as the unintentional effect of their conservatism.

11. See above, p. 470.

12. Beardsley Ruml, "Taxes for Revenue Are Obsolete," *American Affairs*, VIII (1946), 35-36.

Faced with a situation which would, when left alone, result in a raise in the market rate, the banks refrain from altering the interest they charge on advances and thus willy-nilly tumble into expansion.¹³ These assertions are unwarranted. But if we are prepared to admit their correctness for the sake of argument, they do not affect at all the essence of the monetary explanation of the trade cycle. It is of no concern what the particular conditions are that induce the banks to expand credit and to underbid the gross market rate of interest which the unhampered market would have determined. What counts is solely that the banks and the monetary authorities are guided by the idea that the height of interest rates as the free loan market determines it is an evil, that it is the objective of a good economic policy to lower it, and that credit expansion is an appropriate means of achieving this end without harm to anybody but parasitic moneylenders. It is this infatuation that causes them to embark upon ventures which must finally bring about the slump.

If one takes these facts into consideration one could be tempted to abstain from any discussion of the problems involved in the frame of the theory of the pure market economy and to relegate it to the analysis of interventionism, the interference of government with the market phenomena. It is beyond doubt that credit expansion is one of the primary issues of interventionism. Nevertheless the right place for the analysis of the problems involved is not in the theory of interventionism but in that of the pure market economy. For the problem we have to deal with is essentially the relation between the supply of money and the rate of interest, a problem of which the consequences of credit expansion are only a particular instance.

Everything that has been asserted with regard to the effects of any increase in the supply of money proper as far as this additional supply reaches the loan market at an early stage of its inflow into the market system. If the additional quantity of money increases the quantity of money offered for loans at a time when commodity prices and wage rates have not yet been completely adjusted to the change in the money relation, the effects are no different from those of a credit expansion. In analyzing the problem of credit expansion, catallactics completes the teachings of the theory of money and of interest. It implicitly demolishes the age-old errors concerning interest and explodes the fantastic plans to "abolish" interest by means of monetary or credit reform.

What differentiates credit expansion from an increase in the supply of

13. Machlup, (*The Stock Market, Credit and Capital Formation*, p. 248) calls this conduct of banks "passive inflationism."

money as it can appear in an economy employing only commodity money and no fiduciary media at all is conditioned by divergences in the quantity of the increase and in the temporal sequence of its effects on the various parts of the market. Even a rapid increase in the production of the precious metals can never have the range which credit expansion can attain. The gold standard was an efficacious check upon credit expansion, as it forced the banks not to exceed certain limits in their expansionist ventures.¹⁴ The gold standard's own inflationary potentialities were kept within limits by the vicissitudes of gold mining. Moreover, only a part of the additional gold immediately increased the supply offered on the loan market. The greater part acted first upon commodity prices and wage rates and affected the loan market only at a later stage of the inflationary process.

However, the continuous increase in the quantity of commodity money exercised a steady expansionist pressure on the loan market. The gross market rate of interest was, in the course of the last centuries, continually subject to the impact of an inflow of additional money into the loan market. Of course, this pressure for the last hundred and fifty years in the Anglo-Saxon countries and for the last hundred years in the countries of the European continent, was far exceeded by the effects of the synchronous development of circulation credit as granted by the banks apart from their—from time to time reiterated—straightforward endeavors to lower the gross market rate of interest by an intensified expansion of credit. Thus three tendencies toward a lowering of the gross market rate of interest were operating at the same time and strengthening one another. One was the outgrowth of the steady increase in the quantity of commodity money, the second the outgrowth of a spontaneous development of fiduciary media in banking operations, the third the fruit of intentional anti-interest policies sponsored by the authorities and approved by public opinion. It is, of course, impossible to ascertain in a quantitative way the effect of their joint operation and the contribution of each of them; an answer to such a question can only be provided by historical understanding.

What catallactic reasoning can show us is merely that a slight although continuous pressure on the gross market rate of interest as originating from a continuous increase in the quantity of gold, and also from a slight increase in the quantity of fiduciary media, which is not overdone and intensified by purposeful easy money policy, can be counterpoised by the forces of readjustment and accommodation inherent in the market economy. The

14.Cf. above, p. 475.

adaptability of business not purposely sabotaged by forces extraneous to the market is powerful enough to offset the effects which such slight disturbances of the loan market can possibly bring about.

Statisticians have tried to investigate long waves of business fluctuations with statistical methods. Such attempts are futile. The history of modern capitalism is a record of steady economic progress, again and again interrupted by feverish booms and their aftermath, depressions. It is generally possible to discern statistically these recurring oscillations from the general trend toward an increase in the amount of capital invested and the quantity of products turned out. It is impossible to discover any rhythmical fluctuation in the general trend itself.

9. The Market Economy as Affected by the Recurrence of the Trade Cycle

The popularity of inflation and credit expansion, the ultimate source of the repeated attempts to render people prosperous by credit expansion, and thus the cause of the cyclical fluctuations of business, manifests itself clearly in the customary terminology. The boom is called good business, prosperity, and upswing. Its unavoidable aftermath, the readjustment of conditions to the real data of the market, is called crisis, slump, bad business, depression. People rebel against the insight that the disturbing element is to be seen in the malinvestment and the overconsumption of the boom period and that such an artificially induced boom is doomed. They are looking for the philosophers' stone to make it last.

It has been pointed out already in what respect we are free to call an improvement in the quality and an increase in the quantity of products economic progress. If we apply this yardstick to the various phases of the cyclical fluctuations of business, we must call the boom retrogression and the depression progress. The boom squanders through malinvestment scarce factors of production and reduces the stock available through overconsumption; its alleged blessings are paid for by impoverishment. The depression, on the other hand, is the way back to a state of affairs in which all factors of production are employed for the best possible satisfaction of the most urgent needs of the consumers.

Desperate attempts have been made to find in the boom some positive contribution to economic progress. Stress has been laid upon the role forced saving plays in fostering capital accumulation. The argument is vain. It has been shown already that it is very questionable whether forced saving can

ever achieve more than to counterbalance a part of the capital consumption generated by the boom. If those praising the allegedly beneficial effects of forced saving were consistent, they would advocate a fiscal system subsidizing the rich out of taxes collected from people with modest incomes. The forced saving achieved by this method would provide a net increase in the amount of capital available without simultaneously bringing about capital consumption of a much greater size.

Advocates of credit expansion have furthermore emphasized that some of the malinvestments made in the boom later become profitable. These investments, they say, were made too early, i.e., at a date when the state of the supply of capital goods and the valuations of the consumers did not yet allow their construction. However, the havoc caused was not too bad, as these projects would have been executed anyway at a later date. It may be admitted that this description is adequate with regard to some instances of malinvestment induced by a boom. But nobody would dare to assert that the statement is correct with regard to all projects whose execution has been encouraged by the illusions created by the easy money policy. However this may be, it cannot influence the consequences of the boom and cannot undo or deaden the ensuing depression. The effects of the malinvestment appear without regard to whether or not these malinvestments will appear as sound investments at a later time under changed conditions. When, in 1845, a railroad was constructed in England which would not have been constructed in the absence of credit expansion, conditions in the following years were not affected by the prospect that in 1870 or 1880 the capital goods required for its construction would be available. The gain which later resulted from the fact that the railroad concerned did not have to be built by a fresh expenditure of capital and labor, was in 1847 no compensation for the losses incurred by its premature construction.

The boom produces impoverishment. But still more disastrous are its moral ravages. It makes people despondent and dispirited. The more optimistic they were under the illusory prosperity of the boom, the greater is their despair and their feeling of frustration. The individual is always ready to ascribe his good luck to his own efficiency and to take it as a well-deserved reward for his talent, application, and probity. But reverses of fortune he always charges to other people, and most of all to the absurdity of social and political institutions. He does not blame the authorities for having fostered the boom. He reviles them for the inevitable collapse. In the opinion of the public, more inflation and more credit expansion are the only remedy against

the evils which inflation and credit expansion have brought about.

Here, they say, are plants and farms whose capacity to produce is either not used at all or not to its full extent. Here are piles of unsalable commodities and hosts of unemployed workers. But here are also masses of people who would be lucky if they only could satisfy their wants more amply. All that is lacking is credit. Additional credit would enable the entrepreneurs to resume or to expand production. The unemployed would find jobs again and could buy the products. This reasoning seems plausible. Nonetheless it is utterly wrong.

If commodities cannot be sold and workers cannot find jobs, the reason can only be that the prices and wages asked are too high. He who wants to sell his inventories or his capacity to work must reduce his demand until he finds a buyer. Such is the law of the market. Such is the device by means of which the market directs every individual's activities into those lines in which they can best contribute to the satisfaction of the wants of the consumers. The malinvestments of the boom have misplaced inconvertible factors of production in some lines at the expense of other lines in which they were more urgently needed. There is disproportion in the allocation of nonconvertible factors to the various branches of industry. This disproportion can be remedied only by the accumulation of new capital and its employment in those branches in which it is most urgently required. This is a slow process. While it is in progress, it is impossible to utilize fully the productive capacity of some plants for which the complementary production facilities are lacking.

It is vain to object that there is also unused capacity of plants turning out goods whose specific character is low. The slack in the sale of these goods, it is said, cannot be explained by disproportionality in the capital equipment of various branches; they can be used and are needed for many different employments. This too is an error. If steel and iron works, copper mines, and sawmills cannot be operated to their full capacity, the reason can only be that there are not enough buyers on the market ready to purchase their whole output at prices which cover the costs of their current exploitation. As the variable costs can merely consist in prices of other products and in wages, and as the same valid with regard to the prices of these other products, this always means that wage rates are too high to provide all those eager to work with jobs and to employ the inconvertible equipment to the full limits drawn by the requirement that nonspecific capital goods and labor should not be withdrawn from employments in which they fill more urgent needs.

Out of the collapse of the boom there is only one way back to a state of affairs in which progressive accumulation of capital safeguards a steady improvement of material well-being: new saving must accumulate the capital goods needed for a harmonious equipment of all branches of production with the capital required. One must provide the capital goods lacking in those branches which were unduly neglected in the boom. Wage rates must drop; people must restrict their consumption temporarily until the capital wasted by malinvestment is restored. Those who dislike these hardships of the readjustment period must abstain in time from credit expansion.

There is no use in interfering by means of a new credit expansion with the process of readjustment. This would at best only interrupt, disturb, and prolong the curative process of the depression, if not bring about a new boom with all its inevitable consequences.

The process of readjustment, even in the absence of any new credit expansion, is delayed by the psychological effects of disappointment and frustration. People are slow to free themselves from the self-deception of delusive prosperity. Businessmen try to continue unprofitable projects; they shut their eyes to an insight that hurts. The workers delay reducing their claims to the level required by the state of the market; they want, if possible, to avoid lowering their standard of living and changing their occupation and their dwelling place. People are the more discouraged the greater their optimism was in the days of the upswing. They have for the moment lost self-confidence and the spirit of enterprise to such an extent that they even fail to take advantage of good opportunities. But the worst is that people are incorrigible. After a few years they embark anew upon credit expansion, and the old story repeats itself.

*The Role Played by Unemployed Factors of Production
in the First Stages of a Boom*

There are in the changing economy always unsold inventories (exceeding those quantities which for technical reasons must be kept in stock), unemployed workers, and unused capacity of inconvertible production facilities. The system is moving toward a state in which there will be neither unemployed workers nor surplus inventories.¹⁵ But as the appearance of new data continually diverts the course toward a new goal, the conditions of the evenly rotating economy are never realized.

The presence of unused capacity of inconvertible investments is an 15. In the evenly rotating economy also there may be unused capacity of inconvertible equipment. Its nonutilization does not disturb the equilibrium any more than the fallowness of submarginal soil.

outgrowth of errors committed in the past. The assumptions made by the investors were, as later events proved, not correct; the market asks more intensively for other goods than for those which these plants can turn out. The piling up of excessive inventories and the catallactic unemployment of workers are speculative. The owner of the stock refuses to sell at the market price because he hopes to obtain a higher price at a later date. The unemployed worker refuses to change his occupation or his residence or the content himself with lower pay because he hopes to obtain at a later date a job with higher pay in the place of his residence and in the branch of business he likes best. Both hesitate to adjust their claims to the present situation of the market because they wait for a change in the data which will alter conditions to their advantage. Their hesitation is one of the reasons why the system has not yet adjusted itself to the conditions of the market.

The advocates of credit expansion argue that what is wanted is more fiduciary media. Then the plants will work at full capacity the inventories will be sold at prices their owners consider satisfactory, and the unemployed will get jobs at wages they consider satisfactory. This very popular doctrine implies that the rise in prices, brought about by the additional fiduciary media, would at the same time and to the same extent affect all other commodities and services, while the owners of the excessive inventories and the unemployed workers would content themselves with those nominal prices and wages they are asking—in vain, or course—today. For if this were to happen, the real prices and the real wage rates obtained by these owners of unsold inventories and unemployed workers would drop—in proportion to the prices of other commodities and services—to the height to which they must drop in order to find buyers and employers.

The course of the boom is not substantially affected by the fact that at its eve there are unused capacity, unsold surplus inventories, and unemployed workers. Let us assume that there are unused facilities for the mining of copper, unsold piles of copper, and unemployed workers of copper mines. The price of copper is at a level at which mining does not pay for some mines; their workers are discharged; there are speculators who abstain from selling their stocks. What is needed in order to make these mines profitable again, to give jobs to the unemployed, and to sell the piles without forcing prices down below costs of production, is an increment p in the amount of capital goods available large enough to make possible such an increase in investment and in the size of production and consumption that an adequate rise in the demand for copper ensues. If, however, this increment p does not appear and the entrepreneurs, deceived by the credit expansion, nevertheless act as if p had really been available, conditions on the copper market, while the boom lasts, are as if p had really been added to the amount of capital goods available. But everything that

has been predicated about the inevitable consequences of credit expansion fits this case too. The only difference is that, as far as copper is concerned, the inappropriate expansion of production need not be achieved by the withdrawal of capital and labor from employments in which they would better have filled the wants of the consumers. As far as copper is concerned, the new boom encounters a piece of malinvestment of capital and malemployment of labor already effected in a previous boom, which the process of readjustment has not yet absorbed.

Thus it becomes obvious how vain it is to justify a new credit expansion by referring to unused capacity, unsold—or, as people say incorrectly, “unsalable”—stocks, and unemployed workers. The beginning of a new credit expansion runs across remainders of preceding malinvestment and malemployment, not yet obliterated in the course of the readjustment process, and seemingly remedies the faults involved. In fact, however, this is merely an interruption of the process of readjustment and of the return to sound conditions.¹⁶ The existence of unused capacity and unemployment is not a valid argument against the correctness of the circulation credit theory. The belief of the advocates of credit expansion and inflation that abstention from further credit expansion and inflation would perpetuate the depression is utterly false. The remedies these authors suggest would not make the boom last forever. They would merely upset the process of recovery.

The Fallacies of the Nonmonetary Explanations of the Trade Cycle

In dealing with the futile attempts to explain the cyclical fluctuations of business by a nonmonetary doctrine, on point must first of all be stressed which has hitherto been unduly neglected.

There were schools of thought for whom interest was merely a price paid for obtaining the disposition of a quantity of money or money substitutes. From this belief they quite logically drew the inference that abolishing the scarcity of money and money-substitutes would abolish interest altogether and result in the gratuitousness of credit. If, however, one does not endorse this view and comprehends the nature of ordinary interest, a problem presents itself the treatment of which one must not evade. An additional supply of credit, brought about by an increase in the quantity of money or fiduciary media, has certainly the power to lower the gross market rate of interest. If interest is not merely a monetary phenomenon and consequently cannot be lastingly lowered or brushed away by any increase, however large, in the supply of money and fiduciary media, it devolves upon economics to show how the height of the rate of interest conforming to the state of the market's nonmonetary data reestablishes itself. It must explain what kind of

16. Hayek (*Prices and Production* [2d ed. London, 1935], pp. 96 ff.) reaches the same conclusion by way of a somewhat different chain of reasoning.

process removes the cash-induced deviation of the market rate from that state which is consonant with the ratio in people's valuation of present and future goods. If economics were at a loss to achieve this, it would implicitly admit that interest is a monetary phenomenon and could even disappear completely in the course of changes in the money relation.

For the nonmonetary explanations of the trade cycle the experience that there are recurrent depressions is the primary thing. Their champions first do not see in their scheme of the sequence of economic events any clue which could suggest a satisfactory interpretation of these enigmatic disorders. They desperately search for a makeshift in order to patch it onto their teachings as an alleged cycle theory.

The case is different with the monetary or circulation credit theory. Modern monetary theory has finally cleared away all notions of an alleged neutrality of money. It has proved irrefutably that there are in the market economy factors operating about which a doctrine ignorant of the driving force of money has nothing to say. The catallactic system that involves the knowledge of money's non-neutrality and driving force presses the questions of how changes in the money relation affect the rate of interest first in the short run and later in the long run. The system would be defective if it could not answer these questions. It would be contradictory if it were to provide an answer which would not simultaneously explain the cyclical fluctuations of trade. Even if there had never been such things as fiduciary media and circulation credit, modern catallactics would have been forced to raise the problem concerning the relations between changes in the money relation and the rate of interest.

It has been mentioned already that every nonmonetary explanation of the cycle is bound to admit that an increase in the quantity of money or fiduciary media is an indispensable condition of the emergence of a boom. It is obvious that a general tendency of prices to rise which is not caused by a general drop in production and in the supply of commodities offered for sale, cannot appear if the supply of money (in the broader sense) has not increased. Now we can see that those fighting the monetary explanation are also forced to resort to the theory they slander for a second reason. For this theory alone answers the question of how an inflow of additional money and fiduciary media affects the loan market and the market rate of interest. Only those for whom interest is merely the outgrowth of an institutionally conditioned scarcity of money can dispense with an implicit acknowledgment of the circulation credit theory of the cycle. This explains why no critic has ever advanced any tenable objection against this theory.

The fanaticism with which the supporters of all these nonmonetary doctrines refuse to acknowledge their errors is, of course, a display of

political bias. The Marxians have inaugurated the usage of interpreting the commercial crisis as an inherent evil of capitalism, as the necessary outgrowth of its "anarchy" of production.¹⁷ The non-Marxian socialists and the interventionists are no less anxious to demonstrate that the market economy cannot avoid the return of depressions. They are the more eager to assail the monetary theory as currency and credit manipulation is today the main instrument by means of which the anticapitalist governments are intent upon establishing government omnipotence.¹⁸

The attempts to connect business depressions with cosmic influences, the most remarkable of which was William Stanley Jevons' sunspot theory, failed utterly. The market economy has succeeded in a fairly satisfactory way in adjusting production and marketing to all the natural conditions of human life and its environment. It is quite arbitrary to assume that there is just one natural fact—namely, allegedly rhythmic harvest variations—with which the market economy does not know how to cope. Why do entrepreneurs fail to recognize the fact of crop fluctuations and to adjust business activities in such a way as to discount their disastrous effects upon their plans?

Guided by the Marxian slogan "anarchy of production," the present-day nonmonetary cycle doctrines explain the cyclical fluctuations of trade in terms of a tendency, allegedly inherent in the capitalist economy, to develop disproportionality in the size of investments made in various branches of industry. Yet even these disproportionality doctrines do not contest the fact that every businessman is eager to avoid such mistakes, which must bring him serious financial losses. The essence of the activities of entrepreneurs and capitalists is precisely not to embark upon projects which they consider unprofitable. If one assumes that there prevails a tendency for businessmen to fail in these endeavors, one implies that all businessmen are short-sighted. They are too dull to avoid certain pitfalls, and thus blunder again and again in their conduct of affairs. The whole of society has to foot the bill for the shortcomings of the thick-headed speculators, promoters, and entrepreneurs.

Now it is obvious that men are fallible, and businessmen are certainly not free from this human weakness. But one should not forget that on the market a process of selection is in continual operation. There prevails an unceasing tendency to weed out the less efficient entrepreneurs, that is, those who fail in their endeavors to anticipate correctly the future demands of the consumers. If one group of entrepreneurs produces commodities in excess of the demand of the consumers and consequently cannot sell these goods at

17.About the fundamental fault of the Marxian and all other underconsumption theories, cf. above, p. 301.

