

PERIODIC INDUSTRIAL CRISES*

A History of British Crises

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CHAPTER I: CIRCULATION OF CAPITAL.

We have given an account of the history of British industrial crises in the 19th century. In addition we have endeavored to ascertain the economic conditions and causes which, in each specific instance, led British industry to a crisis. Each crisis had its own individual characteristics, just as each historical event which occurs in a concrete situation, and when explaining crises it was comparatively easy to point out the immediate causes peculiar to the given, specific moment which caused the crisis. But together with the individual peculiarities of crises there is evident an extraordinary resemblance between them in all their essential characteristics. The condition of the commodity market immediately before a crisis, changes in the field of money circulation accompanying the development of a crisis, the fluctuations of credit which follow — all this bears such a striking resemblance that when presenting the history of each crisis, one is forced to repeat almost without change what was said about other crises. This makes the history of crises very monotonous and serves as the best evidence of the uniformity of the phenomenon under investigation. Obviously a crisis is contingent not only on fortuitous causes, peculiar to a specific historical moment, but also on continually operative general causes inherent in the modern cultural and economic system.

We have seen that industrial crises or periods of industrial stagnation recur in England with striking regularity. Each decade has its period of revival and its period of business decline. If the fluctuations of modern industry were in the nature of individual phenomena, like most historical events, wars, revolutions, etc. for

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example, there could be no uniformity and regularity in their recurrence and they would have to occur in the same indefinite and unforeseen intervals of time as other social phenomena. But the fluctuations of modern industry are so periodic that it has often been possible to predict them in advance. Consequently, in the phenomenon studied typical characteristics, common to each individual instance of its onset, dominate over individual characteristics. Therefore our task — the explanation of modern industrial crises in their entirety — can not be considered completed when we have explained the causes of each separate crisis. This explanation is only the first and easiest part of our job; we are still left with its second part — to establish the common causes, rooted in the modern organization of national economy, which make individual industrial crises such similar phenomena and bring about the recurrence of trade stagnation with such regular periodicity.

Goods are produced in the capitalist economy not for their own use but for sale. If a commodity does not find a market, the capitalist not only does not receive a profit but he also loses his capital. Continuous sale of the products of capitalist production is required in order to make possible the restoration of capital; if for any reason whatever this sale ceases for a more or less prolonged period of time, capitalist production also of necessity ceases.

Thus the process of capitalist production presupposes a continuous change of the forms of social capital. This change in the form of social capital constitutes the circulation of social capital. If we begin this circulation with that moment when goods enter the market, the first act of circulation will be the conversion of goods into money; commodity capital is converted into money (capital). Then follows the second act — the conversion of money into articles required for the resumption of production; the capitalist purchases the means of production and labor power with the money gained from the sale of manufactured goods. But since surplus value is also included in the value of goods created by capitalist production, a certain portion of their value is converted not into the means of further capitalist production but into articles for the consumption of the capitalist class. This part of the value of manufactured goods completes its circulation with a reconversion into

goods which change into the use of the capitalist class. On the other hand, that part of the value which was converted into the means of production and labor power continues its circular motion; in the production process it is converted into new goods, through which surplus value is created, and, thus, the circular motion of capital is completed to recommence once more in the same form.

This entire process can be expressed schematically in the following way:¹

$$\begin{array}{ccccccc}
 & & S & & & & \\
 T & - & D & - & \dots & P & \dots T \\
 & & R & & & & \\
 + & & + & & & & + \\
 t & - & d & - & t & & .t
 \end{array}$$

T expresses the value of that part of the goods which represents the capital spent on production; t — that part of the value of the goods which corresponds to surplus value; the same parts of the value, converted into money, are expressed by the letters D and d. The letters S and R represent the value of the means of production and labor power. The letter P and the series of dots represent the production process.

The upper row of letters schematize the circular motion of capital itself, the lower — the circular motion of the surplus value which was created in the process of capitalist production. The upper row of letters shows how commodity capital is converted into money, then into the means of production and labor power, after which the production process follows. As a result the spent capital is restored in commodity form and surplus value is created. The lower row of letters shows the circular motion of surplus value. Appearing in commodity form, surplus value assumes the money form and then is converted once more into goods used by capitalists.

