HUMAN ACTION

by Ludwig von Mises, 4th edition (1996)

PART FOUR

CATALLACTICS OR ECONOMICS OF THE MARKET SOCIETY

XX. INTEREST, CREDIT EXPANSION, AND THE TRADE CYCLE - &&7-9

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 son 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.

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 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." 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."[1] 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. 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. 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

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

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 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[2]. 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 accomodation inherent in the market economy. The 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.

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

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 ion 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[3]. 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 outgrowth of errors committed in the past. The assumptions made by the investors were, as later

[3] 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.

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 dies 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[4]. 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 originary 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 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

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

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[5]. 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[6].

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

[5] About the fundamental fault of the Marxian and all other underconsumption theories, cf. above, p. 301.
[6] About these currency and credit manipulations, cf. below, pp. 780-803.

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 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 or 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*[7], 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

[7] 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.

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 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.