18.About these currency and credit manipulations, cf. below, pp. 780-803.

remunerative prices and suffers losses, other groups who produce those things for which the public scrambles make all the greater profits. Some sectors of business are distressed while others thrive. No general depression of trade can emerge.

But the proponents of the doctrines we have to deal with argue differently. They assume that not only the whole entrepreneurial class but all of the people are struck with blindness. As the entrepreneurial class is not a closed social order to which access is denied to outsiders, as every enterprising man is virtually in a position to challenge those who already belong to the class of entrepreneurs, as the history of capitalism provides innumerable examples of penniless newcomers who brilliantly succeeded in embarking upon the production of those goods which according to their own judgment were fitted to satisfy the most urgent needs of consumers, the assumption that all entrepreneurs regularly fall prey to certain errors tacitly implies that all practical men lack intelligence. It implies that nobody who is engaged in business and nobody who considers engaging in business if some opportunity is offered to him by the shortcomings of those already engaged in it, is shrewd enough to understand the real state of the market. But on the other hand the theorists, who are not themselves active in the conduct of affairs and merely philosophize about other people's actions, consider themselves smart enough to discover the fallacies leading astray those doing business. These omniscient professors are never deluded by the errors which cloud the judgment of everyone else. They know precisely what is wrong with private enterprise. Their claims to be invested with dictatorial powers to control business are therefore fully justified.

The most amazing thing about these doctrines is that they furthermore imply that businessmen, in their littleness of mind, obstinately cling to their erroneous procedures in spite of the fact that the scholars have long since unmasked their faults. Although every textbook explodes them, the businessmen cannot help repeating them. There is manifestly no means to prevent the recurrence of economic depression other than to entrust—in accordance with Plato's utopian ideas—supreme power to the philosophers.

Let us examine briefly the two most popular varieties of these disproportionality doctrines.

There is first the durable goods doctrine. These goods retain their serviceableness for some time. As long as their life period lasts, the buyer who has acquired a piece abstains from replacing it by the purchase of a new one. Thus, once all people have made their purchases, the demand for new products dwindles. Business becomes bad. A revival is possible only when, after the lapse of some time, the old houses, cars, refrigerators, and the like are worn out, and their owners must buy new ones.

However, businessmen are as a rule more provident than this doctrine assumes. They are intent upon adjusting the size of their production to the anticipated size of consumers' demand. The bakers take account of the fact that every day a housewife needs a new loaf of bread, and the manufacturers of coffins take into account the fact that the total annual sale of coffins cannot exceed the number of people deceased during this period. The machine industry reckons with the average "life" of its products no less than do the tailors, the shoemakers, the manufacturers of motorcars, radio sets, and refrigerators, and the construction firms. There are, to be sure, always promoters who in a mood of deceptive optimism are prone to overexpand their enterprises. In the pursuit of such projects they snatch away factors of production from other plants of the same industry and from other branches of industry. Thus their overexpansion results in a relative restriction of output in other fields. One branch goes on expanding while others shrink until the unprofitability of the former and the profitability of the latter rearranges conditions. Both the preceding boom and the following slump concern only a part of business.

The second variety of these disproportionality doctrines is known as the acceleration principle. A temporary rise in the demand for a certain commodity results in increased production of the commodity concerned. If demand later drops again, the investments made for this expansion of production appear as malinvestments. This becomes especially pernicious in the field of durable producers' goods. If the demand for the consumers' good a increases by 10 per cent, business increases the equipment p required for its production by 10 per cent. The resulting rise in the demand for p is the more momentous in proportion to the previous demand for p , the longer the duration of serviceableness of a piece of p is and the smaller consequently the previous demand for the replacement of worn-out pieces of p was. If the life of a piece of p is 10 years, the annual demand for p for replacement was 10 per cent of the stock of p previously employed by the industry. The rise of 10 per cent in the demand for a doubles therefore the demand for p and results in a 100 per cent expansion in the equipment r needed for the production of p . If then the demand for a stops increasing, 50 per cent of the production capacity of r remains idle. If the annual increase in the demand for a drops from 10 per cent to 5 per cent, 25 per cent of the production capacity of r cannot be used.

The fundamental error of this doctrine is that it considers entrepreneurial activities as a blindly automatic response to the momentary state of demand. Whenever demand increases and renders a branch of business more profitable, production facilities are supposed instantly to expand in proportion. This view is untenable. Entrepreneurs often err. They pay heavily for their errors. But whoever acted in the way the acceleration principle describes would not be an entrepreneur, but a soulless automaton. Yet the real

entrepreneur is a *speculator*,¹⁹ a man eager to utilize his opinion about the future structure of the market for business operations promising profits. This specific anticipative understanding of the conditions of the uncertain future defies any rules and systematization. It can be neither taught nor learned. If it were different, everybody could embark upon entrepreneurship with the same prospect of success. What distinguishes the successful entrepreneur and promoter from other people is precisely the fact that he does not let himself be guided by what was and is, but arranges his affairs on the ground of his opinion about the future. He sees the past and the present as other people do; but he judges the future in a different way. In his actions he is directed by an opinion about the future which deviates from those held by the crowd. The impulse of his actions is that he appraises the factors of production and the future prices of the commodities which can be produced out of them in a different way from other people. If the present structure of prices renders very profitable the business of those who are today selling the articles concerned, their production will expand only to the extent that entrepreneurs believe that the favorable market constellation will last long enough to make new investments pay. If entrepreneurs do not expect this, even very high profits of the enterprises already operation will not bring about an expansion. It is exactly this reluctance of the capitalists and entrepreneurs to invest in lines which they consider unprofitable that is violently criticized by people who do not comprehend the operation of the market economy. Technocratically minded engineers complain that the supremacy of the profit motive prevents consumers from being amply supplied with all those goods with which technological knowledge could provide them. Demagogues cry out against the greed of capitalists intent upon preserving scarcity.

A satisfactory explanation of business fluctuations must not be built upon the fact that individual firms or groups of firms misjudge the future state of the market and therefore make bad investments. The objective of the trade cycle is the *general* upswing of business activities, the propensity to expand production in *all* branches of industry, and the following *general* depression. These phenomena cannot be brought about by the fact that increased profits in some branches of business result in their expansion and a corresponding overproportional investment in the industries manufacturing the equipment needed for such an expansion.

It is a very well known fact that the more the boom progresses, the harder it becomes to buy machines and other equipment. The plants producing these things are overloaded with orders. Their customers must wait a long time

19. It is noteworthy that the same term is employed to signify the premeditation and the ensuing actions of the promoters and entrepreneurs and the purely academic reasoning of theorists that does not directly result in any action.

until the machines ordered are delivered. This clearly shows that the producers' goods industries are not so quick in the expansion of their own production facilities as the acceleration principle assumes.

But even if, for the sake of argument, we were ready to admit that capitalists and entrepreneurs behave in the way the disproportionality doctrines describe, it remains inexplicable how they could go on in the absence of credit expansion. The striving after such additional investments raises the prices of the complementary factors of production and the rate of interest on the loan market. These effects would curb the expansionist tendencies very soon if there were no credit expansion.

The supporters of the disproportionality doctrines refer to certain occurrences in the field of farming as a confirmation of their assertion concerning the inherent lack of provision on the part of private business. However, it is impermissible to demonstrate characteristic features of free competitive enterprise as operation in the market economy by pointing to conditions in the sphere of medium-size and small farming. In many countries this sphere is institutionally removed from the supremacy of the market and the consumers. Government interference is eager to protect the farmer against the vicissitudes of the market. These farmers do not operate in a free market; they are privileged and pampered by various devices. The orbit of their production activities is a reservation, as it were, in which technological backwardness, narrow-minded obstinacy, and entrepreneurial inefficiency are artificially preserved at the expense of the nonagricultural strata of the people. If they blunder in their conduct of affairs, the government forces the consumers, the taxpayers, and the mortgagees to foot the bill.

It is true that there is such a thing as the *corn-hog cycle* and analogous happenings in the production of other farm products. But the recurrence of such cycles is due to the fact that the penalties which the market applies against inefficient and clumsy entrepreneurs do not affect a great part of the farmers. These farmers are not answerable for their actions because they are the pet children of governments and politicians. If it were not so, they would long since have gone bankrupt and their former farms would be operated by more intelligent people.

XXI. WORK AND WAGES

1. Introversive Labor and Extroversive Labor

A MAN may overcome the disutility of labor (forego the enjoyment of leisure) for various reasons.

1. He may work in order to make his mind and body strong, vigorous, and agile. The disutility of labor is not a price expended for the attainment of these goals; overcoming it is inseparable from the contentment sought. The most conspicuous examples are genuine sport, practiced without any design for reward and social success, and the search for truth and knowledge pursued for its own sake and not as a means of improving one's own efficiency and skill in the performance of other kinds of labor aiming at other ends.¹

2. He may submit to the disutility of labor in order to serve God. He sacrifices leisure to please God and to be rewarded in the beyond by eternal bliss and in the earthly pilgrimage by the supreme delight which the certainty of having complied with all religious duties affords. (If, however, he serves God in order to attain worldly ends—his daily bread and success in his secular affairs—his conduct does not differ substantially from other endeavors to attain mundane advantages by expending labor. Whether the theory guiding his conduct is correct and whether his expectations will materialize are irrelevant to the catallactic qualification of his mode of acting.²)

3. He may toil in order to avoid greater mischief. He submits to the disutility of labor in order to forget, to escape from depressing thoughts and to banish annoying moods; work for him is, as it were, a perfected refinement of play. This refined playing must not be confused with the simple games of children which are merely pleasure-producing. (However, there are also other children's games. Children too are sophisticated enough to indulge in refined play.)

1. Cognition does not aim at a goal beyond the act of knowing. what satisfies the thinker is thinking as such, not obtaining perfect knowledge, a goal inaccessible to man.

2. It is hardly necessary to remark that comparing the craving for knowledge and the conduct of a pious life with sport and play does not imply any disparagement of either.

4. He may work because he prefers the proceeds he can earn by working to the disutility of labor and the pleasures of leisure.

The labor of the classes 1, 2, 3 is expended because the disutility of labor in itself—and not its product—satisfies. One toils and troubles not in order to reach a goal at the termination of the march, but for the very sake of marching. The mountain-climber does not want simply to reach the peak, he wants to reach it by climbing. He disdains the rack railway which would bring him to the summit more quickly and without trouble even though the fare is cheaper than the costs incurred by climbing (e.g., the guide's fee). The toil of climbing does not gratify him immediately; it involves disutility of labor. But it is precisely overcoming the disutility of labor that satisfies him. A less exerting ascent would please him not better, but less.

We may call the labor of classes 1, 2, and 3 introversive labor and distinguish it from the extroversive labor of class 4. In some cases introversive labor may bring about—as a by-product as it were—results for the attainment of which other people would submit to the disutility of labor. The devout may nurse sick people for a heavenly reward; the truth seeker, exclusively devoted to the search for knowledge, may discover a practically useful device. To this extent introversive labor may influence the supply on the market. But as a rule catallactics is concerned only with extroversive labor.

The psychological problems raised by introversive labor are catallactically irrelevant. Seen from the point of view of economics introversive labor is to be qualified as consumption. Its performance as a rule requires not only the personal efforts of the individuals concerned, but also the expenditure of material factors of production and the produce of other peoples' extroversive, not immediately gratifying labor that must be bought by the payment of wages. The practice of religion requires places of worship and their equipment, sport requires diverse utensils and apparatus, trainers and coaches. All these things belong in the orbit of consumption.

2. Joy and Tedium of Labor

Only extroversive, not immediately gratifying labor is a topic of catallactic disquisition. The characteristic mark of this kind of labor is that it is performed for the sake of an end which is beyond its performance and the disutility which it involves. People work because they want to reap the produce of labor. The labor itself causes disutility. But apart from this disutility which is irksome and would enjoin upon man the urge to economize labor even if his power to work were not limited and he were able to perform unlimited work, special emo-

tional phenomena sometimes appear, feelings of joy or tedium, accompanying the execution of certain kinds of labor.

Both, the joy and the tedium of labor, are in a domain other than the disutility of labor. The joy of labor therefore can neither alleviate nor remove the disutility of labor. Neither must the joy of labor be confused with the immediate gratification provided by certain kinds of work. It is an attendant phenomenon which proceeds either from labor's mediate gratification, the produce or reward, or from some accessory circumstances.

People do not submit to the disutility of labor for the sake of the joy which accompanies the labor, but for the sake of its mediate gratification. In fact the joy of labor presupposes for the most part the disutility of the labor concerned.

The sources from which the joy of labor springs are:

1. The expectation of the labor's mediate gratification, the anticipation of the enjoyment of its success and yield. The toiler looks at his work as a means for the attainment of an end sought, and the progress of his work delights him as an approach toward his goal. His joy is a foretaste of the satisfaction conveyed by the mediate gratification. In the frame of social cooperation this joy manifests itself in the contentment of being capable of holding one's ground in the social organism and of rendering services which one's fellow men appreciate either in buying the product or in remunerating the labor expended. The worker rejoices because he gets self-respect and the consciousness of supporting himself and his family and not being dependent on other people's mercy.

2. In the pursuit of his work the worker enjoys the aesthetic appreciation of his skill and its product. This is not merely the contemplative pleasure of the man who views things performed by other people. It is the pride of a man who is in a position to say: I know how to make such things, this is my work.

3. Having completed a task the worker enjoys the feeling of having successfully overcome all the toil and trouble involved. He is happy in being rid of something difficult, unpleasant, and painful, in being relieved for a certain time of the disutility of labor. His is the feeling of "I have done it."

4. Some kinds of work satisfy particular wishes. There are, for example, occupations which meet erotic desires—either conscious or subconscious ones. These desires may be normal or perverse. Also fetishists, homosexuals, sadists and other perverts can sometimes find in their work an opportunity to satisfy their strange appetites. There are occupations which are especially attractive to such people. Cruelty and blood-thirstiness luxuriantly thrive

under various occupational cloaks.

The various kinds of work offer different conditions for the appearance of the joy of labor. These conditions may be by and large more homogeneous in classes 1 and 3 than in class 2. It is obvious that they are more rarely present for class 4.

The joy of labor can be entirely absent. Psychical factors may eliminate it altogether. On the other hand one can purposely aim at increasing the joy of labor.

Keen discerners of the human soul have always been intent upon enhancing the joy of labor. A great part of the achievements of the organizers and leaders of armies of mercenaries belonged to this field. Their task was easy as far as the profession of arms provides the satisfactions of class 4. However, these satisfactions do not depend on the arms-bearer's loyalty. They also come to the soldier who leaves his war-lord in the lurch and turns against him in the service of new leaders. Thus the particular task of the employers of mercenaries was to promote an *esprit de corps* and loyalty that could render their hirelings proof against temptations. There were also, of course, chiefs who did not bother about such impalpable matters. In the armies and navies of the eighteenth century the only means of securing obedience and preventing desertion were barbarous punishments.

Modern industrialism was not intent upon designedly increasing the joy of labor. It relied upon the material improvement that it brought to its employees in their capacity as wage earners as well as in their capacity as consumers and buyers of the products. In view of the fact that job-seekers thronged to the plants and everyone scrambled for the manufactures, there seemed to be no need to resort to special devices. The benefits which the masses derived from the capitalist system were so obvious that no entrepreneur considered it necessary to harangue the workers with procapitalist propaganda. Modern capitalism is essentially mass production for the needs of the masses. The buyers of the products are by and large the same people who as wage earners cooperate in their manufacturing. Rising sales provided dependable information to the employer about the improvement of the masses' standard of living. He did not bother about the feelings of his employees as workers. He was exclusively intent upon serving them as consumers. Even today, in face of the most persistent and fanatical anticapitalist propaganda, there is hardly any counter-propaganda.

This anticapitalist propaganda is a systematic scheme for the substitution of tedium for the joy of labor. The joy of labor of classes 1 and 2 depends to some extent on ideological factors. The worker rejoices in his place in

society and his active cooperation in its productive effort. If one disparages this ideology and replaces it by another which represents the wage earner as the distressed victim of ruthless exploiters, one turn the joy of labor into a feeling of disgust and tedium.

No ideology, however impressively emphasized and taught, can affect the disutility of labor. It is impossible to remove or to alleviate it by persuasion or hypnotic suggestion. On the other hand it cannot be increased by words and doctrines. The disutility of labor is a phenomenon unconditionally given. The spontaneous and carefree discharge of one's own energies and vital functions in aimless freedom suits everybody better than the stern restraint of purposive effort. The disutility of labor also pains a man who with heart and soul and even with self-denial is devoted to his work. He too is eager to reduce the lump of labor if it can be done without prejudice to the mediate gratification expected, and he enjoys the joy of labor of class 3.

However, the joy of labor of classes 1 and 2 and sometimes even that of class 3 can be eliminated by ideological influences and be replaced by the tedium of labor. The worker begins to hate his work if he becomes convinced that what makes him submit to the disutility of labor is not his own higher valuation of the stipulated compensation, but merely an unfair social system. Deluded by the slogans of the socialist propagandists, he fails to realize that the disutility of labor is an inexorable fact of human conditions, something ultimately given that cannot be removed by devices or methods of social organization. He falls prey to the Marxian fallacy that in a socialist commonwealth work will arouse not pain but pleasure.³

The fact that the tedium of labor is substituted for the joy of labor affects the valuation neither of the disutility of labor nor of the produce of labor. Both the demand for labor and the supply of labor remain unchanged. For people do not work for the sake of labor's joy, but for the sake of the mediate gratification. What is altered is merely the worker's emotional attitude. His work, his position in the complex of the social division of labor, his relations to other members of society and to the whole of society appear to him in a new light. He pities himself as the defenseless victim of an absurd and unjust system. He becomes an ill-humored grumbler, an unbalanced personality, an easy prey to all sorts of quacks and cranks. To be joyful in the performance of one's tasks and in overcoming the disutility of labor makes people cheerful and strengthens their energies and vital forces. To feel tedium in working makes people morose and

3. Engels, *Herrn Eugen Dührings Umwälzung der Wissenschaft* (7th ed. Stuttgart, 1910), p. 317. See above, p. 137.

neurotic. A commonwealth in which the tedium of labor prevails is an assemblage of rancorous, quarrelsome and wrathful malcontents.

However, with regard to the volitional springs for overcoming the disutility of labor, the role played by the joy and the tedium of labor is merely accidental and supererogatory. There cannot be any question of making people work for the mere sake of the joy of labor. The joy of labor is no substitute for the mediate gratification of labor. The only means of inducing a man to work more and better is to offer him a higher reward. It is vain to bait him with the joy of labor. When the dictators of Soviet Russia, Nazi Germany, and Fascist Italy tried to assign to the joy of labor a definite function in their system of production, they saw their expectations blighted.

Neither the joy nor the tedium of labor can influence the amount of labor offered on the market. As far as these feelings are present with the same intensity in all kinds of work, the case is obvious. But it is the same with regard to joy and tedium which are conditioned by the particular features of the work concerned or the particular character of the worker. Let us look, for example, at the joy of class 4. The eagerness of certain people to get jobs which offer an opportunity for the enjoyment of these particular satisfactions tends to lower wage rates in this field. But it is precisely this effect that makes other people, less responsive to these questionable pleasures, prefer other sectors of the labor market in which they can earn more. Thus an opposite tendency develops which neutralizes the first one.

The joy and the tedium of labor are psychological phenomena which influence neither the individual's subjective valuation of the disutility and the mediate gratification of labor nor the price paid for labor on the market.

3. Wages

Labor is a scarce factor of production. As such it is sold and bought on the market. The price paid for labor is included in the price allowed for the product or the services if the performer of the work is the seller of the product or the services. If bare labor is sold and bought as such, either by an entrepreneur engaged in production for sale or by a consumer eager to use the services rendered for his own consumption, the price paid is called wages.

For acting man his own labor is not merely a factor of production but also the source of disutility; he values it not only with regard to the mediate gratification expected but also with regard to the disutility it causes. But for him, as for everyone, other people's labor as offered for sale on the market is nothing but a factor of production. Man deals with other people's labor in the same way

that he deals with all scarce material factors of production. He appraises it according to the principles he applies in the appraisal of all other goods. The height of wage rates is determined on the market in the same way in which the prices of all commodities are determined. In this sense we may say that labor is a commodity. The emotional associations which people, under the influence of Marxism, attach to this term do not matter. It suffices to observe incidentally that the employers deal with labor as they do with commodities because the conduct of the consumers forces them to proceed in this way.