Thus in the course of its circular motion, social capital appears consecutively in three different forms: in the form of commodity, money, and production capital. In the course of production, capi-

¹ This scheme is Marx's scheme, somewhat changed. See *Das Kapital*, II, 48.

tal changes its material form but it does not change its master: the very same capitalist who acquired labor power and the means of production in his system also directs the course of transformation of the means of production into new goods, which then become objects of exchange. But in the process of transforming commodity capital into money (capital) and money (capital) into production (capital), the capital is transferred from the hand of one master into the hand of another.

Of these two acts — sale and purchase — purchase, under the conditions of the capitalist economy, presents no difficulties. If there is money, it is easy to buy goods.

It is a different matter with the other act of the circular motion of capital — selling. It is much more difficult in the capitalist economy to sell than it is to buy. The points of sale of a given commodity in the aggregate are called its market. The most typical feature of the capitalist economy is the fact that, as a general rule, the market for every commodity is filled and even overflowing with supply. Under modern conditions of economy the supply of goods can lag behind the demand only temporarily. On the other hand, in comparison with demand, a surplus supply of goods not only is not a rare phenomenon of the modern economic system but the general rule. Because the market is glutted with goods, the usual, normal condition of the commodity market in our day is characterized by the difficulty of selling goods.

From this there arises the struggle for markets, a striking feature of the economic life of our time.

Under the conditions of capitalist economy, the difficulty lies not in producing goods but in selling them, in finding a market for them. Because of its importance, this second problem pushes the first completely into the background. Everyone knows how complex is the organization of the market in our day, what an effort each industrialist must make to push his goods onto the crowded market, overflowing with all kinds of goods. As a general rule, supply always exceeds demand, outstrips it, and the producer is ready to do anything to stimulate demand. The modern industrialist has created a complex net of agencies whose eco-

nomic importance it is difficult to exaggerate. Like a spider's web, this net has caught the entire world in its mesh. Every large firm has great numbers of agents at its disposal, settled and traveling, solely occupied in finding buyers and customers for the firm's goods. If we add to the net the intermediaries of various public enterprises and institutions existing specifically to find markets for goods — consular agencies abroad, local, national and international expositions, trade museums, all kinds of associations for the development of trade, export, etc., etc., then, as we shall see clearly, what a vast, overpowering role the organization of the sale of goods — in other words, the market — plays in the modern economy.

The market is the knot which ties together the threads of modern economic life. The market governs production, production does not govern the market; such is the immediate impression produced by the capitalist economic system. Capitalist economy has vast resources of productive forces at its disposal, only a part of which are used. Every capitalist country at every period could considerably expand its production if it found a use for all of its productive forces. What is it that prevents this use, that checks the growth of social production in the capitalist economy? It is nothing else but the difficulty of finding a sale for producible goods — in other words, the lack of a market. The market is thus the focal force which controls the entire capitalist economy, and the lack of it, continuously felt by capitalist production, is an elastic band which checks the development of production.

But in what kind of soil does this lack of a market, this difficulty in selling goods originate, owing to which capitalist production is forever putting pressure on the market, is forever striving to produce more than the market permits? Herein lies the important and difficult problem of the market, the expansion of which has long been too much for economic science.

CHAPTER V: THEORIES OF CRISES.

The Theory of Production — Say, Ricardo, Wilson, Jevons, Engels, Kautsky. *The Theory of Exchange* — Laveleye, Juglar, Mills. *The Theory of Distribution* — Sismondi, Dühring, Rodbertus, Mill, George.

The periodicity of industrial crises has manifested itself most definitely in England, but periodic fluctuations of industry are also observed in all other capitalist countries. Beginning with the 1870's, phases of prosperity and depression seized the entire capitalist world simultaneously or almost simultaneously. The industrial crises at the end of the seventies, the mid-eighties and the beginning of the nineties of the past century, and the beginning of the present century and in 1908 were worldwide in nature; they differed only in the varying degrees of intensity in the various countries. The same must be said also of industrial upswings because, as a general rule, the force of the shock to the national economy of one country or another during the transition from prosperity to depression was in direct proportion to the intensity of the prosperity. In those countries where industrial booms had not suddenly appeared, abrupt disturbances of credit were also not observed during the transition to the slump; on the other hand, in countries of more intense prosperity, a drop in the industrial curve was accompanied by severe crises and panics. Thus, in this period, England did not undergo a single typical industrial crisis; instead, periods of industrial stagnation set in unaccompanied by panics and sudden disorganization of credit. Germany and the United States, on the other hand, experienced a series of periodic industrial crises during this period, which were by no means less intensive than the British crises of a previous time.