It is not permissible to speak of labor and wages in general without resorting to certain restrictions. A uniform type of labor or a general rate of wages do not exist. Labor is very different in quality, and each kind of labor renders specific services. each is appraised as a complementary factor for turning out definite consumers' goods and services. Between the appraisal of the performance of a surgeon and that of a stevedore there is no direct connection. But indirectly each sector of the labor market is connected with all other sectors. An increase in the demand for surgical services, however great, will not make stevedores flock into the practice of surgery. Yet the lines between the various sectors of the labor market are not sharply drawn. There prevails a continuous tendency for workers to shift from their branch to other similar occupations in which conditions seem to offer better opportunities. Thus finally every change in demand or supply in one sector affects all other sectors indirectly. All groups indirectly compete with one another. If more people enter the medical profession, men are withdrawn from kindred occupations who again are replaced by an inflow of people from other branches and so on. In this sense there exists a connexity between all occupational groups however different the requirements in each of them may be. There again we are faced with the fact that the disparity in the quality of work needed for the satisfaction of wants is greater than the diversity in men's inborn ability to perform work.⁴

Connexity exists not only between different types of labor and the prices paid for them but no less between labor and the material factors of production. Within certain limits, labor can be substituted for material factors of production and vice versa. The extent that such substitutions are resorted to depends on the height of wage rates and the prices of material factors.

The determination of wage rates—like that of the prices of material factors of production—can be achieved only on the market. There is no such thing as nonmarket wage rates, just as there are no nonmarket prices. As far as there are wages, labor is dealt with like any material factor of production

4. Cf. above, pp. 133-135.

and sold and bought on the market. It is usual to call the sector of the market of producers' goods on which labor is hired the labor market. As with all other sectors of the market, the labor market is actuated by the entrepreneurs intent upon making profits. Each entrepreneur is eager to buy all the kinds of specific labor he needs for the realization of his plans at the cheapest price. But the wages he offers must be high enough to take the workers away from competing entrepreneurs. The upper limit of his bidding is determined by anticipation of the price he can obtain for the increment in salable goods he expects from the employment of the worker concerned. The lower limit is determined by the bids of competing entrepreneurs who themselves are guided by analogous considerations. It is this that economists have in mind in asserting that the height of wage rates for each kind of labor is determined by its marginal productivity. Another way to express the same truth is to say that wage rates are determined by the supply of labor and of material factors of production on the one hand and by the anticipated future prices of the consumers' goods.

This catallactic explanation of the determination of wage rates has been the target of passionate but entirely erroneous attacks. It has been asserted that there is a monopoly of the demand for labor. Most of the supporters of this doctrine think that they have sufficiently proved their case by referring to some incidental remarks of Adam Smith concerning "a sort of tacit but constant and uniform combination" among employers to keep wages down.⁵ Others refer in vague terms to the existence of trade associations of various groups of businessmen. The emptiness of all this talk is evident. However, the fact that these garbled ideas are the main ideological foundation of labor unionism and the labor policy of all contemporary governments makes it necessary to analyze them with the utmost care.

The entrepreneurs are in the same position with regard to the sellers of labor as they are with regard to the sellers of the material factors of production. They are under the necessity of acquiring all factors of production at the cheapest price. But if in the pursuit of this endeavor some entrepreneurs, certain groups of entrepreneurs, or all entrepreneurs offer prices or wage rates which are too low, i.e., do not agree with the state of the unhampered market, they will succeed in acquiring what they want to acquire only if entrance into the ranks of entrepreneurship is blocked through institutional barriers. If the emergence of new entrepreneurs or the expansion of the activities of already operating

5. Cf. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Basle, 1791), vol. I, Bk. I, chap. viii, p. 100. Adam Smith himself seems to have unconsciously given up the idea. Cf. W.H. Hutt, *The Theory of Collective Bargaining* (London, 1930), pp. 24-25.

entrepreneurs is not prevented, any drop in the prices of factors of production not consonant with the structure of the market must open new chances for the earning of profits. There will be people eager to take advantage of the margin between the prevailing wage rate and the marginal productivity of labor. Their demand for labor will bring wage rates back to the height conditioned by labor's marginal productivity. The tacit combination among the employers to which Adam Smith referred, even if it existed, could not lower wages below the competitive market rate unless access to entrepreneurship required not only brains and capital (the latter always available to enterprises promising the highest returns), but in addition also an institutional title, a patent, or a license, reserved to a class of privileged people.

It has been asserted that a job-seeker must sell his labor at any price, however low, as he depends exclusively on his capacity to work and has no other source of income. He cannot wait and is forced to content himself with any reward the employers are kind enough to offer him. This inherent weakness makes it easy for the concerted action of the masters to lower wage rates. They can, if need be, wait longer, as their demand for labor is not so urgent as the worker's demand for subsistence. The argument is defective. It takes it for granted that the employers pocket the difference between the marginal-productivity wage rate and the lower monopoly rate as an extra monopoly gain and do not pass it on to the consumers in the form of a reduction in prices. For if they were to reduce prices according to the drop in costs of production, they, in their capacity as entrepreneurs and sellers of the products, would derive no advantage from cutting wages. The whole gain would go to the consumers and thereby also to the wage-earners in their capacity as buyers; the entrepreneurs themselves would be benefitted only as consumers. To retain the extra profit resulting from the "exploitation" of the workers' alleged poor bargaining power would require concerted action on the part of employers in their capacity as sellers of the products. It would require a universal monopoly of all kinds of production activities which can be created only by an institutional restriction of access to entrepreneurship.

The essential point of the matter is that the alleged monopolistic combination of the employers about which Adam Smith and a great part of public opinion speak would be a monopoly of demand. But we have already seen that such alleged monopolies of demand are in fact monopolies of supply of a particular character. The employers would be in a position enabling them to lower wage rates by concerted action only if they were to monopolize a factor indispensable for every kind of production and to restrict the employ-

ment of this factor in a monopolistic way. As there is no single material factor indispensable for every kind of production, they would have to monopolize all material factors of production. This condition would be present only in a socialist community, in which there is neither a market nor prices and wage rates.

Neither would it be possible for the proprietors of the material factors of production, the capitalists and the landowners, to combine in a universal cartel against the interests of the workers. The characteristic mark of production activities in the past and in the foreseeable future is that the scarcity of labor exceeds the scarcity of most of the primary, nature-given material factors of production. The comparatively greater scarcity of labor determines the extent to which the comparatively abundant primary natural factors can be utilized. There is unused soil, there are unused mineral deposits and so on because there is not enough labor available for their utilization. If the owners of the soil that is tilled today were to form a cartel in order to reap monopoly gains, their plans would be frustrated by the competition of the owners of the submarginal land. The owners of the produced factors of production in their turn could not combine in a comprehensive cartel without the cooperation of the owners of the primary factors.

Various other objections have been advanced against the doctrine of the monopolistic exploitation of labor by a tacit or avowed combine of employers. It has been demonstrated that at no time and at no place in the unhampered market economy can the existence of such cartels be discovered. It has been shown that it is not true that the job-seekers cannot wait and are therefore under the necessity of accepting any wage rates, however low, offered to them by the employers. It is not true that every unemployed worker is faced with starvation; the workers too have reserves and can wait; the proof is that they really do wait. On the other hand waiting can be financially ruinous to the entrepreneurs and capitalists too. If they cannot employ their capital, they suffer losses. Thus all the disquisitions about an alleged "employers' advantage" and "workers' disadvantage" in bargaining are without substance.⁶

But these are secondary and accidental considerations. The central fact is that a monopoly of the demand for labor cannot and does not exist in an unhampered market economy. It could originate only as an outgrowth of institutional restrictions of access to entrepreneurship.

Yet one more point must be stressed. The doctrine of the monopolistic

6. All these and many other points are carefully analyzed by Hutt, *op. cit.*, pp. 35-72.

manipulation of wage rates by the employers speaks of labor as if it were a homogeneous entity. It deals with such concepts as demand for "labor in general" and supply of "labor in general." But such notions have, as has been pointed out already, no counterpart in reality. What is sold and bought on the labor market is not "labor in general," but definite specific labor suitable to render definite services. Each entrepreneur is in search of workers who are fitted to accomplish those specific tasks which he needs for the execution of his plans. He must withdraw these specialists from the employments in which they happen to work at the moment. The only means he has to achieve this is to offer them higher pay. Every innovation which an entrepreneur plans—the production of a new article, the application of a new process of production, the choice of a new location for a specific branch or simply the expansion of production already in existence either in his own enterprise or in other enterprises—requires the employment of workers hitherto engaged somewhere else. The entrepreneurs are not merely faced with a shortage of "labor in general," but with a shortage of those specific types of labor they need for their plants. The competition among the entrepreneurs in bidding for the most suitable hands is no less keen than their competition in bidding for the required raw materials, tools, and machines and in their bidding for capital on the capital and loan market. The expansion of the activities of the individual firms as well as of the whole society is not only limited by the amount of capital goods available and of the supply of "labor in general." In each branch of production it is also limited by the available supply of specialists. This is, of course, only a temporary obstacle which vanishes in the long run when more workers, attracted by the higher pay of the specialists in comparatively undermanned branches, will have trained themselves for the special tasks concerned. But in the changing economy such a scarcity of specialists emerges anew daily and determines the conduct of employers in search for workers.

Every employer must aim at buying the factors of production needed, inclusive of labor, at the cheapest price. An employer who paid more than agrees with the market price of the services his employees render him, would be soon removed from his entrepreneurial position. On the other hand an employer who tried to reduce wage rates below the height consonant with the marginal productivity of labor would not recruit the type of men that the most efficient utilization of his equipment requires. There prevails a tendency for wage rates to reach the point at which they are equal to the price of the marginal product of the kind of labor in question. If wage rates drop below this point, the gain derived from the employment of every additional

worker will increase the demand for labor and thus make wage rates rise again. If wage rates rise above this point, the loss incurred from the employment of every worker will force the employers to discharge workers. The competition of the unemployed for jobs will create a tendency for wage rates to drop.

4. Catallactic Unemployment

If a job-seeker cannot obtain the position he prefers, he must look for another kind of job. If he cannot find an employer ready to pay him as much as he would like to earn, he must abate his pretensions. If he refuses, he will not get any job. He remains unemployed.

What causes unemployment is the fact that—contrary to the above-mentioned doctrine of the worker's inability to wait—those eager to earn wages can and do wait. A job-seeker who does not want to wait will always get a job in the unhampered market economy in which there is always unused capacity of natural resources and very often also unused capacity of produced factors of production. It is only necessary for him either to reduce the amount of pay he is asking for or to alter his occupation or his place of work.

There were and still are people who work only for some time and then live for another period from the savings they have accumulated by working. In countries in which the cultural state of the masses is low, it is often difficult to recruit workers who are ready to stay on the job. The average man there is so callous and inert that he knows of no other use for his earnings than to buy some leisure time. He works only in order to remain unemployed for some time.

It is different in the civilized countries. Here the worker looks upon unemployment as an evil. He would like to avoid it provided the sacrifice required is not too grievous. He chooses between employment and unemployment in the same way in which he proceeds in all other actions and choices: he weighs the pros and cons. If he chooses unemployment, this unemployment is a market phenomenon whose nature is not different from other market phenomena as they appear in a changing market economy. We may call this kind of unemployment market-generated or *catallactic unemployment*.

The various considerations which may induce a man to decide for unemployment can be classified in this way:

1. The individual believes that he will find at a later date a remunerative job in his dwelling place and in an occupation which he likes better and for which he has been trained. He seeks to avoid the expenditure and other disadvantages involved in shifting from one occupation to another and from one geographical point to another. There may be special conditions increasing these costs. A

worker who owns a homestead is more firmly linked with the place of his residence than people living in rented apartments. A married woman is less mobile than an unmarried girl. Then there are occupations which impair the worker's ability to resume his previous job at a later date. A watchmaker who works for some time as a lumberman may lose the dexterity required for his previous job. In all these cases the individual chooses temporary unemployment because he believes that this choice pays better in the long run.

2. There are occupations the demand for which is subject to considerable seasonal variations. In some months of the year the demand is very intense, in other months it dwindles or disappears altogether. The structure of wage rates discounts these seasonal fluctuations. The branches of industry subject to them can compete on the labor market only if the wages they pay in the good season are high enough to indemnify the wage earners for the disadvantages resulting from the seasonal irregularity in demand. Then many of the workers, having saved a part of their ample earnings in the good season, remain unemployed in the bad season.

3. The individual chooses temporary unemployment for considerations which in popular speech are called uneconomic or even irrational. He does not take jobs which are incompatible with his religious, moral, and political convictions. He shuns occupations the exercise of which would impair his social prestige. He lets himself be guided by traditional standards of what is proper for a gentleman and what is unworthy. He does not want to lose face or caste.

Unemployment in the unhampered market is always voluntary. In the eyes of the unemployed man, unemployment is the minor of two evils between which he has to choose. The structure of the market may sometimes cause wage rates to drop. But, on the unhampered market, there is always for each type of labor a rate at which all those eager to work can get a job. The final wage rate is that rate at which all job-seekers get jobs and all employers as many workers as they want to hire. Its height is determined by the marginal productivity of each type of work.

Wage rate fluctuations are the device by means of which the sovereignty of the consumers manifests itself on the labor market. They are the measure adopted for the allocation of labor to the various branches of production. They penalize disobedience by cutting wage rates in the comparatively overmanned branches and recompense obedience by raising wage rates in the comparatively undermanned branches. They thus submit the individual to a harsh social pressure. It is obvious that they indirectly limit the individual's freedom to choose his occupation. But this pressure is not rigid. It leaves to the individual

a margin in the limits of which he can choose between what suits him better and what less. Within this orbit he is free to act of his own accord. This amount of freedom is the maximum of freedom that an individual can enjoy in the framework of the social division of labor, and this amount of pressure is the minimum of pressure that is indispensable for the preservation of the system of social cooperation. There is only one alternative left to the catallactic pressure exercised by the wages system: the assignment of occupations and jobs to each individual by the peremptory decrees of an authority, a central board planning all production activities. This is tantamount to the suppression of all freedom.

It is true that under the wages system the individual is not free to choose permanent unemployment. But no other imaginable social system could grant him a right to unlimited leisure. That man cannot avoid submitting to the disutility of labor is not an outgrowth of any social institution. It is an inescapable natural condition of human life and conduct.

It is not expedient to call catallactic unemployment in a metaphor borrowed from mechanics "frictional" unemployment. In the imaginary construction of the evenly rotating economy there is no unemployment because we have based this construction on such an assumption. Unemployment is a phenomenon of a changing economy. The fact that a worker discharged on account of changes occurring in the arrangement of production processes does not instantly take advantage of every opportunity to get another job but waits for a more propitious opportunity is not a consequence of the tardiness of the adjustment to the change in conditions, but is one of the factors slowing down the pace of this adjustment. It is not an automatic reaction to the changes which have occurred, independent of the will and the choices of the job-seekers concerned, but the effect of their intentional actions. It is speculative, not frictional.

Catallactic unemployment must not be confused with *institutional unemployment*. Institutional unemployment is not the outcome of the decisions of the individual job-seekers. It is the effect of interference with the market phenomena intent upon enforcing by coercion and compulsion wage rates higher than those the unhampered market would have determined. The treatment of institutional unemployment belongs to the analysis of the problems of interventionism.

5. Gross Wage Rates and Net Wage Rates

What the employer buys on the labor market and what he gets in exchange for the wages paid is always a definite performance which he appraises according to its market price. The customs and usages prevailing on the various

sectors of the labor market do not influence the prices paid for definite quantities of specific performances. Gross wage rates always tend toward the point at which they are equal to the price for which the increment resulting from the employment of the marginal worker can be sold on the market, due allowance being made for the price of the required materials and to ordinary interest on the capital needed.

In weighing the pros and cons of the hiring of workers the employer does not ask himself what the worker gets as take-home wages. The only relevant question for him is: What is the total price I have to expend for securing the services of this worker? In speaking of the determination of wage rates catallactics always refers to the total price which the employer must spend for a definite quantity of work of a definite type, i.e., to gross wage rates. If laws or business customs force the employer to make other expenditures besides the wages he pays to the employee, the take-home wages are reduced accordingly. Such accessory expenditures do not affect the gross rate of wages. Their incidence falls upon the wage-earner. Their total amount reduces the height of take-home wages, i.e., of net wage rates.

It is necessary to realize the following consequences of this state of affairs:

1. It does not matter whether wages are time wages or piecework wages. Also where there are time wages, the employer takes only one thing into account; namely, the average performance he expects to obtain from each worker employed. His calculation discounts all the opportunities time work offers to shirkers and cheaters. He discharges workers who do not perform the minimum expected. On the other hand a worker eager to earn more must either shift to piecework or seek a job in which pay is higher because the minimum of achievement expected is greater.

Neither does it matter on an unhampered labor market whether time wages are paid daily, weekly, monthly, or as annual wages. It does not matter whether the time allowed for of discharge is longer or shorter, whether agreements are made for definite periods or for the worker's lifetime, whether the employee is entitled to retirement and a pension for himself, his widow, and his orphans, to paid or unpaid vacations, to certain assistance in case of illness or invalidism or to any other benefits and privileges. The question the employer faces is always the same: Does it or does it not pay for me to enter into such a contract? Don't I pay too much for what I am getting in return?

2. Consequently the incidence of all so-called social burdens and gains ultimately falls upon the worker's net wage rates. It is irrelevant whether or not the employer is entitled to deduct the contributions to all kinds of social

security from the wages he pays in cash to the employee. At any rate these contributions burden the employee, not the employer.

3. The same holds true with regard to taxes on wages. Here too it does not matter whether the employer has or has not the right to deduct them from take-home wages.

4. Neither is a shortening of the hours of work a free gift to the worker. If he does not compensate for the shorter hours of work by increasing his output accordingly, time wages will drop correspondingly. If the law decreeing a shortening of the hours of work prohibits such a reduction in wage rates, all the consequences of a government-decreed rise in wage rates appear. The same is valid with regard to all other so-called social gains, such as paid vacations and so on.

5. If the governments grants to the employer a subsidy for the employment of certain classes of workers, their take-home wages are increased by the total amount of such a subsidy.

6. If the authorities grant to every employed worker whose own earnings lag behind a certain minimum standard an allowance raising his income to this minimum, the height of wage rates is not directly affected. Indirectly a drop in wage rates could possibly result as far as this system could induce people who did not work before to seek jobs and thus bring about an increase in the supply of labor.⁷

6. Wages and Subsistence

The life of primitive man was an unceasing struggle against the scantiness of the nature-given means for his sustenance. In this desperate effort to secure bare survival, many individuals and whole families, tribes, and races succumbed. Primitive man was always haunted by the specter of death from starvation. Civilization has freed us from these perils. Human life is menaced day and night by innumerable dangers; it can be destroyed at any instant by natural forces which are beyond control or at least cannot be controlled at the present stage of our knowledge and our potentialities. But the horror of starvation no longer terrifies people living in a capitalist society. He who is able to work earns much more than is needed for bare sustenance.

There are also, of course, disabled people who are incapable of work.

7. In the last years of the eighteenth century, amidst the distress produced by the protracted war with France and the inflationary methods of financing it, England resorted to this makeshift (the Speenhamland system). the real aim was to prevent agricultural workers from leaving their jobs and going into the factories where they could earn more. The Speenhamland system was thus a disguised subsidy for the landed gentry saving them the expense of higher wages.

Then there are invalids who can perform a small quantity of work, but whose disability prevents them from earning as much as normal workers do; sometimes the wage rates they could earn are so low that they could not maintain themselves. These people can keep body and soul together only if other people help them. The next of kin, friends, the charity of benefactors and endowments, and communal poor relief take care of the destitute. Alms-folk do not cooperate in the social process of production; as far as the provision of the means for the satisfaction of wants is concerned, they do not act; they live because other people look after them. The problems of poor relief are problems of the arrangement of consumption, not of the arrangement of production activities. They are as such beyond the frame of a theory human action which refers only to the provision of the means required for consumption, not to the way in which these means are consumed. Catallactic theory deals with the methods adopted for the charitable support of the destitute only as far as they can possibly affect the supply of labor. It has sometimes happened that the policies applied in poor relief have encouraged unwillingness to work and the idleness of able-bodied adults.