How is this mysterious phenomenon of capitalist development — its cyclicism, periodical change of phases of prosperity and depression — to be explained? For a long time economic science was not able to give a satisfactory answer to this difficult question.

The various theories which science advanced as an explanation of the problems of crises can be divided into three groups. One can include in the first group the theories which sought the cause of crises in the sphere of social production; in the second — in the sphere of social exchange; in the third — in the sphere of social distribution.

1. Theories of Production.

J. B. Say said that industrial crises occur not because too many goods have been produced but for a diametrically opposed reason:

certain goods can not be sold because of insufficient production of goods in other branches of industry. Actually, general overproduction of goods never occurs. To support this, Say cites as an example the industrial crises of 1812-13. During this period manufacturers everywhere complained of a decline in trade and lack of demand for goods. Actually, manufactured goods, particularly textiles of every kind, fell sharply in price and did not find a market; but on the other hand, agricultural products — grain, meat, and all colonial goods — rose exorbitantly in price and the demand for them exceeded the supply. In this way the surplus production of certain goods was compensated for by the shortage of production of others.*

D. Ricardo considered industrial crises as chance disturbances of trade brought about by the most diverse causes. Influenced by the events of his time, Ricardo dwelt particularly upon the disorganization of trade produced by the advent of war and conclusion of peace. According to Ricardo, all these disorganizations are caused by a change in the conditions of demand and continue until capital switches from those branches of industry whose production is in less demand to other branches of industry whose products enjoy greater demand.**

When Say and Ricardo wrote, industrial crises were still a new phenomenon and therefore it was easy to acknowledge them as simple chance. Subsequent events have proven that industrial crises are not fortuitous disturbances of trade, arising from external causes, but represent a unique feature of modern national economy and recur with regular periodicity even under most favorable conditions for the development of national industry and trade. The permanent causes of the recurrence of industrial crises or periods of trade decline are not indicated by Say and Ricardo. Say's argument that during a crisis, side by side with a drop in the price of some goods, a rise is to be noted in the price of other goods, only indicates Say's inadequate understanding of the inti-

* J. B. Say, *Cours d'Economie Politique Pratique*, p. 343.

** David Ricardo, *Principles of Political Economy*, Russian translation by N. Ziber, Chapter XIX, "On Sudden Changes in the Directions of Trade."

mate relationship, in an exchange economy, between all branches of industry and the prices of all commodities.

In general, if one acknowledges disproportionate distribution of social production as the cause of industrial crises, it is necessary to point out why production is disproportionately distributed at specific periods which recur with such remarkable periodicity. The whole difficulty of explaining the causes of industrial crises is precisely this: every individual crisis can usually be explained easily by some reasons or other, but why in every decade British industry experiences periods of boom and bust — the Say-Ricardo theory does not answer at all. According to this, an industrial crisis is the same kind of fortuitous, unforeseen misfortune as a war or epidemic, for example. But, as is evident from the history of British crises given above, each industrial crisis is a complicated complex of phenomena, which have developed in a rigidly fixed order. Every crisis is preceded by an expansion of production and increase in commodity prices; then commodity prices fall and the succession of changes begins in the circulation of money and credit and ends with the complete destruction of credit. The condition of the money market before and after an industrial crisis is so typical that it is very easy to predict them in advance. None of this is explained by the Say-Ricardo theory, which could not give the required explanation, since, at the time of the theory's origin, industrial crises were too new and undefined a phenomenon.

If we adhere strictly to the Say-Ricardo view and explain industrial crises by a chance disproportion in the distribution of social production, we must conclude that if industrial crises recur with regular periodicity, then disturbances in production also occur periodically.

But why is it that from time to time the entrepreneurs, in whose hands social production lies, are not equal to the situation and why, instead of adjusting national supply to demand, do they confuse the whole thing and throw industry into complete disorder? Obviously, if this really happens, it is because the entrepreneurs can not always control production. In which branch of industry does production submit least to the controlling activity of the human will? In agriculture, of course; the amount of agricultural goods which a

country produces fluctuates greatly from year to year, depending upon the condition of meteorological elements over which, until now, the human will has no power whatever. Thus we arrive at the conclusion that we should seek the cause of the recurrence of industrial crises in the sphere of agriculture.