In the capitalist society there prevails a tendency toward a steady increase in the per capita quota of capital invested. The accumulation of capital soars above the increase in population figures. Consequently the marginal productivity of labor, real wage rates, and the wage earners' standard of living tend to rise continually. But this improvement in well-being is not the manifestation of the operation of an inevitable law of human evolution; it is a tendency resulting from the interplay of forces which can freely produce their effects only under capitalism. It is possible and, if we take into account the direction of present-day policies, even not unlikely that capital consumption on the one hand and an increase or an insufficient drop in population figures on the other hand will reverse things. Then it could happen that men will again learn what starvation means and that the relation of the quantity of capital goods available and population figures will become so unfavorable as to make part of the workers earn less than a bare subsistence. The mere approach to such conditions would certainly cause irreconcilable dissensions within society, conflicts the violence of which must result in a complete disintegration of all societal bonds. The social division of labor cannot be preserved if part of the cooperating members of society are doomed to earn less than a bare subsistence.

The notion of a physiological minimum of subsistence to which the "iron law of wages" refers and which demagogues put forward again and again is of no use for a catallactic theory of the determination of wage rates. One of

the foundations upon which social cooperation rests is the fact that labor performed according to the principle of the division of labor is so much more productive than the efforts of isolated individuals that able-bodied people are not troubled by the fear of starvation which daily threatened their forebears. Within a capitalist commonwealth the minimum of subsistence plays no catallactic role.

Furthermore, the notion of a physiological minimum of subsistence lacks that precision and scientific rigor which people have ascribed to it. Primitive man, adjusted to a more animal-like than human existence, could keep himself alive under conditions which are unbearable to his dainty scions pampered by capitalism. There is no such thing as a physiologically and biologically determined minimum of subsistence, valid for every specimen of the zoological species *homo sapiens*. No more tenable is the idea that a definite quantity of calories is needed to keep a man healthy and progenitive, and a further definite quantity to replace the energy expended in working. The appeal to such notions of cattle breeding and the vivisection of guinea pigs does not aid the economist in his endeavors to comprehend the problems of purposive human action. The "iron law of wages" and the essentially identical Marxian doctrine of the determination of "the value of labor power" by "the working time necessary for its production, consequently also for its reproduction,"⁸ are the least tenable of all that has ever been taught in the field of catallactics.

Yet it was possible to attach some meaning to the ideas implied in the iron law of wages. If one sees in the wage earner merely a chattel and believes that he plays no other role in society, if one assumes that he aims at no other satisfaction than feeding and proliferation and does not know of any employment for his earnings other than the procurement of those animal satisfactions, one may consider the iron law as a theory of the determination of wage rates. In fact the classical economists, frustrated by their abortive value theory, could not think of any other solution of the problem involved. For Torrens and Ricardo the theorem that the natural price of labor is the price which enables the wage earners to subsist and to perpetuate their race, without any increase or diminution, was the logically inescapable inference from their untenable value theory. But when their epigones saw that they could no longer satisfy themselves with this manifestly preposterous law, they resorted to a modification of it which was

8. Cf. marx, *Das Kapital* (7th ed. Hamburg, 1914), I, 133. In the *Communist Manifesto* (Section II) Marx and Engels formulate their doctrine in this way: "The average price of a wage labor is the minimum wage, i.e., that quantum of means of subsistence which is absolutely required to keep the laborer in bare existence as laborer." It "merely suffices to prolong and produce a bare existence."

tantamount to a complete abandonment of any attempt to provide an economic explanation of the determination of wage rates. They tried to preserve the cherished notion of the minimum of subsistence by substituting the concept of a "social" minimum for the concept of a physiological minimum. They no longer spoke of the minimum required for the necessary subsistence of the laborer and for the preservation of an undiminished supply of labor. They spoke instead of the minimum required for the preservation of a standard of living sanctified by historical tradition and inherited customs and habits. While daily experience taught impressively that under capitalism real wage rates and the wage earners' standard of living were steadily rising, while it became from day to day more obvious that the traditional walls separating the various strata of the population could no longer be preserved because the social improvement in the conditions of the industrial workers demolished the vested ideas of social rank and dignity, these doctrinaires announced that old customs and social convention determine the height of wage rates. Only people blinded by preconceived prejudices and party bias could resort to such an explanation in an age in which industry supplies the consumption of the masses again and again with new commodities hitherto unknown and makes accessible to the average worker satisfactions of which no king could dream in the past.

It is not especially remarkable that the Prussian Historical School of the *wirtschaftliche Staatswissenschaften* viewed wage rates no less than commodity prices and interest rates as "historical categories" and that in dealing with wage rates it had recourse to the concept of "income adequate to the individual's hierarchical station in the social scale of ranks." It was the essence of the teachings of this school to deny the existence of economics and to substitute history for it. But it is amazing that Marx and the Marxians did not recognize that their endorsement of this spurious doctrine entirely disintegrated the body of the so-called Marxian system of economics. When the articles and dissertations published in England in the early 'sixties convinced Marx that it was no longer permissible to cling unswervingly to the wage theory of the classical economists, he modified his theory of the value of labor power. He declared that "the extent of the so-called natural wants and the manner in which they are satisfied, are in themselves a product of historical evolution" and "depend to a large extent on the degree of civilization attained by any given country and, among other factors, especially on the conditions and customs and pretensions concerning the standard of life under which the class of free laborers has been formed." Thus "a historical and moral element enter into the determination of the value of labor power." But when Marx adds that nonetheless

“for a given country at any given time, the average quantity of *indispensable* necessities of life is a given fact,”⁹ he contradicts himself and misleads the reader. What he has in mind is no longer the “indispensable necessities,” but the things considered indispensable from a traditional point of view, the means necessary for the preservation of a standard of living adequate to the workers’ station in the traditional social hierarchy. The recourse to such an explanation means virtually the renunciation of any economic or catallactic elucidation of the determination of wage rates. Wage rates are explained as a datum of history. They are no longer seen as a market phenomenon, but as a factor originating outside of the interplay of the forces operating on the market.

However, even those who believe that the height of wage rates as they are actually paid and received in reality are forced upon the market from without as a datum cannot avoid developing a theory which explains the determination of wage rates as the outcome of the valuations and decisions of the consumers. Without such a catallactic theory of wages, no economic analysis of the market can be complete and logically satisfactory. It is simply nonsensical to restrict the catallactic disquisitions to the problems of the determination of commodity prices and interest rates and to accept wage rates as a historical datum. An economic theory worthy of the name must be in a position to assert with regard to wage rates more than that they are determined by a “historical and moral element.” The characteristic mark of economics is that it explains the exchange ratios manifested in market transactions as market phenomena the determination of which is subject to a regularity in the concatenation and sequence of events. It is precisely this that distinguishes economic conception from the historical understanding, theory from history.

We can well imagine a historical situation in which the height of wage rates is forced upon the market by the interference of external compulsion and coercion. Such institutional fixing of wage rates is one of the most important features of our age of interventionist policies. But with regard to such a state of affairs it is the task of economics to investigate what effects are brought about by the disparity between the two wage rates, the potential rate which the unhampered market would have produced by the interplay of the supply of and the demand for labor on the one hand, and on the other the rate which external compulsion and coercion impose upon the parties to the market transactions.

9. Cf. Marx, *Das Kapital*, p. 134. Italics are mine. The term used by Marx which in the text is translated as “necessaries of life” is “*Lebensmittel*.” the *Muret-Sanders Dictionary* (16 ed.) translates this term “articles of food, provisions, victuals, grub.”

It is true, wage earners are imbued with the idea that wages must be at least high enough to enable them to maintain a standard of living at least high enough to enable them to maintain a standard of living adequate to their station in the hierarchical gradation of society. Every single worker has his particular opinion about the claims he is entitled to raise on account of "status," "rank," "tradition," and "custom" in the same way as he has his particular opinion about his own efficiency and his own achievements. But such pretensions and self-complacent assumptions are without any relevance for the determination of wage rates. They limit neither the upward nor the downward movement of wage rates. The wage earner must sometimes satisfy himself with much less than what, according to his opinion, is adequate to his rank and efficiency. If he is offered more than he expected, he pockets the surplus without a qualm. The age of *laissez faire* for which the iron law and Marx's doctrine of the historically determined formation of wage rates claim validity witnessed a progressive, although sometimes temporarily interrupted, tendency for real wage rates to rise. The wage earners' standard of living rose to a height unprecedented in history and never thought of in earlier periods.

The labor unions pretend that nominal wage rates at least must always be raised in accordance with the changes occurring in the monetary unit's purchasing power in such a way as to secure to the wage earner the unabated enjoyment of the previous standard of living. They raise these claims also with regard to wartime conditions and the measures adopted for the financing of war expenditure. In their opinion even in wartime neither inflation nor the withholding of income taxes must affect the worker's take-home *real* wage rates. This doctrine tacitly implies the thesis of the *Communist Manifesto* that "the working men have no country" and have "nothing to lose but their chains"; consequently they are neutral in the wars waged by the bourgeois exploiters and do not care whether their nation conquers or is conquered. It is not the task of economics to scrutinize these statements. It only has to establish the fact that it does not matter what kind of justification is advanced in favor of the enforcement of wage rates higher than those the unhampered labor market would have determined. If as a result of such claims real wage rates are really raised above the height consonant with the marginal productivity of the various types of labor concerned, the unavoidable consequences must appear without any regard to the underlying philosophy.

In reviewing the whole history of mankind from the early beginnings of civilization up to our age, it makes sense to establish in general terms the fact that the productivity of human labor has been multiplied, for indeed the

members of a civilized nation produce today much more than their ancestors did. But this concept of the productivity of labor in general is devoid of any praxeological or catallactic meaning and does not allow any expression in numerical terms. Still less is it permissible to refer to it in attempts to deal with the problems of the market.

Present-day labor-union doctrine operates with a concept of productivity of labor that is designedly constructed to provide an alleged ethical justification for syndicalistic ventures. It defines productivity either as the total market value in terms of money that is added to the products by the processing (either of one firm or by all the firms of a branch of industry), divided by the number of workers employed, or as output (of this firm or branch of industry) per manhour of work. Comparing the magnitudes computed in this way for the beginning of a definite period of time and for its end, they call the amount by which the figure computed for the later date exceeds that for the earlier date "increase in productivity of labor," and they pretend that it by rights belongs entirely to the workers. They demand that this whole amount should be added to the wage rates which the workers received at the beginning of the period. Confronted with these claims of the unions, the employers for the most part do not contest the underlying doctrine and do not question the concept of productivity of labor involved. They accept it implicitly in pointing out that wage rates have already risen to the full extent of the increase in productivity, computed according to this method, or that they have already risen beyond this limit.

Now this procedure of computing the productivity of the work performed by the labor force of a firm or an industry is entirely fallacious. One thousand men working forty hours a week in a modern American shoe factory turn out every month m pairs of shoes. One thousand men working with the traditional old-fashioned tools in small artisan shops somewhere in the backward countries of Asia produce over the same period of time, even when working much longer than forty hours weekly, many fewer than m pairs. Between the United States and Asia the difference in productivity computed according to the methods of the union doctrine is enormous. It is certainly not due to any inherent virtues of the American worker. He is not more diligent, painstaking, skillful, or intelligent than the Asiatics. (We may even assume that many of those employed in a modern factory perform much simpler operations than those required from a man handling the old-fashioned tools.) The superiority of the American plant is entirely caused by the superiority of its equipment and the prudence of its entrepreneurial conduct. What prevents the business-

men of the backward countries from adopting the American methods of production is lack of capital accumulated, not any insufficiency on the part of their workers.

On the eve of the "Industrial Revolution," conditions in the West did not differ much from what they are today in the East. The radical change of conditions that bestowed on the masses of the West the present average standard of living (a high standard indeed when compared with pre-capitalistic or with Soviet conditions) was the effect of capital accumulation by saving and the wise investment of it by farsighted entrepreneurship. No technological improvement would have been possible if the additional capital goods required for the practical utilization of new inventions had not previously been made available by saving.

While the workers in their capacity as workers did not, and do not, contribute to the improvement of the apparatus of production, they are (in a market economy which is not sabotaged by government or union violence), both in their capacity as workers and in their capacity as consumers, the foremost beneficiaries of the ensuing betterment of conditions.

What initiates the chain of actions that results in an improvement of economic conditions is the accumulation of new capital through saving. These additional funds render the execution of projects possible which, for the lack of capital goods, could not have been executed previously. Embarking upon the realization of the new projects, the entrepreneurs compete on the market for the factors of production with all those already engaged in projects previously entered upon. In their attempts to secure the necessary quantity of raw materials and of manpower, they push up the prices of raw materials and wage rates. Thus the wage earners, already at the start of the process, reap a share of the benefits that the abstention from consumption on the part of the savers has begotten. In the farther course of the process they are again favored, now in their capacity as consumers, by the drop in prices that the increase in production tends to bring about.¹⁰

Economics describes the final outcome of this sequence of changes thus: An increase in capital invested results, with an unchanged number of people intent upon earning wages, in a rise of the marginal utility of labor and therefore of wage rates. What raises wage rates is an increase in capital exceeding the increase in population or, in other words, an increase in the per-head quota of capital invested. On the unhampered labor market, wage rates always tend toward the height at which they equal the marginal productivity of each kind of

10. See above, pp. 296-297.

labor, that is the height that equals the value added to or subtracted from the value of the product by the employment or discharge of a man. At this rate all those in search of employment find jobs, and all those eager to employ workers can hire as many as they want. If wages are raised above this market rate, unemployment of a part of the potential labor force inevitably results. It does not matter what kind of doctrine is advanced in order to justify the enforcement of wage rates that exceed the potential market rates.

Wage rates are ultimately determined by the value which the wage earner's fellow citizens attach to his services and achievements. Labor is appraised like a commodity, not because the entrepreneurs and capitalists are hardhearted and callous, but because they are unconditionally subject to the supremacy of the consumers of which today the earners of wages and salaries form the immense majority. The consumers are not prepared to satisfy anybody's pretensions, presumptions, and self-conceit. They want to be served in the cheapest way.

*A Comparison Between the Historical Explanation of Wage Rates
and the Regression Theorem*

It may be useful to compare the doctrine of Marxism and the Prussian Historical School, according to which wage rates are a historical datum and not a catallactic phenomenon, with the regression theorem of money's purchasing power.¹¹

The regression theorem establishes the fact that no good can be employed for the function of a medium of exchange which at the very beginning of its use for this purpose did not have exchange value on account of other employments. This fact does not substantially affect the daily determination of money's purchasing power as it is produced by the interplay of the supply of and the demand for money on the part of people intent upon keeping cash. The regression theorem does not assert that any actual exchange ratio between money on the one hand and commodities and services on the other hand is a historical datum not dependent on today's market situation. It merely explains how a new kind of media of exchange can come into use and remain in use. In this sense it says that there is a historical component in money's purchasing power.

It is quite different with the Marxian and Prussian theorems. As this doctrine sees it, the actual height of wage rates as it appears on the market is a historical datum. The valuations of the consumers who mediate are the buyers of labor and those of the wage earners, the sellers of labor, are of no avail. Wage rates are fixed by historical events of the past. They can neither rise above nor drop

11. See above, pp. 408-410.

below this height. The fact that wage rates are higher in Switzerland than in India can be explained only by history, just as only history can explain why Napoleon I became a Frenchman and not an Italian, an emperor and not a Corsican lawyer. It is impossible, in the explanation of the discrepancy between the wage rates of shepherds or of bricklayers in these two countries, to resort to factors unconditionally in operation on every market. An explanation can only be provided by the history of these two nations.

7. The Supply of Labor as Affected by the Disutility of Labor

The fundamental facts affecting the supply of labor are:

1. Every individual can expend only a limited quantity of labor.
2. This definite quantity cannot be performed at any time desired. The interpolation of periods of rest and recreation is indispensable.
3. Not every individual is able to perform any kind of labor. There are innate as well as acquired diversities in the abilities to perform certain types of work. The innate faculties required for certain types of work cannot be acquired by any training and schooling.
4. The capacity of work must be dealt with appropriately if it is not to deteriorate or to vanish altogether. Special care is needed to preserve a man's abilities—both the innate and the acquired—for such a period as the unavoidable decline of his vital forces may permit.
5. As work approaches the point at which the total amount of work a man can perform at the time is exhausted and the interpolation of a period of recreation is indispensable, fatigue impairs the quantity and the quality of the performance.¹²
6. Men prefer the absence of labor, i.e., leisure, to labor, or as the economists put it: they attach disutility to labor.

The self-sufficient man who works in economic isolation for the direct satisfaction of his own needs only, stops working at the point at which he begins to value leisure, the absence of labor's disutility, more highly than the increment in satisfaction expected from working more. Having satisfied his most urgent needs, he considers the satisfaction of the still unsatisfied needs less desirable than the satisfaction of his striving after leisure.

The same is true for wage earners no less than for an isolated autarkic

12. Other fluctuations in the quantity and quality of the performance per unit of time, e.g., the lower efficiency in the period immediately following the resumption of work interrupted by recreation, are hardly of any importance for the supply of labor on the market.

worker. They too are not prepared to work until they have expended the total capacity of work they are capable of expending. They too are eager to stop working at the point at which the mediate gratification expected no longer outweighs the disutility involved in the performance of additional work.

Popular opinion, laboring under atavistic representations and blinded by Marxian slogans, was slow in grasping this fact. It clung and even today clings to the habit of looking at the wage earner as a bondsman, and at wages as the capitalist equivalent of the bare subsistence which the slave owner and the cattle owner must provide for their slaves and animals. In the eyes of this doctrine the wage earner is a man whom poverty has forced to submit to bondage. The vain formalism of the bourgeois lawyers, we are told, calls this subjection voluntary, and interprets the relation between employer and employee as a contract between two equal parties. In truth, however, the worker is not free; he acts under duress; he must submit to the yoke of virtual serfdom because no other choice is left to him, society's disinherited outcast. Even his apparent right to choose his master is spurious. The open or silent combination of the employers fixing the conditions of employment in a uniform way by and large makes this freedom illusory.

If one assumes that wages are merely the reimbursement of the expenses incurred by the worker in the preservation and reproduction of labor power or that their height is determined by tradition, it is quite consistent to consider every reduction in the obligations which the labor contract imposes on the worker as a unilateral gain for the worker. If the height of wage rates does not depend on the quantity and quality of the performance, if the employer does not pay to the worker the price the market assigns to his achievement, if the employer does not buy a definite quantity and quality of workmanship, but buys a bondsman, if wage rates are so low that for natural or "historical" reasons they cannot drop any further, one improves the wage earner's lot by forcibly shortening the length of the working day. Then it is permissible to look at the laws limiting the hours of work as tantamount to the decrees by means of which European governments of the seventeenth, eighteenth, and early nineteenth centuries step by step reduced and finally entirely abolished the amount of the unpaid statute labor (corvée) which the peasant bondsmen were liable to give to their lords, or to ordinances lightening the work to be done by convicts. Then the shortening of daily hours of work which the evolution of capitalist industrialism brought about is appraised as a victory of the exploited wage-slaves over the rugged selfishness of their tormentors. All laws imposing upon the employer the duty to make definite expenditures to the benefit of the employees are described as "social

gains," i.e., as liberalities for the attainment of which the employees do not have to make any sacrifice.

It is generally assumed that the correctness of this doctrine is sufficiently demonstrated by the fact that the individual wage earner has only a negligible influence on the determination of the terms of the labor contract. The decisions concerning the length of the working day, work on Sundays and holidays, the time set for meals and many other things are made by the employers without asking the employees. The wage earner has no other choice than to yield to these orders or to starve.

The cardinal fallacy involved in this reasoning has already been pointed out in the preceding sections. The employers are not asking for labor in general, but for men who are fitted to perform the kind of labor they need. Just as an entrepreneur must choose for his plants the most suitable location, equipment, and raw materials, so he must hire the most efficient workers. He must arrange conditions of work in such a way as to make them appear attractive to those classes of workers he wants to employ. It is true that the individual worker has but little to say with regard to these arrangements. They are, like the height of wage rates itself, like commodity prices, and the shape of articles produced for mass consumption, the product of the interaction of innumerable people participating in the social process of the market. They are as such mass phenomena which are but little subject to modification on the part of a single individual. However, it is a distortion of truth to assert that the individual voter's ballot is without influence because many thousands or even millions of votes are required to decide the issue and that those of people not attached to any party virtually do not matter. Even if one were to admit this thesis for the sake of argument, it is a non sequitur to infer that the substitution of totalitarian principles for democratic procedures would make the officeholders more genuine representatives of the people's will than election campaigns. The counterparts of these totalitarian fables in the field of the market's economic democracy are the assertions that the individual consumer is powerless against the suppliers and the individual employee against the employers. It is, of course, not an individual's taste, different from that of the many, that determines the features of articles of mass production designed for mass consumption, but the wishes and likes of the majority. It is not the individual job-seeker, but the masses of job-seekers whose conduct determines the terms of the labor contracts prevailing in definite areas or branches of industry. If it is customary to have lunch between noon and one o'clock, an individual worker who prefers to have it between two and three p.m. has little chance of having his wishes satisfied.

However, the social pressure to which this solitary individual is subject in this case is not exercised by the employer, but by his fellow employees.

Employers in their search for suitable workers are forced to accommodate themselves even to serious and costly inconveniences if they cannot find those needed on other terms. In many countries, some of them stigmatized as socially backward by the champions of anticapitalism, employers must yield to various wishes of workers motivated by considerations of religious ritual or caste and status. They must arrange hours of work, holidays, and many technical problems according to such opinions, however burdensome such an adjustment may be. Whenever an employer asks for special performances which appear irksome or repulsive to the employees, he must pay extra for the excess of disutility the worker must expend.

The terms of the labor contract refer to all working conditions, not merely to the height of wage rates. Teamwork in factories and the interdependence of various enterprises make it impossible to deviate from the arrangements customary in the country or in the branch concerned and thus result in a unification and standardization of these arrangements. But this fact neither weakens nor eliminates the employee contribution in their setting up. For the individual workers they are, of course, an unalterable datum as the railroad's timetable is for the individual traveler. But nobody would contend that in determining the timetable the company does not bother about the wishes of the potential customers. Its intention is precisely to serve as many of them as possible.

The interpretation of the evolution of modern industrialism has been utterly vitiated by the anticapitalistic bias of governments and professedly prolabor writers and historians. The rise in real wage rates, the shortening of hours of work, the elimination of child labor, and the restriction of the labor of women, it is asserted, were the result of the interference of governments and labor unions and the pressure of public opinion aroused by humanitarian authors. But for this interference and pressure the entrepreneurs and capitalists would have retained for themselves all the advantages derived from the increase in capital investment and the consequent improvement in technological methods. The rise in the wage earners' standard of living was thus brought about at the expense of the "unearned" income of capitalists, entrepreneurs, and landowners. It is highly desirable to continue these policies, benefiting the many at the sole expense of a few selfish exploiters, and to reduce more and more the unfair take of the propertied classes.

The incorrectness of this interpretation is obvious. All measures restricting the supply of labor directly or indirectly burden the capitalists as far as they increase the marginal productivity of labor and reduce the marginal productivity of the material factors of production. As they restrict the supply of labor without reducing the supply of capital, they increase the portion allotted to the wage earners out of the total net product of the production effort. But this total net produce will drop too, and it depends on the specific data of each case whether the relatively greater quota of a smaller cake will be greater or smaller than the relatively smaller quota of a bigger cake. Profits and the rate of interest are not directly affected by the shortening of the total supply of labor. The prices of material factors of production drop and wage rates per unit of the individual worker's performance (not necessarily also per capita of the workers employed) rise. The prices of the products rise too. Whether all these changes result in an improvement or in a deterioration of the average wage earner's income is, as has been said, a question of fact in each instance.

But our assumption that such measures do not affect the supply of material factors of production is impermissible. The shortening of the hours of work, the restriction of night work and of the employment of certain classes of people impair the utilization of a part of the equipment available and are tantamount to a drop in the supply of capital. The resulting intensification of the scarcity of capital goods may entirely undo the potential rise in the marginal productivity of labor as against the marginal productivity of capital goods.

If concomitantly with the compulsory shortening of the hours of work the authorities or the unions forbid any corresponding reduction in wage rates which the state of the market would require or if previously prevailing institutions prevent such a reduction, the effects appear that every attempt to keep wage rates at a height above the potential market rate brings about: institutional unemployment.

The history of capitalism as it has operated in the last two hundred years in the realm of Western civilization is the record of a steady rise in the wage earners' standard of living. The inherent mark of capitalism is that it is mass production for mass consumption directed by the most energetic and far-sighted individuals, unflaggingly aiming at improvement. Its driving force is the profit-motive the instrumentality of which forces the businessman constantly to provide the consumers with more, better, and cheaper amenities. An excess of profits over losses can appear only in a progressing economy and only to the

extent to which the masses' standard of living improves.¹³ Thus capitalism is the system under which the keenest and most agile minds are driven to promote to the best of their abilities the welfare of the laggard many.

In the field of historical experience it is impossible to resort to measurement. As money is no yardstick of value and want-satisfaction, it cannot be applied for comparing the standard of living of people in various periods of time. However, all historians whose judgment is not muddled by romantic prepossessions agree that the evolution of capitalism has multiplied capital equipment on a scale which far exceeded the synchronous increase in population figures. Capital equipment both per capita of the population and per capita of those able to work is immensely larger today than fifty, a hundred, or two hundred years ago. Concomitantly there has been a tremendous increase in the quota which the wage earners receive out of the total amount of commodities produced, an amount which in itself is much bigger than in the past. The ensuing rise in the masses' standard of living is miraculous when compared with the conditions of ages gone by. In those merry old days even the wealthiest people led an existence which must be called straitened when compared with the average standard of the American or Australian worker of our age. Capitalism, says Marx, unthinkingly repeating the fables of the eulogists of the Middle Ages, has an inevitable tendency to impoverish the workers more and more. The truth is that capitalism has poured a horn of plenty upon the masses of wage earners who frequently did all they could to sabotage the adoption of those innovations which render their life more agreeable. How uneasy an American worker would be if he were forced to live in the style of a medieval lord and to miss the plumbing facilities and the other gadgets he simply takes for granted!

The improvement in his material well-being has changed the worker's valuation of leisure. Better supplied with the amenities of life as he is, he sooner reaches the point at which he looks upon any further increment in the disutility of labor as an evil which is no longer outweighed by the expected further increment in labor's mediate gratification. He is eager to shorten the hours of daily work and to spare his wife and children the toil and trouble of gainful employment. It is not labor legislation and labor-union pressure that have shortened hours of work and withdrawn married women and children from the factories; it is capitalism, which has made the wage earner so prosperous that he is able to buy more leisure time for himself and his

13. See above, pp. 294-300.

dependents. The nineteenth century's labor legislation by and large achieved nothing more than to provide a legal ratification for changes which the interplay of the market factors had brought about previously. As far as it sometimes went ahead of industrial evolution, the quick advance in wealth soon made things right again. As far as the allegedly prolabor laws decreed measures which were not merely the ratification of changes already effected or the anticipation of changes to be expected in the immediate future, they hurt the material interests of the workers.

The term "social gains" is utterly misleading. If the law forces workers who would prefer to work forty-eight hours a week not to give more than forty hours of work, or if it forces employers to incur certain expenses for the benefit of employees, it does not favor workers at the expense of employers. Whatever the provisions of a social security law may be, their incidence ultimately burdens the employee, not the employer. They affect the amount of take-home wages; if they raise the price the employer has to pay for a unit of performance above the potential market rate, they create institutional unemployment. Social security does not enjoin upon the employers the obligation to expend more in buying labor. It imposes upon the wage earners a restriction concerning the spending of their total income. It curtails the worker's freedom to arrange his household according to his own decisions.

Whether such a system of social security is a good or a bad policy is essentially a political problem. One may try to justify it by declaring that the wage earners lack the insight and the moral strength to provide spontaneously for their future. But then it is not easy to silence the voices of those who ask whether it is not paradoxical to entrust the nation's welfare to the decisions of voters whom the law itself considers incapable of managing their own affairs; whether it is not absurd to make those people supreme in the conduct of government who are manifestly in need of a guardians? It is no accident that Germany, the country that inaugurated the social security system, was the cradle of both varieties of modern disparagement of democracy, the Marxian as well as the non-Marxian.

*Remarks About the Popular Interpretation
of the "Industrial Revolution"*

It is generally asserted that the history of modern industrialism and especially the history of the British "Industrial Revolution" provide an empirical verification of the "realistic" or "institutional" doctrine and utterly

explode the "abstract" dogmatism of the economists.¹⁴

The economists flatly deny that labor unions and government pro-labor legislation can and did lastingly benefit the whole class of wage earners and raise their standard of living. But the facts, say the anti-economists, have refuted these fallacies. The statesmen and legislators who enacted the factory acts displayed a better insight into reality than the economists. While laissez-faire philosophy, without pity and compassion, taught that the sufferings of the toiling masses are unavoidable, the common sense of laymen succeeded in quelling the worst excesses of profit-seeking business. The improvement in the conditions of the workers is entirely an achievement of governments and labor unions.

Such are the ideas permeating most of the historical studies dealing with the evolution of modern industrialism. The authors begin by sketching an idyllic image of conditions as they prevailed on the eve of the "Industrial Revolution." At that time, they tell us, things were, by and large, satisfactory. The peasants were happy. So also were the industrial workers under the domestic system. They worked in their own cottages and enjoyed a certain economic independence since they owned a garden plot and their tools. But then "the Industrial Revolution fell like a war or a plague" on these people.¹⁵ The factory system reduced the free worker to virtual slavery; it lowered his standard of living to the level of bare subsistence; in cramming women and children into the mills it destroyed family life and sapped the very foundations of society, morality, and public health. A small minority of ruthless exploiters had cleverly succeeded in imposing their yoke upon the immense majority.

The truth is that economic conditions were highly unsatisfactory on the eve of the Industrial Revolution. The traditional social system was not elastic enough to provide for the needs of a rapidly increasing population. Neither farming nor the guilds had any use for the additional hands. Business was imbued with the inherited spirit of privilege and exclusive monopoly; its institutional foundations were licenses and the grant of a patent of monopoly; its philosophy was restriction and the prohibition of competition both domestic and foreign. The

14. The attribution of the phrase "the Industrial Revolution" to the reigns of the two last Hanoverian Georges was the outcome of deliberate attempts to melodramatize economic history in order to fit it into the Procrustean Marxian schemes. The transition from medieval methods of production to those of the free enterprise system was a long process that started centuries before 1760 and, even in England, was not finished in 1830. Yet, it is true that England's industrial development was considerably accelerated in the second half of the eighteenth century. It is therefore permissible to use the term "Industrial Revolution" in the examination of the emotional connotations with which Fabianism, Marxism, the Historical School, and Institutionalism have loaded it.

15. J.L. Hammond and Barbara Hammond, *The Skilled Labourer 1760-1832* (2d ed. London, 1920), p. 4.

number of people for whom there was no room left in the rigid system of paternalism and government tutelage of business grew rapidly. They were virtually outcasts. The apathetic majority of these wretched people lived from the crumbs that fell from the tables of the established castes. In the harvest season they earned a trifle by occasional help on farms; for the rest they depended upon private charity and communal poor relief. Thousands of the most vigorous youths of these strata were pressed into the service of the Royal Army and Navy; many of them were killed or maimed in action; many more perished ingloriously from the hardships of the barbarous discipline, from tropical diseases, or from syphilis.¹⁶ Other thousands, the boldest and most ruthless of their class, infested the country as vagabonds, beggars, tramps, robbers, and prostitutes. The authorities did not know of any means to cope with these individuals other than the poorhouse and the workhouse. The support the government gave to the popular resentment against the introduction of new inventions and laborsaving devices made things quite hopeless.

The factory system developed in a continuous struggle against innumerable obstacles. It had to fight popular prejudice, old established customs, legally binding rules and regulations, the animosity of the authorities, the vested interests of privileged groups, the envy of the guilds. The capital equipment of the individual firms was insufficient, the provision of credit extremely difficult and costly. Technological and commercial experience was lacking. Most factory owners failed; comparatively few succeeded. Profits were sometimes considerable, but so were losses. It took many decades until the common practice of reinvesting the greater part of profits earned accumulated adequate capital for the conduct of affairs on a broader scale.

That the factories could thrive in spite of all these hindrances was due to two reasons. First there were the teachings of the new social philosophy expounded by the economists. They demolished the prestige of Mercantilism, paternalism, and restrictionism. They exploded the superstitious belief that labor-saving devices and processes cause unemployment and reduce all people to poverty and decay. The laissez-faire economists were the pioneers of the unprecedented technological achievements of the last two hundred years.

Then there was another factor that weakened the opposition to innovations. The factories freed the authorities and the ruling landed aristocracy from an embarrassing problem that had grown too large for them. They provided sustenance for the masses of paupers. They emptied the poor houses, the workhouses, and the prisons. They converted starving beggars into self-supporting breadwinners.

The factory owners did not have the power to compel anybody to take a

16. In the Seven Years' War, 1,512 British seamen were killed in battle while 133,708 died of disease or were missing. Cf. W.L. Dorn, *Competition for Empire 11740-1763* (New York, 1940), p. 114.

factory job. They could only hire people who were ready to work for the wages offered to them. Low as these wage rates were, they were nonetheless much more than these paupers could earn in any other field open to them. It is a distortion of facts to say that the factories carried off the housewives from the nurseries and the kitchens and the children from their play. These women had nothing to cook with and to feed their children. These children were destitute and starving. Their only refuge was the factory. It saved them, in the strict sense of the term, from death by starvation.

It is deplorable that such conditions existed. But if one wants to blame those responsible, one must not blame the factory owners who—driven by selfishness, of course, and not by “altruism”—did all they could to eradicate the evils. What had caused these evils was the economic order of the precapitalistic era, the order of the “good old days.”

In the first decades of the Industrial Revolution the standard of living of the factory workers was shockingly bad when compared with the contemporary conditions of the upper classes and with the present conditions of the industrial masses. Hours of work were long, the sanitary conditions in the workshops deplorable. The individual's capacity to work was used up rapidly. But the fact remains that for the surplus population which the enclosure movement had reduced to dire wretchedness and for which there was literally no room left in the frame of the prevailing system of production, work in the factories was salvation. These people thronged into the plants for no reason other than the urge to improve their standard of living.

The laissez-faire ideology and its offshoot, the “Industrial Revolution,” blasted the ideological and institutional barriers to progress and welfare. They demolished the social order in which a constantly increasing number of people were doomed to abject need and destitution. The processing trades of earlier ages had almost exclusively catered to the wants of the well-to-do. Their expansion was limited by the amount of luxuries the wealthier strata of the population could afford. Those not engaged in the production of primary commodities could earn a living only as far as the upper classes were disposed to utilize their skill and services. But now a different principle came into operation. The factory system inaugurated a new mode of marketing as well as of production. Its characteristic feature was that the manufactures were not designed for the consumption of a few well-to-do only, but for the consumption of those who had hitherto played but a negligible role as consumers. Cheap things for the many, was the objective of the factory system. The classical factory of the early days of the Industrial Revolution was the cotton mill. Now, the cotton goods it turned out were not something the rich were asking for. These wealthy people clung to silk, linen, and cambric. Whenever the factory with its methods of mass production by means of power-driven machines invaded a

new branch of production, it started with the production of cheap goods for the broad masses. The factories turned to the production of more refined and therefore more expensive goods only at a later stage, when the unprecedented improvement in the masses' standard of living which they caused made it profitable to apply the methods of mass production also to these better articles. Thus, for instance, the factory-made shoe was for many years bought only by the "proletarians" while the wealthier consumers continued to patronize the custom shoemakers. The much talked about sweatshops did not produce clothes for the rich, but for people in modest circumstances. The fashionable ladies and gentlemen preferred and still do prefer custom-made frocks and suits.

The outstanding fact about the Industrial Revolution is that it opened an age of mass production for the needs of the masses. The wage earners are no longer people toiling merely for other people's well-being. They themselves are the main consumers of the products the factories turn out. Big business depends upon mass consumption. There is, in present-day America, not a single branch of big business that would not cater to the needs of the masses. The very principle of capitalist entrepreneurship is to provide for the common man. In his capacity as consumer the common man is the sovereign whose buying or abstention from buying decides the fate of entrepreneurial activities. There is in the market economy no other means of acquiring and preserving wealth than by supplying the masses in the best and cheapest way with all the goods they ask for.

Blinded by their prejudices, many historians and writers have entirely failed to recognize this fundamental fact. As they see it, wage earners toil for the benefit of other people. They never raise the question who these "other" people are.

Mr. and Mrs. Hammond tell us that the workers were happier in 1760 than they were in 1830.¹⁷ This is an arbitrary value judgment. There is no means of comparing and measuring the happiness of different people and of the same people at different times. We may agree for the sake of argument that an individual who was born in 1740 was happier in 1760 than in 1830. But let us not forget that in 1770 (according to the estimate of Arthur Young) England had 8.5 million inhabitants, while in 1831 (according to the census) the figure was 16 million.¹⁸ This conspicuous increase was mainly conditioned by the Industrial Revolution. With regard to these additional Englishmen the assertion of the eminent historians can only be approved by those who endorse the melancholy verses of Sophocles: "Not to be born is, beyond all question, the best; but when a man has once seen the light of day, this is next best, that speedily he should return to that place whence he came."

17.J.L. Hammond and Barbara Hammond, *loc. cit.*

18.F.C. Dietz, *An Economic History of England* (New York, 1942), pp. 279 and 392.

The early industrialists were for the most part men who had their origin in the same social strata from which their workers came. They lived very modestly, spent only a fraction of their earnings for their households and put the rest back into the business. But as the entrepreneurs grew richer, the sons of successful businessmen began to intrude into the circles of the ruling class. The highborn gentlemen envied the wealth of the parvenus and resented their sympathies with the reform movement. They hit back by investigating the material and moral conditions of the factory hands and enacting factory legislation.

The history of capitalism in Great Britain as well as in all other capitalist countries is a record of an unceasing tendency toward the improvement in the wage earners' standard of living. This evolution coincided with the development of prolabor legislation and the spread of labor unionism on the one hand and with the increase in the marginal productivity of labor on the other hand. The economists assert that the improvement in the workers' material conditions is due to the increase in the per capita quota of capital invested and the technological achievements which the employment of this additional capital brought about. As far as labor legislation and union pressure did not exceed the limits of what the workers would have got without them as a necessary consequence of the acceleration of capital accumulation as compared with population, they were superfluous. As far as they exceeded these limits, they were harmful to the interests of the masses. They delayed the accumulation of capital thus slowing down the tendency toward a rise in the marginal productivity of labor and in wage rates. They conferred privileges on some groups of wage earners at the expense of other groups. They created mass unemployment and decreased the amount of products available for the workers in their capacity as consumers.

The apologists of government interference with business and of labor unionism ascribe all the improvements in the conditions of the workers to the actions of governments and unions. Except for them, they contend, the workers' standard of living would be no higher today than it was in the early years of the factory system.

It is obvious that this controversy cannot be settled by appeal to historical experience. With regard to the establishment of the facts there is no disagreement between the two groups. Their antagonism concerns the interpretation of events, and this interpretation must be guided by the theory chosen. The epistemological and logical considerations which determine the correctness or incorrectness of a theory are logically and temporally antecedent to the elucidation of the historical problem involved. The historical facts as such neither prove nor disprove any theory. They need to be interpreted in the light of theoretical insight.

Most of the authors who wrote the history of the conditions of labor under

capitalism were ignorant of economics and boasted of this ignorance. However, this contempt for sound economic reasoning did not mean that they approached the topic of their studies without prepossession and without bias in favor of any theory. They were guided by the popular fallacies concerning governmental omnipotence and the alleged blessings of labor unionism. It is beyond question that the Webbs as well as Lujo Bretano and a host of minor authors were at the very start of their studies imbued with a fanatical dislike of the market economy and an enthusiastic endorsement of the doctrines of socialism and interventionism. They were certainly honest and sincere in their convictions and tried to do their best. Their candor and probity may exonerate them as individuals; it does not exonerate them as historians. However pure the intentions of a historian may be, there is no excuse for his recourse to fallacious doctrines. The first duty of a historian is to examine with the utmost care all the doctrines to which he resorts in dealing with the subject matter of his work. If he neglects to do this and naively espouses the garbled and confused ideas of popular opinion, he is not a historian but an apologist and propagandist.