This idea has been developed by a whole series of economists. As early as 1840, James Wilson, the founder of the newspaper *The Economist*, which acquired such deserved fame, published a small pamphlet, *Fluctuations of Currency, Commerce and Manufactures, referable to the Corn Laws*. In this very interesting pamphlet, Wilson speaks of the periodic recurrence of phases of trade revival and decline and sees the cause of this periodicity "in the enormous fluctuations in the sums paid for the necessities of life, or, in other words, in fluctuations in food prices."*

It is quite natural that the rise and fall of the cost of food, which constitutes such an important item of expense for the mass of the population, has an effect upon the condition of all other branches of industry. Commodity circulation can take place freely only if, in the production of each individual kind of goods, a certain proportion is maintained which corresponds to the conditions of supply at a given time and in a given place. Insufficient production of such an important product as human food immediately upsets all commodity circulation; if more of the purchasers' means is spent on food, less of it is left for all remaining expenditures. In this case, a want of demand for all non-agricultural articles is caused directly by insufficient production of agricultural products (according to Say's theory, the crisis is caused not by a surplus but by a shortage of goods).

This idea — that the cause of industrial crises lies in crop failures, was later reiterated by many economists. Of the most recent we cite, for example, W. Bagehot. . . .

But, as is known, fluctuations in the price of corn in England from the time of the abolition of the Corn Laws was caused not so much by fluctuations in the yield of corn in England itself as by the yields in countries of corn export. A low wheat price can coincide with the failure of the wheat crop in England; of course,

* James Wilson, *Fluctuations of Currency* . . . , London, 1840, p. 10.

such a situation is extremely ruinous for the British farmer and therefore can not help but also have a depressing effect upon the general condition of British industry. On the other hand, a high wheat price can also coincide with the British yield. . . .

The ten year cycle of development of British industry, the regular alternation of periods of trade revival and decline — all this can not be caused by fluctuations in the price of corn or by crop yields in England, since both of the latter figures fluctuate very irregularly. . . .

Thus the periodicity of industrial crises can not depend upon the periodic recurrence of crop failures of wheat and other grain cereals, produced by temperate countries (yields of rye, oats, barley, etc. generally fluctuate just as wheat yields). But this still does not prove that there is no relation between industrial crises and fluctuations in agricultural production. England exports the main bulk of its finished products to tropical countries and imports from them the greater part of the raw materials which she needs. Perhaps in these latter countries the yields of vegetable products experience periodic fluctuations which, in their turn, affect the industry of countries which trade with them?

Proceeding from this premise, one of the most remarkable of the British economists of recent times, Stanley Jevons, expressed the paradoxical idea that the periodicity of industrial crises depends directly upon the periodic increase of sun spots.* Jevons maintained quite seriously that there will come a time when the City will study the condition of the sun as carefully as they now watch the state of the cashbox of the Bank of England.

In Jevons' opinion, periodic disturbances of trade are not phenomena peculiar only to our time; Jevons finds the same periods of trade revival and decline also in the last century. According to him, during the last 200 years, intensification of speculation and disturbance of trade were noted in England in the following years: in 1711, 1721, 1732, 1763, 1783, 1805, 1815, 1825, 1836-1839, 1847, 1857, 1866 and 1878. Only two decades of the 18th century (1732-62) were free of crises, but even then it is possible that this was

* W. Stanley Jevons, *Investigations in Currency and Finance*. Articles: "The Solar Period and the Price of Corn," "The Periodicity of Commercial Crises," "Commercial Crises and Sun-spots."

only an apparent freedom and is to be explained simply by our inadequate acquaintance with the economic history of this period.

If we calculate the average length of the period separating the onset of each subsequent period from the preceding one, we shall obtain the figure 10.466 years; in other words, a more or less severe breakdown of trade occurs in England every 10.466 years. This figure tallies surprisingly with the period when the great number of sunspots appear on the sun. The period of the latter amounts to 10.45 years. The difference between the two periods is so insignificant that it can be ignored completely.

When in the course of two centuries two kinds of phenomena recur periodically within the same number of years, then, naturally, the thought arises that one of the phenomena may be the cause of the other. Since crises can not cause the appearance of sunspots, there remains the assumption that the appearance of sunspots is the cause of crises.

As early as the beginning of the last century, William Herschel suggested that the amount of spots on the sun exerted an influence on the weather and consequently on the yield of grasses and cereals. But if we shall compare the fluctuations of corn prices in Europe with fluctuations of sunspots, we shall not notice any conformity between the two phenomena. In Jevons' opinion, the reason for this lack of conformity lies in the complexity and diversity of the meteorological conditions which determine the yield and price of corn in Europe.