The antagonism between the two opposite points of view is not merely a historical problem. It refers no less to the most burning problems of the present day. It is the matter of controversy in what is called in present-day America the problem of industrial relations.

Let us stress one aspect of the matter only. Vast areas—Eastern Asia, the East Indies, Southern and Southeastern Europe, Latin America—are only superficially affected by modern capitalism. Conditions in these countries by and large do not differ from those of England on the eve of the “Industrial Revolution.” There are millions of people for whom there is no secure place left in the traditional economic setting. The fate of these wretched masses can be improved only by industrialization. What they need most is entrepreneurs and capitalists. As their own foolish policies have deprived these nations of the further enjoyment of the assistance imported foreign capital hitherto gave them, they must embark upon domestic capital accumulation. They must go through all the stages through which the evolution of Western industrialism had to pass. They must start with comparatively low wage rates and long hours of work. But, deluded by the doctrines prevailing in present-day Western Europe and North America, their statesmen think that they can proceed in a different way. They encourage labor-union pressure and alleged prolabor legislation. Their interventionist radicalism nips in the bud all attempts to create domestic industries. Their stubborn dogmatism spells the doom of the Indian and Chinese coolies, the Mexican peons, and millions of other peoples, desperately struggling on the verge of starvation.

8. Wage Rates as Affected by the Vicissitudes of the Market

Labor is a factor of production. The price which the seller of labor can obtain on the market depends on the data of the market.

The quantity and the quality of labor which an individual is fitted to deliver is determined by his innate and acquired characteristics. The innate abilities cannot be altered by any purposeful conduct. They are the individual's heritage with which his ancestors have endowed him on the day of his birth. He can bestow care upon these gifts and cultivate his talents, he can keep them from prematurely withering away; but he can never cross the boundaries which nature has drawn to his forces and abilities. He can display more or less skill in his endeavors to sell his capacity to work at the highest price which is obtainable on the market under prevailing conditions; but he cannot change his nature in order to adjust it better to the state of the market data. It is good luck for him if market conditions are such that a kind of labor which he is able to perform is lavishly remunerated; it is chance, not personal merit if his innate talents are highly appreciated by his fellow men. Miss Greta Garbo, if she had lived a hundred years earlier, would probably have earned much less than she did in this age of moving pictures. As far as her innate talents are concerned, she is in a position similar to that of a farmer whose farm can be sold at a high price because the expansion of a neighboring city converted it into urban soil.

Within the rigid limits drawn by his innate abilities, a man's capacity to work can be perfected by training for the accomplishment of definite tasks. The individual—or his parents—incurs expenses for a training the fruit of which consists in the acquisition of the ability to perform certain kinds of work. Such schooling and training intensify a man's one-sidedness; they make him a specialist. Every special training enhances the specific character of a man's capacity to work. The toil and trouble, the disutility of the efforts to which an individual must submit in order to acquire these special abilities, the loss of potential earnings during the training period, and the money expenditure required are laid out in the expectation that the later increment in earnings will compensate for them. These expenses are an investment and as such speculative. It depends on the future state of the market whether or not they will pay. In training himself the worker becomes a speculator and entrepreneur. The future state of the market will determine whether profit or loss results from his investment.

Thus the wage earner has vested interests in a twofold sense, as a man

with definite innate qualities and as a man who has acquired definite special skills.

The wage earner sells his labor on the market at the price which the market allows for it today. In the imaginary construction of the evenly rotating economy the sum of the prices which the entrepreneur must expend for all the complementary factors of production together must equal—due consideration being made for time preference—the price of the product. In the changing economy changes in the market structure may bring about differences between these two magnitudes. The ensuing profits and losses do not affect the wage earner. Their incidence falls upon the employer alone. The uncertainty of the future affects the employee only as far as the following items are concerned:

1. The expenses incurred in time, disutility, and money for training.
2. The expenses incurred in moving to a definite place of work.
3. In case of a labor contract stipulated for a definite period of time, changes in the price of the specific type of labor occurring in the meantime and changes in the employer's solvency.

9. The Labor Market

Wages are the prices paid for the factor of production, human labor. As is the case with all the other prices of complementary factors of production their height is ultimately determined by the prices of the products as they are expected at the instant the labor is sold and bought. It does not matter whether he who performs the labor sells his services to an employer who combines them with the material factors production and with the services of other people or whether he himself embarks upon his own account and peril upon these acts of combination. The final price of labor of the same quality is at any rate the same in the whole market system. Wage rates are always equal to the price of the full produce of labor. The popular slogan "the worker's right to the full produce of labor" was an absurd formulation of the claim that the consumers' goods should be distributed exclusively among the workers and nothing should be left to the entrepreneurs and the owners of the material factors of production. From no point of view whatever can artifacts be considered as the products of mere labor. They are the yield of a purposive combination of labor and of material factors of production.

In the changing economy there prevails a tendency for market wage rates to adjust themselves precisely to the state of the final wage rates. This adjustment is a time-absorbing process. The length of the period of adjustment depends on the time required for the training for new jobs and for the

removal of workers to new places of residence. It depends furthermore on subjective factors, as for instance the workers' familiarity with the conditions and prospects of the labor market. The adjustment is a speculative venture as far as the training for new jobs and the change of residence involve costs which are expended only if one believes that the future state of the labor market will make them appear profitable.

With regard to all these things there is nothing that is peculiar to labor, wages, and the labor market. What gives a particular feature to the labor market is that the worker is not merely the purveyor of the factor of production labor, but also a human being and that it is impossible to sever the man from his performance. Reference to this fact has been mostly used for extravagant utterances and for a vain critique of the economic teachings concerning wage rates. However, these absurdities must not prevent economics from paying adequate attention to this primordial fact.

For the worker it is a matter of consequence what kind of labor he performs among the various kinds he is able to perform, where he performs it, and under what particular conditions and circumstances. An unaffected observer may consider empty or even ridiculous prejudices the ideas and feelings that actuate a worker to prefer certain jobs, certain places of work, and certain conditions of labor to others. However, such academic judgments of unaffected censors are of no avail. For an economic treatment of the problems involved there is nothing especially remarkable in the fact that the worker looks upon his toil and trouble not only from the point of view of the disutility of labor and its mediate gratification, but also takes into account whether the special conditions and circumstances of its performance interfere with his enjoyment of life and to what extent. The fact that a worker is ready to forego the chance to increase his money earnings by migrating to a place he considers less desirable and prefers to remain in his native place or country is not more remarkable than the fact that a wealthy gentleman of no occupation prefers the more expensive life in the capital to the cheaper life in a small town. The worker and the consumer are the same person; it is merely economic reasoning that integrates the social functions and splits up this unity into two schemes. Men cannot sever their decisions concerning the utilization of their working power from those concerning the enjoyment of their earnings.

Descent, language, education, religion, mentality, family bonds, and social environment tie the worker in such a way that he does not choose the place and the branch of his work merely with regard to the height of wage rates.

We may call that height of wage rates for definite types of labor which would prevail on the market if the workers did not discriminate between various places and, wage rates being equal, did not discriminate between various places and, wage rates being equal, did not prefer one working place to another, standard wage rates (*S*). If, however, the wage earners, out of the above-mentioned considerations, value differently work in different places, the height of market wage rates (*M*) can permanently deviate from the standard rates. We may call the maximum difference between the market rate and the standard rate which does not yet result in the migration of workers from the places of lower market wage rates to those of higher market wage rates the attachment component (*A*). The attachment component of a definite geographical place or area is either positive or negative.

We must furthermore take into account that the various places and areas differ with regard to provision with consumers' goods as far as transportation costs (in the broadest sense of the term) are concerned. These costs are lower in some areas, higher in other areas. Then there are differences with regard to the physical input required for the attainment of the same amount of physical satisfaction. In some places a man must expend more in order to attain the same degree of want-satisfaction which, apart from the circumstances determining the amount of the attachment component, he could attain elsewhere more cheaply. On the other hand, a man can in some places avoid certain expenses without any impairment of his want-satisfaction while renunciation of these expenses would curtail his satisfaction in other places. We may call the expenses which a worker must incur in certain places in order to attain in this sense the same degree of want-satisfaction, or which he can spare without curtailing his want-satisfaction, the cost component (*C*). The cost component of a definite geographical place or area is either positive or negative.

If we assume that there are no institutional barriers preventing or penalizing the transfer of capital goods, workers, and commodities from one place or area to another and that the workers are indifferent with regard to their dwelling and working places, there prevails a tendency toward a distribution of population over the earth's surface in accordance with the physical productivity of the primary natural factors of production and the immobilization of inconvertible factors of production as affected in the past. There is, if we disregard the cost component, a tendency toward an equalization of wage rates for the same type of work all over the earth.

It would be permissible to call an area comparatively overpopulated if in it market wage rates plus the (positive or negative) cost component are lower than the standard rates, and comparatively underpopulated if in it market wage rates

plus the (positive or negative) cost component are higher than the standard rates. But it is not expedient to resort to such a definition of the terms involved. It does not help us in explaining the real conditions of the formation of wage rates and the conduct of wage earners. It is more expedient to choose another definition. We may call an area comparatively overpopulated if in it market wage rates are lower than the standard rates plus both the (positive or negative) attachment component and the (positive or negative) cost component, that is where $M < (S + A + C)$. Accordingly an area is to be called comparatively underpopulated in which $M > (S + A + C)$. In the absence of institutional migration barriers workers move from the comparatively overpopulated areas to the comparatively underpopulated until everywhere $M = S + A + C$.

The same is true, *mutatis mutandis*, for the migration of individuals working on their own account and selling their labor in disposing of its products or in rendering personal services.

The concepts of the attachment component and the cost component apply in the same way to shifting from one branch of business or occupation to another.

It is hardly necessary to observe that the migrations which these theorems describe come to pass only in so far as there are no institutional barriers to the mobility of capital, labor, and commodities. In this age aiming at the disintegration of the international division of labor and at each sovereign nation's economic self-sufficiency, the tendencies they describe are fully operative only within each nation's boundaries.

The Work of Animals and of Slaves

For man, animals are a material factor of production. It may be that one day a change in moral sentiments will induce people to treat animals more gently. Yet, as far as men do not leave the animals alone and let them go their way, they will always deal with them as mere objects of their own acting. Social cooperation can exist only between human beings because only these are able to attain insight into the meaning and the advantages of the division of labor and of peaceful cooperation.

Man subdues the animal and integrates it into his scheme of action as a material thing. In taming, domesticating, and training animals man often displays appreciation for the creature's psychological peculiarities; he appeals, as it were, to its soul. But even then the gulf that separates man from animal remains unbridgeable. An animal can never get anything else than satisfaction of its appetites for food and sex and adequate protection against injury resulting from environmental factors. Animals are bestial and inhuman precisely because

they are such as the iron law of wages imagined workers to be. As human civilization would never have emerged if men were exclusively dedicated to feeding and mating, so animals can neither consort in social bonds nor participate in human society.

People have tried to look upon fellow men as they look upon animals and to deal with them accordingly. They have used whips to compel galley slaves and barge haulers to work like capstan-horses. However, experience has shown that these methods of unbridled brutalization render very unsatisfactory results. Even the crudest and dumbest people achieve more when working of their own accord than under the fear of the whip.

Primitive man makes no distinction between his property in women, children, and slaves on the one hand and his property in cattle and inanimate things on the other. But as soon as he begins to expect from his slave services other than such as can also be rendered by draft and pack animals, he is forced to loosen their chains. He must try to substitute the incentive of self-interest for the incentive of mere fear; he must try to bind the slave to himself by human feelings. If the slave is no longer prevented from fleeing exclusively by being chained and watched and no longer forced to work exclusively under the threat of being whipped, the relation between master and slave is transformed into a social nexus. The slave may, especially if the memory of happier days of freedom is still fresh, bemoan his misfortune and hanker after liberation. But he puts up with what seems to be an inevitable state of affairs and accommodates himself to his fate in such a way as to make it as bearable as possible. The slave becomes intent upon satisfying his master through application and carrying out the tasks entrusted to him; the master becomes intent upon rousing the slave's zeal and loyalty through reasonable treatment. There develop between lord and drudge familiar relations which can properly be called friendship.

Perhaps the eulogists of slavery were not entirely wrong when they asserted that many slaves were satisfied with their station and did not aim at changing it. There are perhaps individuals, groups of individuals, and even whole peoples and races who enjoy the safety and security provided by bondage; who, insensible of humiliation and mortification, are glad to pay with a moderate amount of labor for the privilege of sharing in the amenities of a well-to-do household; and in whose eyes subjection to the whims and bad tempers of a master is only a minor evil or no evil at all.

Of course, the conditions under which the servile workers toiled in big farms and plantations, in mines, in workshops, and galleys were very different from the idyllically described gay life of domestic valets, chambermaids, cooks, and nurses and from the conditions of unfree laborers, dairymaids, herdsmen, and shepherds of small farming. No apologist of slavery was bold enough to glorify the lot of the Roman agricultural slaves,

chained and crammed together in the *ergastulum*, or of the Negroes of the American cotton and sugar plantations.¹⁹

The abolition of slavery and serfdom is to be attributed neither to the teachings of theologians and moralists nor to weakness or generosity on the part of the masters. There were among the teachers of religion and ethics as many eloquent defenders of bondage as opponents.²⁰ Servile labor disappeared because it could not stand the competition of free labor; its unprofitability sealed its doom in the market economy.

The price paid for the purchase of a slave is determined by the net yield expected from his employment (both as a worker and as a progenitor of other slaves) just as the price paid for a cow is determined by the net yield expected from its utilization. The owner of a slave does not pocket a specific revenue. For him there is no "exploitation" boon derived from the fact that the slave's work is not remunerated and that the potential market price of the services he renders is possibly greater than the cost of feeding, sheltering, and guarding him. He who buys a slave must in the price paid make good for these economies as far as they may be expected; he pays for them in full, due allowance being made for time preference. Whether the proprietor employs the slave in his own household or enterprise or rents his services to other people, he does not enjoy any specific advantage from the existence of the institution of slavery. The specific boon goes totally to the slave-hunter, i.e., the man who deprives free men of their liberty and transforms them into slaves. But, of course, the profitability of the slave-hunter's business depends upon the height of the prices buyers are ready to pay for the acquisition of slaves. If these prices drop below the operation and transportation costs incurred in the business of slave-hunting, business no longer pays and must be discontinued.

Now, at no time and at no place was it possible for enterprises employing servile labor to compete on the market with enterprises employing free labor. Servile labor could always be utilized only where it did not have to meet the competition of free labor.

If one treats men like cattle, one cannot squeeze out of them more than cattle-like performances. But it then becomes significant that man is physically weaker than oxen and horses, and that feeding and guarding a slave is, in proportion to the performance to be reaped, more expensive than feeding and guarding cattle. When

19. Margaret Mitchell, who in her popular novel *Gone With the Wind* (New York, 1936) eulogizes the South's slavery system, is cautious enough not to enter into particulars concerning the plantation hands, and prefers to dwell upon the conditions of domestic servants, who even in her account appear as an elite of their caste.

20. Cf. about the American proslavery doctrine Charles and Mary Beard, *The Rise of American Civilization* (1944), I, 703-710; and c.e. Merriam, *A History of American Political Theories* (New York, 1924), pp. 227-251.

treated as a chattel, man renders a smaller yield per unit of cost expended for current sustenance and guarding than domestic animals. If one asks from an unfree laborer human performances, one must provide him with specifically human inducements. If the employer aims at obtaining products which in quality and quantity excel those whose production can be extorted by the whip, he must interest the toiler in the yield of his contribution. Instead of punishing laziness and sloth, he must reward diligence, skill, and eagerness. But whatever he may try in this respect, he will never obtain from a bonded worker, i.e., a worker who does not reap the full market price of his contribution, a performance equal to that rendered by a freeman, i.e., a man hired on the unhampered labor market. The upper limit beyond which it is impossible to lift the quality and quantity of the products and services rendered by slave and serf labor is far below the standards of free labor. In the production of articles of superior quality an enterprise employing the apparently cheap labor of unfree workers can never stand the competition of enterprises employing free labor. It is this fact that has made all systems of compulsory labor disappear.

Social institutions once made whole areas or branches of production reservations exclusively kept for the occupation of unfree labor and sheltered against any competition on the part of entrepreneurs employing free men. Slavery and serfdom thus became essential features of a rigid caste system that could be neither removed nor modified by the actions of individuals. Wherever conditions were different, the slave owners themselves resorted to measures which were bound to abolish, step by step, the whole system of unfree labor. It was not humanitarian feelings and clemency that induced the callous and pitiless slaveholders of ancient Rome to loosen the fetters of their slaves, but the urge to derive the best possible gain from their property. They abandoned the system of centralized big-scale management of their vast landholdings, the *latifundia*, and transformed the slaves into virtual tenants cultivating their tenements on their own account and owing to the landlord merely either a lease or a share of the yield. In the processing trades and in commerce the slaves became entrepreneurs and their funds, the *peculium*, their legal quasi-property. Slaves were manumitted in large numbers because the freedman rendered to the former owner, the *patronus*, services more valuable than those to be expected from a slave. For the manumission was not an act of grace and a gratuitous gift on the part of the owner. It was a credit operation, a purchase of freedom on the installment plan, as it were. The freedman was bound to render the former owner for many years or even for a lifetime definite payments and services. The *patronus* moreover had special rights of inheritance to the estate of the deceased freedman.²¹

21.Cf. Ciccotti, *Le Déclin de l'esclavage antique* (Paris, 1910), pp. 292 ff.; Salvioi, *Le Capitalisme dans de monde antique* (Paris, 1906), pp. 141 ff.; Cairnes, *The Slave Power* (London, 1862), p. 234.

With the disappearance of the plants and farms employing unfree laborers, bondage ceased to be a system of production and became a political privilege of an aristocratic caste. The overlords were entitled to definite tributes in kind or money and to definite services on the part of their subordinates; moreover their serfs' children were obliged to serve them as servants or military retinue for a definite length of time. But the underprivileged peasants and artisans operated their farms and shops on their own account and peril. Only when their processes of production were accomplished did the lord step in and claim a part of the proceeds.

Later, from the sixteenth century on, people again began to employ unfree workers in agricultural and even sometimes in industrial big-scale production. In the American colonies Negro slavery became the standard method of the plantations. In Eastern Europe—in Northeastern Germany, in Bohemia and its annexes Moravia and Silesia, in Poland, in the Baltic countries, in Russia, and also in Hungary and its annexes—big-scale farming was built upon the unpaid statute labor of serfs. Both these systems of unfree labor were sheltered by political institutions against the competition of enterprises employing free workers. In the plantation colonies the high costs of immigration and the lack of sufficient legal and judicial protection of the individual against the arbitrariness of government officers and the planter aristocracy prevented the emergence of a sufficient supply of free labor and the development of a class of independent farmers. In Eastern Europe the caste system made it impossible for outsiders to enter the field of agricultural production. Big-scale farming was reserved to members of the nobility. Small holdings were reserved to unfree bondsmen. Yet the fact that the enterprises employing unfree labor would not be able to stand the competition of enterprises employing free labor was not contested by anybody. On this point the eighteenth and early nineteenth-century authors on agricultural management were no less unanimous than the writers of ancient Rome on farm problems. But the abolition of slavery and serfdom could not be effected by the free play of the market system, as political institutions had withdrawn the estates of the nobility and the plantations from the supremacy of the market. Slavery and serfdom were abolished by political action dictated by the spirit of the much-abused *laissez faire, laissez passer* ideology.

Today mankind is again faced with endeavors to substitute compulsory labor for the labor of the freeman selling his capacity to work as a "commodity" on the market. Of course, people believe that there is an essential difference between the tasks incumbent upon the comrades of the socialist commonwealth and those incumbent upon slaves or serfs. The slaves and serfs, they say, toiled for the benefit of an exploiting lord. But in a socialist system the produce of labor goes to society of which the toiler himself is a part; here the worker works for himself, as it were. What this reasoning

overlooks is that the identification of the individual comrades and the totality of all comrades with the collective entity pocketing the produce of all work is merely fictitious. Whether the ends which the community's officeholders are aiming at agree or disagree with the wishes and desires of the various comrades, is of minor importance. The main thing is that the individual's contribution to the collective entity's wealth is not required in the shape of wages determined by the market. A socialist commonwealth lacks any method of economic calculation; it cannot determine separately what quotas of the total amount of goods produced are to be assigned to the various complementary factors of production. As it cannot ascertain the magnitude of the contribution society owes to the various individuals' efforts, it cannot remunerate the workers according to the value of their performance.

In order to distinguish free labor from compulsory labor no metaphysical subtleties concerning the essence of freedom and compulsion are required. We may call free labor that kind of extroversive, not immediately gratifying labor that a man performs either for the direct satisfaction of his own wants or for their indirect satisfaction to be reaped by expending the price earned by its sale on the market. Compulsory labor is labor performed under the pressure of other incentives. If somebody were to take umbrage at this terminology because the employment of words like freedom and compulsion may arouse an association of ideas injurious to a dispassionate treatment of the problems involved, one could as well choose other terms. We may substitute the expression *F* labor for the term free labor and the term *C* labor for the term compulsory labor. The crucial problem cannot be affected by the choice of the terms. What alone matters is this: What kind of inducement can spur a man to submit to the disutility of labor if his own want-satisfaction neither directly nor—to any appreciable extent—indirectly depends on the quantity and quality of *his* performance?

Let us assume for the sake of argument that many workers, perhaps even most of them, will of their own accord dutifully take pains for the best possible fulfillment of the tasks assigned to them by their superiors. (We may disregard the fact that the determination of the task to be imposed upon the various individuals would confront a socialist commonwealth with insoluble problems.) But how to deal with those sluggish and careless in the discharge of the imposed duties? There is no other way left than to punish them. In their superiors must be vested the authority to establish the offense, to give judgment on its subjective reasons, and to mete out punishment accordingly. A hegemonic bond is substituted for the contractual bond. The worker becomes subject to the discretionary power of his superiors, he is personally subordinate to his chief's disciplinary power.

In the market economy the worker sells his services as other people sell

their commodities. The employer is not the employee's lord. He is simply the buyer of services which he must purchase at their market price. Of course, like every other buyer an employer too can take liberties. But if he resorts to arbitrariness in hiring or discharging workers, he must foot the bill. An employer or an employee entrusted with the management of a department of an enterprise is free to discriminate in hiring workers, to fire them arbitrarily, or to cut down their wages below the market rate. But in indulging in such arbitrary acts he jeopardizes the profitability of his enterprise or his department and thereby impairs his own income and his position in the economic system. In the market economy such whims bring their own punishment. The only real and effective protection of the wage earner in the market economy is provided by the play of the factors determining the formation of prices. The market makes the worker independent of arbitrary discretion on the part of the employer and his aides. The workers are subject only to the supremacy of the consumers as their employers are too. In determining, by buying or abstention from buying, the prices of products and the employment of factors of production, consumers assign to each kind of labor its market price.

What makes the worker a free man is precisely the fact that the employer, under the pressure of the market's price structure, considers labor a commodity, an instrument of earning profits. The employee is in the eyes of the employer merely a man who for a consideration in money helps him to make money. The employer pays for services rendered and the employee performs in order to earn wages. There is in this relation between employer and employee no question of favor or disfavor. The hired man does not owe the employer gratitude; he owes him a definite quantity of work of a definite kind and quality.

That is why in the market economy the employer can do without the power to punish the employee. All nonmarket systems of production must give to those in control the power to spur on the slow worker to more zeal and application. As imprisonment withdraws the worker from his job or at least reduces considerably the value of his contribution, corporal punishment has always been the classical means of keeping slaves and serfs to their work. With the abolition of unfree labor one could dispense with the whip as a stimulus. Flogging was the symbol of bond labor. Members of a market society consider corporal punishment inhuman and humiliating to such a degree that it has been abolished also in the schools, in the penal code, and in military discipline.

He who believes that a socialist commonwealth could do without compulsion and coercion against slothful workers because everyone will spontaneously do his duty, falls prey to the illusions implied in the doctrine of anarchism.

XXII. THE NONHUMAN ORIGINAL FACTORS OF PRODUCTION

1. General Observations Concerning the Theory of Rent

IN the frame of Ricardian economics the idea of rent was an attempt at a treatment of those problems which modern economics approaches by means of marginal-utility analysis.¹ Ricardo's theory appears rather unsatisfactory when judged from the point of view of present-day insight; there is no doubt that the method of the subjective-value theory is far superior. Yet the renown of the rent theory is well deserved; the care bestowed upon its initiation and perfection brought forth fine fruits. There is no reason for the history of economic thought to feel ashamed of the rent theory.²

The fact that land of different quality and fertility, i.e., yielding different returns per unit of input, is valued differently does not pose any special problem to modern economics. As far as Ricardo's theory refers to the gradation in the valuation and appraisalment of pieces of land, it is completely comprehended in the modern theory of the prices of factors of production. It is not the content of the rent theory that is objectionable, but the exceptional position assigned to it in the complex of the economic system. Differential rent is a general phenomenon and is not limited to the determination of the prices of land. The sophisticated distinction between "rents" and "quasi-rents" is spurious. Land and the services it renders are dealt with in the same way as other factors of production and their services. Control of a better tool yields "rent" when compared with the returns of less suitable tools which must be utilized on account of the insufficient supply of more suitable ones. The abler and more zealous worker earns a "rent" when compared with the wages earned by his less skillful and less industrious competitors.

The problems which the rent concept was designed to solve were for the most part generated by the employment of inappropriate terms. The general

1. It was, says Fetter (*Encyclopaedia of the Social Sciences*, XIII, 291), "a garbled marginality theory."

2. Cf. Amonn *Ricard als Begründer der theoretischen Nationalökonomie* (Jena, 1924), pp. 54 ff.

notions as used in everyday language and mundane thought were not formed with regard to the requirements of praxeological and economic investigation. The early economists were mistaken in adopting them without scruple and hesitation. Only if one clings naively to general terms such as *land* or *labor*, is one puzzled by the question why *land* and *labor* are differently valued and appraised. He who does not allow himself to be fooled by mere words, but looks at a factor's relevance for the satisfaction of human wants, considers it a matter of course that different services are valued and appraised differently.

The modern theory of value and prices is not based on the classification of the factors of production as land, capital, and labor. Its fundamental distinction is between goods of higher and of lower orders, between producers' goods and consumers' goods. When it distinguishes within the class of factors of production the original (nature-given) factors from the produced factors of production (the intermediary products) and furthermore within the class of original factors the nonhuman (external) factors from the human factors (labor), it does not break up the uniformity of its reasoning concerning the determination of the prices of the factors of production. The law controlling the determination of the prices of the factors of production is the same with all classes and specimens of these factors. The fact that different services rendered by such factors are valued, appraised, and dealt with in a different way can only amaze people who fail to notice these differences in serviceableness. He who is blind to the merits of a painting may consider it strange that collectors should pay more for a painting of Velasquez than for a painting of a less gifted artist; for the connoisseur it is self-evident. It does not astonish the farmer that buyers pay higher prices and tenants higher leases for more fertile land than for less fertile. The only reason why the old economists were puzzled by this fact was that they operated with a general term *land* that neglects differences in productivity.

The greatest merit of the Ricardian theory of rent is the cognizance of the fact that the marginal land does not yield any rent. From this knowledge there is but one step to the discovery of the principle of valuational subjectivism. Yet blinded by the *real cost* notion neither the classical economists nor their epigones took this step.

While the differential-rent idea, by and large, can be adopted by the subjective-value theory, the second rent concept derived from Ricardian economics, viz., the residual-rent concept, must be rejected altogether. This residual-claimant idea is based on the notion of *real* or *physical* costs that do not make any sense in the frame of the modern explanation of the prices of factors of

production. The reason why the price of Burgundy is higher than that of Chianti is not the higher price of the vineyards of Burgundy as against those of Tuscany. The causation is the other way around. Because people are ready to pay higher prices for Burgundy than for Chianti, winegrowers are ready to pay higher prices for the vineyards of Burgundy than for those of Tuscany.

In the eyes of the accountant profits appear as a share left over when all costs of production have been paid. In the evenly rotating economy such a surplus of the prices of products over and above costs could never appear. In the changing economy differences between the prices of the products and the sum of the prices that the entrepreneur has expended for the purchase of the complementary factors of production plus interest on the capital invested can appear in either direction, i.e., either as profit or as loss. These differences are caused by changes which arise in the prices of the products in the time interval. He who succeeds better than others in anticipating these changes in time and acts accordingly, reaps profits. He who fails in his endeavors to adjust his entrepreneurial ventures to the future state of the market is penalized by losses.

The main deficiency of Ricardian economics was that it was a theory of the distribution of a total product of a nation's joint efforts. Like the other champions of classical economics Ricardo failed to free himself from the Mercantilist image of the *Volkswirtschaft*. In his thought the problem of the determination of prices was subordinated to the problem of the distribution of wealth. The customary characterization of his economic philosophy as "that of the manufacturing middle classes of contemporary England"³ misses the point. These English businessmen of the early nineteenth century were not interested in the total product of industry and its distribution. They were guided by the urge to make profits and to avoid losses.

Classical economics erred when it assigned to land a distinct place in its theoretical scheme. Land is, in the economic sense, a factor of production, and the laws determining the formation of the prices of land are the same that determine the formation of the prices of other factors of production. All peculiarities of the economic teachings concerning land refer to some peculiarities of the data involved.

2. The Time Factor in Land Utilization

The starting point of the economic teachings concerning land is the distinction between two classes of original factors of production, viz., human and nonhuman

3. Cf., for example, Haney, *History of Economic Thought* (rev. ed. New York, 1927), p. 275.

factors. As the utilization of the nonhuman factors is as a rule connected with the power to utilize a piece of the earth, we speak of land when referring to them.⁴

In dealing with the economic problems of land, i.e., the nonhuman original factors of production, one must neatly separate the praxeological point of view from the cosmological point of view. It may make good sense for cosmology in its study of cosmic events to speak of permanency and of the conservation of mass and energy. If one compares the orbit within which human action is able to affect the natural environmental conditions of human life with the operation of natural entities, it is permissible to call the natural powers indestructible and permanent or—more precisely—safe against destruction by human action. For the great periods of time to which cosmology refers, soil erosion (in the broadest sense of the term) of such an intensity as can be effected by human interference is of no importance. Nobody knows today whether or not cosmic changes will in millions of years transform deserts and barren soil into land that from the point of view of our present-day knowledge will have to be described as extremely fertile and the most luxuriant tropical gardens into sterile land. Precisely because nobody can anticipate such changes nor venture to influence the cosmic events which possibly could bring them about, it is supererogatory to speculate about them in dealing with the problems of human action.⁵

The natural sciences may assert that those powers of the soil that condition its serviceableness for forestry, cattle breeding, agriculture, and water utilization regenerate themselves periodically. It may be true that even human endeavors deliberately directed toward the utmost devastation of the productive capacity of the earth's crust could at best succeed only with regard to small parts of it. But these facts do not strictly count for human action. The periodical regeneration of the soil's productive powers is not a rigid datum that would face man with a uniquely determined situation. It is possible to use the soil in such a way that this regeneration is slowed down and postponed or the soil's productive power either vanishes altogether for a definite period of time or can be restored only by means of a considerable input of capital and labor. In dealing with the soil man has to choose between various methods different from one another with regard to the preservation and regeneration of its productive power. No less than in any other branch of production the time factor enters also into the

4. Legal provisions concerning the separation of the right of hunting, fishing, and extracting mineral deposits from the other rights of the owner of a piece of land are of no interest for catallactics. The term land as used in catallactics includes also expanses of water.

5. Thus also the problem of entropy stands outside the sphere of praxeological meditation.

conduct of hunting, fishing, grazing, cattle breeding, plant growing, lumbering and water utilization. Here too man must choose between satisfaction in nearer and in more remote periods of the future. Here too the phenomenon of originary interest, entailed in every human action, plays its paramount role.

There are institutional conditions that cause the persons involved to prefer satisfaction in the nearer future and to disregard entirely or almost entirely satisfaction in the more distant future. If the soil is on the one hand not owned by individual proprietors and on the other hand all, or certain people favored by special privilege or by the actual state of affairs, are free to make use of it temporarily for their own benefit, no heed is paid to the future. The same is the case when the proprietor expects that he will be expropriated in the not too distant future. In both cases the actors are exclusively intent upon squeezing out as much as possible for their immediate advantage. They do not concern themselves about the temporally more remote consequences of their methods of exploitation. Tomorrow does not count for them. The history of lumbering, hunting, and fishing provides plenty of illustrative experience; but many examples can also be found in other branches of soil utilization.

From the point of view of the natural sciences, the maintenance of capital goods and the preservation of the powers of the soil belong to two entirely different categories. The produced factors of production perish sooner or later entirely in the pursuit of production processes, and piecemeal are transformed into consumers' goods which are eventually consumed. If one does not want to make the results of past saving and capital accumulation disappear, one must, apart from consumers' goods, also produce the amount of capital goods which is needed for the replacement of those worn out. If one were to neglect this, one would finally consume, as it were, the capital goods. One would sacrifice the future to the present; one would live in luxury today and be in want later.

But, it is often said, it is different with the powers of land. They cannot be *consumed*. Such a statement is meaningful, however, only from the point of view of geology. But from the geological point of view one could, or should, no less deny that factory equipment or a railroad can be "eaten up." The gravel and stones of a railroad's substructure and the iron and steel of the rails, bridges, cars, and engines do not perish in a cosmic sense. Only from the praxeological point of view is it permissible to speak of the consumption, the eating up, of a tool, a railroad, or a steel mill. In the same economic sense we speak of the consumption of the productive powers of the soil. In forestry, agriculture, and water utilization these powers are dealt with in the same way

as other factors of production. With regard to the powers of the soil, too, the actors must choose between processes of production which render higher output at the expense of productivity in later periods and processes which do not impair future physical productivity. It is possible to extract so much from the soil that its later utilization will render smaller returns (per unit of the quantities of capital and labor employed) or practically no returns at all.

It is true that there are physical limits to the devastating powers of man. (These limits are sooner reached in lumbering, hunting, and fishing than in tilling the soil.) But this fact results only in a quantitative, not in a qualitative difference between capital decumulation and soil erosion.

Ricardo calls the powers of the soil "original and indestructible."⁶ However, modern economics must stress the point that valuation and appraisal do not differentiate between original and produced factors of production and that the cosmological indestructibility of mass and energy, whatever it may mean, does not enjoin upon land utilization a character radically different from other branches of production.

3. The Submarginal Land

The services a definite piece of land can render in a definite period of time are limited. If they were unlimited, men would not consider land a factor of production and an economic good. However, the quantity of soil available is so vast, nature is so prodigal, that land is still abundant. Therefore, only the most productive pieces of land are utilized. There is land which people consider—either with regard to its physical productivity or with regard to its location—as too poor to be worth cultivating. Consequently the marginal soil, i.e., the poorest soil cultivated, yields no rent in the Ricardian sense.⁷ Submarginal land would be considered entirely worthless if one were not to appraise it positively in anticipation of its being utilized in later days.⁸

The fact that the market economy does not have a more ample supply of agricultural products is caused by the scarcity of capital and labor, not by a scarcity of cultivable land. An increase in the surface of land available

6. Ricardo, *Principles of Political Economy and Taxation*, p. 34.

7. There are areas in which practically every corner is cultivated or otherwise utilized. But this is the outcome of institutional conditions barring the inhabitants of these regions from access to more fertile unused soil.

8. The appraisal of a piece of soil must not be confused with the appraisal of the improvements, i.e., the irremovable and inconvertible results of the investment of capital and labor that facilitate its utilization and raise future outputs per unit and future inputs.

would—other things being equal—increase the supply of cereals and meat only if the additional land's fertility exceeded that of the marginal land already previously cultivated. On the other hand, the supply of agricultural products would be increased by any increase in the amount of labor and capital available, provided the consumers do not consider another employment of the additional amount of capital and labor more appropriate to fill their most urgent wants.⁹

The useful mineral substances contained in the soil are limited in quantity. It is true that some of them are the outgrowth of natural processes which are still going on and increasing the existing deposits. However, the slowness and length of these processes makes them insignificant for human action. Man must take into account that the available deposits of these minerals are limited. Every single mine or oil source is exhaustible; many of them are already exhausted. We may hope that new deposits will be discovered and that technological procedures will be invented which will make it possible to utilize deposits which today cannot be exploited at all or only at unreasonable costs. We may also assume that the further progress of technological knowledge will enable later generations to utilize substances which cannot be utilized today. But all these things do not matter for the present-day conduct of mining and oil drilling. The deposits of mineral substances and their exploitation are not characterized by features which would give a particular mark to human action dealing with them. For catallactics the distinction between soil used in agriculture and that used in mining is merely a distinction of data.

Although the available quantities of these mineral substances are limited, and although we may academically concern ourselves with the possibility that they will be entirely exhausted one day, acting men do not consider these deposits rigidly limited. Their activities take into account the fact that definite mines and wells will become exhausted, but they do not pay heed to the fact that at an unknown later date all the deposits of certain minerals may come to an end. For to present-day action the supply of these substances appears to be so abundant that one does not venture to exploit all their deposits to the full extent which the state of technological knowledge permits. The mines are utilized only as far as there is no more urgent employment available for the required quantities of capital and labor. There are therefore submarginal deposits that are not utilized at all. In every mine

9. These observations, of course, refer only to conditions in which there are no institutional barriers to the mobility of capital and labor.

operated the extent of the production is determined by the relation between the prices of the products and those of the required nonspecific factors of production.

4. The Land as Standing Room

The employment of land for the location of human residences, workshops, and means of transportation withdraws pieces of soil from other employments.

The particular place which older theories attributed to urban site rent need not here concern us. It is not especially noteworthy that people pay higher prices for land they value more for housing than for land which they value less. It is a matter of fact that for workshops, warehouses, and railroad yards people prefer locations which reduce costs of transportation, and that they are ready to pay higher prices for such land in accordance with the economies expected.

Land is also used for pleasure grounds and gardens, for parks and for the enjoyment of the grandeur and beauty of nature. With the development of the love of nature, this very characteristic feature of "bourgeois" mentality, the demand for such enjoyments increased enormously. The soil of the high mountain chains, once merely considered a barren dreariness of rocks and glaciers, is today highly appreciated as the source of the most lofty pleasures.

From time immemorial access to these spaces has been free to everybody. Even if the land is owned by private individuals, the owners as a rule have not the right to close it to tourists and mountain-climbers or to ask an entrance fee. Whoever has the opportunity to visit these areas, has the right to enjoy all their grandeur, and to consider them his own, as it were. The nominal owner does not derive any advantage from the satisfaction his property gives to the visitors. But this does not alter the fact that this land serves human well-being and is appreciated accordingly. The ground is subject to an easement that entitles everybody to pass along and to camp on it. As no other utilization of the area concerned is possible, this servitude completely exhausts all the advantages the proprietor could reap from his ownership. Since the particular services which these rocks and glaciers can render are practically inexhaustible, do not wear out, and do not require any input of capital and labor for their conservation, this arrangement does not bring about those consequences which appeared wherever it was applied to lumbering, hunting, and fishing grounds.

If, in the neighborhood of these mountain chains, the space available for the construction of shelters, hotels, and means of transportation (e.g., rack railroads) is limited, the owners of these scarce pieces of soil can sell or rent

them on more propitious terms and thus divert to themselves a part of the advantages the tourists reap from the free accessibility of the peaks. If this is not the case, the tourists enjoy all these advantages gratuitously.