It is another matter if we take tropical countries. There, meteorological conditions are much more simple and more monotonous and that is why it is easy to note the influence of the change in the amount of solar heat and light received by the earth on vegetation. Dr. Genter and other observers have noted that in India famines, caused by crop failures, recur periodically and that the period of recurrence coincides with the period when the greatest number of spots appear on the sun. Taking this into account, it is not difficult to understand the mysterious connection between the state of the solar disk and industrial crises in England. . . .

But if periodic industrial crises depend upon the periodic increase of sunspots, it still does not follow that industrial crises can

not originate from other causes. The crises of 1798 and 1811 were caused by political events; the crisis of 1871 was caused by the termination of the Franco-Prussian war. But these crises, being of a more or less fortuitous nature, should be distinguished from the periodic disturbances of the national economy which are conditioned by fluctuations in the sun's light and heat.

The theory of crises set forth by Jevons is characterized by the usual virtues and shortcomings of this original thinker and economist.* Like all the rest of Jevons' work, it displays rare statistical virtuosity and inventiveness. Great creative imagination was required to deduce a connection between two such remote phenomena as industrial crises and sunspots. But, on the other hand, this theory also reveals Jevons' usual shortcomings: the misuse of mathematical, abstract combinations to the detriment of careful study of actual facts. Having calculated the average periodicity of the onset of British crises and having obtained a number approximating the number of periodic appearances of sunspots, Jevons considers the matter solved and the casual connection between the two phenomena proved. But in order to obtain the desired figure, Jevons had to make a whole series of far-fetched interpretations. He rejects some crises completely as not periodic; in other instances he maintains that crises occurred at specific moments required by his theory, although he presents no factual proof for this.

Actually, of all of the crises in the 18th century enumerated by Jevons, only the crises of 1721, 1763, 1783, and 1793 were unquestionable, and, except for the crises of 1721 and 1793, they were very weak. In the 19th century, industrial crises or periods of business stagnation actually recurred in England with remarkable regularity: from the twenties to the seventies, each decade was marked by an industrial crisis, and beginning with this period industrial crises gave way to long periods of commercial and industrial decline. But it can not be said that the interval of time separating each subsequent period of trade revival or decline al-

* It found followers. Thus, for example, the Italian economist Vossardo in his work *Economia Politica* (Torino, 1877) accepted Jevons' theory as a whole and even offered to set up a number of astronomical, botanical and statistical controls in order to solve the problem definitively.

ways remains the same. Thus, during the first two decades of the 19th century there were three crises — in 1810, 1815 and 1818; but in 1805, contrary to Jevons' assertion, there was no industrial crisis. . . .

Beginning with the twenties of the 19th century, great regularity is observed in the advent of crises or periods of commercial and industrial decline. But again, this regularity is far from attaining the limits which Jevons' theories require. The intervals between the three crises of 1825, 1836, and 1847 amounted to 11 years; the next crisis set in in 10 years (in 1857), and then a crisis occurred in 9 years (in 1866). . . .

Therefore, even taking as a basis the time of the onset of crises, it can not be assumed that the recurrence of crises is directly linked with some strictly periodic, astronomic, or physical phenomenon. On the contrary, the cause of the recurrence of crises is obviously of a social nature, and, therefore, the period of the onset of crises now expands and contracts, depending upon changes in the economic, political, and general social conditions of a specific time.

But the main objection to Jevons' theory is that it is not in accord with the real, concrete conditions of the origin of individual crises. In setting forth the history of individual crises, we are almost obliged to say nothing about India, but, on the other hand, we must discuss the United States in detail. Actually there is a comparatively minor fluctuation of exports of British goods to India. Strange as this may seem, during many crises the export of British goods to India not only did not decline but even increased. . . .

Jevons' theory explains the origin of industrial crises by physical causes. In opposition to this, the theory which we shall now study places the social cause of crises at the forefront. Fourier already spoke of the vicious circle, *circulus vitiosus*, of the modern industrial system, under which excessive wealth is the direct cause of poverty. But this theory was developed completely only in the works of the creators of modern scientific socialism: Marx and Engels and their followers, the German Social-Democrats. . . .

Karl Marx did not offer any specific theory of crises. In those places in *Capital* where he speaks about crises, he joins with Engels, whose studies on the industrial reserves of capitalism, the surplus army of workers (who enter factories and shops during prosperous years and live in poverty and destitution during periods of industrial stagnation), became one of the cornerstones of the economic system of *Capital*.

It is interesting to pause for a look at the views of Kautsky, the head of modern Marxism, on the present question.