5. The Prices of Land

In the imaginary construction of the evenly rotating economy buying and selling of the services of definite pieces of land does not differ at all from buying and selling the services of other factors of production. All these factors are appraised according to the services they will render in various periods of the future, due allowance being made for time preference. For the marginal land (and, of course, for the submarginal land) no price is paid at all. Rent-bearing land (i.e., land that, compared with the marginal land, bears a higher output per unit of input of capital and labor) is appraised in accordance with the degree of its superiority. Its price is the sum of all its future rents, each of them discounted at the rate of originary interest.¹⁰

In the changing economy people buying and selling land take due account of expected changes in the market prices for the services rendered by the soil. Of course, they may err in their expectations; but this is another thing. They try to anticipate to the best of their abilities future events that may alter the market data and they act in accordance with these opinions. If they believe that the annual net yield of the piece of land concerned will rise, the price will be higher than it would have been in the absence of such expectations. This is, for instance, the case with suburban land in the neighborhood of cities growing in population or with forests and arable land in countries in which pressure groups are likely to succeed in raising, by means of tariffs, the prices of timber and cereals. On the other hand, fears concerning the total or partial confiscation of the net yield of land tend to lower the prices of land. In everyday business language people speak of the "capitalization" of the rent and observe that the rate of capitalization is different with different classes of land and varies even within the same class with different pieces of soil. This terminology is rather inexpedient as it

10. There is need to remember again that the imaginary construction of the evenly rotating economy cannot be carried consistently to its ultimate logical consequences (see above, p. 248). with regard to the problems of land one must stress two points: First, that in the frame of this imaginary construction, characterized by the absence of changes in the conduct of affairs, there is no room for the buying and selling of land. Second, that in order to integrate into this construction mining and oil drilling we must ascribe to the mines and oil wells a permanent character and must disregard the possibility that any of the operated mines and wells could be exhausted or even undergo a change in the quantity of output or of current input required.

misrepresents the nature of the process.

In the same way in which buyers and sellers of land take into account anticipated future events that will reduce the net return, they deal with taxes. Taxes levied upon land reduce its market price to the extent of the discounted amount of their future burden. The introduction of a new tax of this kind which is likely not to be abolished results in an immediate drop in the market price of the pieces of land concerned. This is the phenomenon that the theory of taxation calls *amortization* of taxes.

In many countries the owners of land or of certain estates enjoyed special political legal privileges or a great social prestige. Such institutions too can play a role in the determination of the prices of land.

The Myth of the Soil

Romanticists condemn the economic theories concerning land for their utilitarian narrow-mindedness. Economists, they say, look upon land from the point of view of the callous speculator who degrades all eternal values to terms of money and profit. Yet, the glebe is much more than a mere factor of production. It is the inexhaustible source of human energy and human life. Agriculture is not simply one branch of production among many other branches. It is the only natural and respectable activity of man, the only dignified condition of a really human existence. It is iniquitous to judge it merely with regard to the net returns to be squeezed out of the soil. The soil not only bears the fruits that nourish our body; it produces first of all the moral and spiritual forces of civilization. The cities, the processing industries, and commerce are phenomena of depravity and decay; their existence is parasitic; they destroy what the ploughman must create again and again.

Thousands of years ago, when fishing and hunting tribesmen began to cultivate the soil, romantic reverie was unknown. But if there had lived romanticists in those ages, they would have eulogized the lofty moral values of the hunt and would have stigmatized soil cultivation as a phenomenon of depravity. They would have reproached the ploughman for desecrating the soil that the gods had given to man as a hunting ground and for degrading it to a means of production.

In the preromantic ages in his actions no one considered the soil as anything other than a source of human well-being, a means to promote welfare. The magic rites and observances concerning the soil aimed at nothing else than improvement of the soil's fertility and increase in the quantity of fruits to be harvested. These people did not seek the *unio mystica* with the mysterious powers and forces hidden in the soil. All they aimed at was bigger and better crops. They resorted to magic rituals and adjurations because in their

opinion this was the most efficient method of attaining the ends sought. Their sophisticated progeny erred when they interpreted these ceremonies from an "idealistic" point of view. A real peasant does not indulge in ecstatic babble about the soil and its mysterious powers. For him land is a factor of production, not an object of sentimental emotions. He covets more land because he desires to increase his income and to improve his standard of living. Farmers buy and sell land and mortgage it; they sell the produce of land and become very indignant if the prices are not as high as they want them to be.

Love of nature and appreciation of the beauties of the landscape were foreign to the rural population. The inhabitants of the cities brought them to the countryside. It was the city-dwellers who began to appreciate the land as *nature*, while the countrymen valued it only from the point of view of its productivity for hunting, lumbering, crop raising and cattle breeding. From time immemorial the rocks and glaciers of the Alps were merely waste land in the eyes of the mountaineers. Only when the townsfolk ventured to climb the peaks, and brought money into the valleys, did they change their minds. The pioneers of mountain-climbing and skiing were ridiculed by the indigenous population until they found out that they could derive gain from this eccentricity.

Not shepherds, but sophisticated aristocrats and city-dwellers were the authors of bucolic poetry. Daphnis and Chloe are creations of fancies far removed from earthy concerns. No less removed from the soil is the modern political myth of the soil. It did not blossom from the moss of the forests and the loam of the fields, but from the pavements of the cities and the carpets of the salons. The farmers make use of it because they find it a practical means of obtaining political privileges which raise the prices of their products and of their farms.

XXIII. THE DATA OF THE MARKET

1. The Theory and the Data

CATALLACTICS, the theory of the market economy, is not a system of theorems valid only under ideal and unrealizable conditions and applicable to reality merely with essential restrictions and modifications. All the theorems of catallactics are rigidly and without any exception valid for all phenomena of the market economy, provided the particular conditions which they presuppose are present. It is, for instance, a simple question of fact whether there is direct or indirect exchange. But where there is indirect exchange, all the general laws of the theory of indirect exchange are valid with regard to the acts of exchange and the media of exchange. As has been pointed out,¹ praxeological knowledge is precise or exact knowledge of reality. All references to the epistemological issues of the natural sciences and all analogies derived from comparing these two radically different realms of reality and cognition are misleading. There is, apart from formal logic, no such thing as a set of "methodological" rules applicable both to cognition by means of the category of causality and to that by means of the category of finality.

Praxeology deals with human action as such in a general and universal way. It deals neither with the particular conditions of the environment in which man acts nor with the concrete content of the valuations which direct his actions. For praxeology data are the bodily and psychological features of the acting men, their desires and value judgments, and the theories, doctrines, and ideologies they develop in order to adjust themselves purposively to the conditions of their environment and thus to attain the ends they are aiming at. These data, although permanent in their structure and strictly determined by the laws controlling the order of the universe, are perpetually fluctuating and varying; they change from instant to instant.²

The fullness of reality can be mentally mastered only by a mind resorting both to the conception of praxeology and to the understanding of history;

1. See above, p. 39.

2. Cf. Strigl, *Die ökonomischen Kategorien und die Organisation der Wirtschaft* (Jena, 1923), pp. 18 ff.

and the latter requires command of the teachings of the natural sciences. Cognition and prediction are provided by the totality of knowledge. What the various single branches of science offer is always fragmentary; it must be complemented by the results of all the other branches. From the point of view of acting man the specialization of knowledge and its breaking up into the various sciences is merely a device of the division of labor. In the same way in which the consumer utilizes the products of various branches of production, the actor must base his decisions on knowledge brought about by various branches of thought and investigation.

It is not permissible to disregard any of these branches in dealing with reality. The Historical School and the Institutionalists want to outlaw the study of praxeology and economics and to occupy themselves merely with the registration of the data or, as they call them nowadays, the institutions. But no statement concerning these data can be made without reference to a definite set of economic theorems. When an institutionalist ascribes a definite event to a definite cause, e.g., mass unemployment to the alleged deficiencies of the capitalist mode of production, he resorts to an economic theorem. In objecting to the closer examination of the theorem tacitly implied in his conclusions, he merely wants to avoid the exposure of the fallacies of his argument. There is no such thing as a mere recording of unadulterated facts apart from any reference to theories. As soon as two events are recorded together or integrated into a class of events, a theory is operative. The question whether there is any connection between them can only be answered by a theory, i.e., in the case of human action by praxeology. It is vain to search for coefficients of correlation if one does not start from a theoretical insight acquired beforehand. The coefficient may have a high numerical value without indicating any significant and relevant connection between the two groups.³

2. The Role of Power

The Historical School and Institutionalism condemn economics for disregarding the role which power plays in real life. The basic notion of economics, viz., the choosing and acting individual, is, they say, an unrealistic concept. Real man is not free to choose and to act. He is subject to social pressure, to the sway of irresistible power. It is not the individuals' value judgments, but the interactions of the forces of power that determine the market phenomena.

3. Cf. Cohen and Nagel, *An Introduction to Logic and Scientific Method* (New York, 1939), pp. 316-322.

These objections are no less spurious than all other statements of the critics of economics.

Praxeology in general and economics and catallactics in particular do not contend or assume that man is free in any metaphysical sense attached to the term *freedom*. Man is unconditionally subject to the natural conditions of his environment. In acting he must adjust himself to the inexorable regularity of natural phenomena. It is precisely the scarcity of the nature-given conditions of his welfare that enjoins upon man the necessity to act.⁴

In acting man is directed by ideologies. He chooses ends and means under the influence of ideologies. The might of an ideology is either direct or indirect. It is direct when the actor is convinced that the content of the ideology is correct and that he serves his own interests directly in complying with it. It is indirect when the actor rejects the content of the ideology as false, but is under the necessity of adjusting his actions to the fact that this ideology is endorsed by other people. The mores of their social environment are a power which people are forced to consider. Those recognizing the spuriousness of the generally accepted opinions and habits must in each instance choose between the advantages to be derived from resorting to a more efficient mode of acting and the disadvantages resulting from the contempt of popular prejudices, superstitions, and folkways.

The same is true with regard to violence. In choosing man must take into account the fact that there is a factor ready to exercise violent compulsion upon him.

All the theorems of catallactics are valid also with regard to actions influenced by such social or physical pressure. The direct or indirect might of an ideology and the threat of physical compulsion are merely data of the market situation. It does not matter, for instance, what kind of considerations motivate a man not to offer a higher bid for the purchase of a commodity than the one he really makes without obtaining the good concerned. For the determination of the market price it is immaterial whether he spontaneously prefers to spend his money for other purposes or whether he is afraid of being

4. Most social reformers, foremost among them Fourier and Marx, pass over in silence the fact that the nature-given means of removing human uneasiness are scarce. As they see it, the fact that there is not an abundance of all useful thing is merely caused by the inadequacy of the capitalist mode of production and will therefore disappear in the "higher phase" of communism. An eminent Menshevik author who could not help referring to the nature-given barriers to human well-being, in genuinely Marxian style, calls Nature "the most relentless exploiter." Cf. Many Gordon, *Workers Before and After Lenin* (New York, 1941), pp. 227; 458.

looked upon by his fellow men as an upstart, or as a spendthrift, afraid of violating a government-decreed ceiling price or of defying a competitor ready to resort to violent revenge. In any case, his abstention from bidding a higher price contributes to the same extent to the emergence of the market price.⁵

It is customary nowadays to signify the position which the owners of property and the entrepreneurs occupy on the market as economic power or market power. This terminology is misleading when applied to the conditions of the market. All that happens in the unhampered market economy is controlled by the laws dealt with by catallactics. All market phenomena are ultimately determined by the choices of the consumers. If one wants to apply the notion of power to phenomena of the market, one ought to say: in the market all power is vested in the consumers. The entrepreneurs are forced, by the necessity of earning profits and avoiding losses, to consider in every regard—e.g. also in the conduct of the wrongly so-called “internal” affairs of their plants, especially personnel management—the best possible and cheapest satisfaction of the consumers as their supreme directive. It is very inexpedient to employ the same term “power” in dealing with a firm’s ability to supply the consumers with automobiles, shoes, or margarine better than others do and in referring to the strength of a government’s armed forces to crush any resistance.

Ownership of material factors of production as well as entrepreneurial or technological skill do not—in the market economy—bestow power in the coercive sense. All they grant is the privilege to serve the real masters of the market, the consumers, in a more exalted position than other people. Ownership of capital is a mandate entrusted to the owners, under the condition that it should be employed for the best possible satisfaction of the consumers. He who does not comply with this imposition forfeits his wealth and is relegated to a place in which his ineptitude no longer hurts people’s well-being.

3. The Historical Role of War and Conquest

Many authors glorify war and revolution, bloodshed and conquest. Carlyle and Ruskin, Nietzsche, Georges Sorel, and Spengler were harbingers of the ideas which Lenin and Stalin, Hitler and Mussolini put into effect.

The course of history, say these philosophies, is not determined by the mean activities of materialistic peddlers and merchants, but by the heroic deeds of warriors and conquerors. The economists err in abstracting from the experience of the short-lived liberal episode a theory to which they

5. The economic consequences of the interference of external compulsion and coercion with the market phenomena are dealt with in the sixth part of this book.

ascribe universal validity. This epoch of liberalism, individualism, and capitalism; of democracy, tolerance, and freedom; of the disregard of all “true” and “eternal” values; and of the supremacy of the rabble is now vanishing and will never return. The dawning age of manliness requires a new theory of human action.

However, no economist ever ventured to deny that war and conquest were of utmost importance in the past and that Huns and Tartars, Vandals and Vikings, Normans and conquistadors played an enormous part in history. One of the determinants of the present state of mankind is the fact that there were thousands of years of armed conflicts. Yet, what remains and is the essence of human civilization, is not the legacy inherited from the warriors. Civilization is an achievement of the “bourgeois” spirit, not of the spirit of conquest. Those barbarian peoples who did not substitute working for plundering disappeared from the historical scene. If there is still any trace left of their existence, it is in the achievements they accomplished under the influence of the civilization of the subdued peoples. Latin civilization survived in Italy, France, and the Iberian peninsula in defiance of all barbarian invasions. If capitalist entrepreneurs had not succeeded Lord Clive and Warren Hastings, British rule in India might one day have become such an insignificant historical reminiscence as are the one hundred and fifty years of Turkish rule in Hungary.

It is not the task of economics to enter into an examination of the endeavors to revive the ideals of the Vikings. It has merely to refute the statements that the fact that there are armed conflicts reduces its teachings to nought. With regard to this problem there is need to emphasize again the following:

First: The teachings of catallactics do not refer to a definite epoch of history, but to all actions characterized by the two conditions *private ownership of the means of production* and *division of labor*. Whenever and wherever, in a society in which there is private ownership of the means of production, people not only produce for the direct satisfaction of their own wants but also consume goods produced by other people, the theorems of catallactics are strictly valid.

Second: If apart from the market and outside of the market there is robbing and plundering, these facts are a datum for the market. The actors must take into account the fact that they are threatened by murderers and robbers. If killing and robbing become so prevalent that any production appears useless, it may finally happen that productive work ceases and mankind plunges into a state of war of every man against every other man.

Third: In order to seize booty, something to be plundered must be available. The heroes can only live if there are enough “bourgeois” to be

expropriated. The existence of producers is a condition for the survival of conquerors. But the producers could do without the plunderers.

Fourth: There are, of course, other imaginable systems of a society based on the division of labor besides the capitalist system of private ownership of the means of production. Champions of militarism are consistent in asking for the establishment of socialism. The whole nation should be organized as a community of warriors in which the noncombatants have no other task than that of supplying the fighting forces with all they need. (The problems of socialism are dealt with in the fifth part of this book.)

4. Real Man as a Datum

Economics deals with the real actions of real men. Its theorems refer neither to ideal nor to perfect men, neither to the phantom of a fabulous economic man (*homo oeconomicus*) nor to the statistical notion of an average man (*homme moyen*). Man with all his weaknesses and limitations, every man as he lives and acts, is the subject matter of catallactics. Every human action is a theme of praxeology.

The subject matter of praxeology is not only the study of society, societal relations, and mass phenomena, but the study of all human actions. The term “the social sciences” and all its connotations are in this regard misleading.

There is no yardstick that a scientific investigation can apply to human action other than that of the ultimate goals the acting individual wants to realize in embarking upon a definite action. The ultimate goals themselves are beyond and above any criticism. Nobody is called upon to establish what could make another man happy. What an unaffected observer can question is merely whether or not the means chosen for the attainment of these ultimate goals are fit to bring about the results sought by the actor. Only in answering this question is economics free to express an opinion about the actions of individuals and groups of individuals, or of the policies of parties, pressure groups, and governments.

It is customary to disguise the arbitrariness of the attacks launched against the value judgments of other people by converting them into a critique of the capitalist system or of the conduct of entrepreneurs. Economics is neutral with regard to all such statements.

To the arbitrary statement that “the balance between the production of different goods is admittedly faulty under capitalism,”⁶ the economist does not oppose the statement that this balance is faultless. What the economist

6. Cf. Albert L. Meyers, *Modern Economics* (New York, 1946), p. 672.

asserts is that in the unhampered market economy this balance is in agreement with the conduct of the consumers as displayed in the spending of their incomes.⁷ It is not the task of the economist to censure his fellow men and to call the result of their actions faulty.

The alternative to the system in which the individual's value judgments are paramount in the conduct of production processes is autocratic dictatorship. Then the value judgments of the dictators alone decide although they are no less arbitrary than those of other people.

Man is certainly not a perfect being. His human weakness taints all human institutions and thus also the market economy.

5. The Period of Adjustment

Every change in the market data has its definite effects upon the market. It takes a definite length of time before all these effects are consummated, i.e., before the market is completely adjusted to the new state of affairs.

Catallactics has to deal with all the various individuals' conscious and purposive reactions to the changes in the data and not, of course, merely with the final result brought about in the market structure by the interplay of these actions. It may happen that the effects of one change in the data are counteracted by the effects of another change occurring, by and large, at the same time and to the same extent. Then no considerable change in the market prices finally results. The statistician, exclusively preoccupied with the observation of mass phenomena and the outgrowth of the totality of market transactions as manifested in market prices, ignores the fact that the nonemergence of changes in the height of prices is merely accidental and not the outcome of a continuance in the data and the absence of specific adjustment activities. He fails to see any movement and the social consequences of such movements. Yet each change in the data has its own course, generates certain reactive responses on the part of the individuals affected and disturbs the relation between the various members of the market system even if eventually no considerable changes in the prices of the various goods and no changes at all in the figures concerning the total amount of capital in the whole market system result.⁸

7. This is the general feature of democracy whether political or economic. Democratic elections do not provide the guarantee that the man elected is free from faults, but merely that the majority of the voters prefer him to other candidates.

8. With regard to changes in the elements determining the purchasing power of money see above, p. 419. With regard to the documulation and accumulation of capital see above, pp. 515-516.

Economic history can give vague information, after the fact, about the length of adjustment periods. The method of attaining such information is, of course, not measurement, but historical understanding. The various adjustment processes are in reality not isolated. Synchronously an indefinite number of them take their course, their paths intersect, and they mutually influence one another. To disentangle this intricate tissue and to observe the chain of actions and reactions set into motion by a definite change in the data is a difficult task for the historian's understanding and the results are mostly meager and questionable.

The understanding of the length of adjustment periods is also the most difficult task incumbent upon those eager to understand the future, the entrepreneurs. Yet for success in entrepreneurial activities mere anticipation of the direction in which the market will react to a certain event is of little significance if it is not supplemented by an adequate anticipation of the length of the various adjustment periods involved. Most of the mistakes committed by entrepreneurs in the conduct of affairs and most of the blunders vitiating the prognoses of future business trends on the part of "expert" forecasters are caused by errors concerning the length of adjustment periods.

In dealing with effects brought about by changes in the data, it is customary to distinguish between the temporally nearer and the temporally remoter effects, viz., the short-run effects and the long run effects. This distinction is much older than the terminology in which it is expressed nowadays.

In order to discover the immediate—the short-run—effects brought about by a change in a datum, there is as a rule no need to resort to a thorough investigation. The short-run effects are for the most part obvious and seldom escape the notice of a naive observer unfamiliar with searching investigations. What started economic studies was precisely the fact that some men of genius began to suspect that the remoter consequences of an event may differ from the immediate effects visible even to the most simple-minded layman. The main achievement of economics was the disclosure of such long-run effects hitherto unnoticed by the unaffected observer and neglected by the statesman.

From their startling discoveries the classical economists derived a rule for political practice. Governments, statesmen, and political parties, they argued, in planning and acting should consider not only the short-run consequences but also the long-run consequences of their measures. The correctness of this inference is incontestable and indisputable. Action aims at the substitution of a more satisfactory state of affairs for a less satisfactory. Whether or not the outcome of a definite action will be considered more or less satisfactory depends on a correct anticipation of all its consequences,