"The great contemporary crises which shake the world market," says Kautsky, "are caused by overproduction which, in its turn, arises from the lack of plan (*Planlosigkeit*) inherent in commodity production. Overproduction in the sense that the amount of manufactured products exceeds the demand for them is possible under any form of economy; but when manufacturers produce for their own use, this can not cause any harm. . . It is different with commodity production. In its developed form it assumes that no one produces for his own use, but solely for the market. Each one must buy what he needs. In addition general production is not distributed according to any plan, but each producer is left to guess for himself how great is the demand for the goods which he produces. On the other hand, under commodity production, as soon as it has risen above the lowest stage of exchange, no one, except producers of the commodity serving as the money unit, precious metals, can buy without having previously sold. These are the two roots of crisis. . . ."

. . . The idea that industrial crises are the natural and inevitable consequence of the modern organization of national economy was put forth by many people even before Engels (suffice it to mention Sismondi); but only the Marxist school explained with complete preciseness just which elements of the capitalist system give birth to crises. Nevertheless, I can not acknowledge that the problem of the origin of crises has been solved to complete satisfaction by the works of the followers of this school. Suffice it to say that in Kautsky's opinion, industrial crises are brought about all the same by accidental causes (opening of a new market, for example);

* Karl Kautsky, *Das Erfurter Programm*, Stuttgart, 1892, p. 87.

but if this were so, then crises would not recur at such regular intervals of time.

One can agree that the lack of organization of commodity production and free competition constitute the basic cause of industrial crises. But, as I have said previously, in forming a theory of crises the main difficulty lies not in indicating the conditions which at any given moment can cause a crisis, but in explaining precisely the fact that crises occur not every moment but within definite intervals of time, i.e. periodically. Capitalist production always remains disorganized; but industry and trade are at one time in a flourishing state and at another in a state of extreme depression. There must be some basic cause, not indicated by the Marxist school, which brings about the regular expansion and contraction of the entire national economy. Let us now see whether this cause lies not in the sphere of production but in the sphere of exchange.

2. *The Theory of Exchange.*

The most common explanation of crises which is repeated by almost everyone who has written about crises (among them, historians of crises, for example, Tooke,* Morier Evans,** M. Wirth,† Juglar,‡ etc.) is as follows: crises are caused by intensification of speculation in the commodity and money market. Evidence by a number of practical and scientific people, evidence presented by a number of British parliamentary commissions which investigated the causes of crises, nearly always point to overtrade and overtrading as the main cause of a crisis. . . . Excessive expansion of trade, always accompanied by abuse of credit, is a consequence of intensification of the speculative spirit among traders; speculation on the stock exchange always leads to the creation of numerous

* Th. Tooke, *A History of Prices*.

** Morier Evans, *The Commercial Crisis*, 1847, London, 1848; *The History of the Commercial Crisis 1857-1858*, London, 1859.

† Max Wirth, *Geschichte der Handelskrisen*.

‡ S. Juglar, *Des Crises Commerciales*. The historical part of this excellent work is very poor and in places is a literal translation of M. Wirth's book just as the latter book is, in place, a translation of Tooke.

stock exchange prices, a considerable portion of which come into being not owing to the country's real needs but solely for purposes of stock exchange speculation. It is quite natural that intensification of speculation and expansion of credit must eventually lead to the ruination of the speculators, for only those enterprises, which conform to market conditions and are carried on with a sufficient amount of available capital, can have a lasting success. But since, thanks to the expansion of credit, there exists at the present time a close connection between all of the individual businesses, the speculators' bankruptcy involves also the ruin of the rest of the entangled and not very stable enterprises; and an industrial crisis breaks out in the country.

This, we repeat, is the usual explanation of crises. But, in essence, it is not an explanation at all but a description of the external symptoms of industrial crisis. Why at specific moments does the spirit of speculation become more intense and envelop the entire commercial and industrial world like an epidemic? If these moments occurred very rarely (as, for example, the famous speculations during the last century of John Law in France or the speculations of the South Sea Company in England) one could still consider them accidental phenomena, like some epidemic disease, without giving any further explanation. But if from decade to decade the spirit of speculation invariably grows more intense at approximately the same time, within regular intervals, then it is necessary to indicate some general cause for this, for it is quite improbable that such frequent and regular recurrence of the same phenomena is not caused by a general, constantly operative cause.

And so, what is the general cause which periodically calls for the intensification of speculation and subsequent crash?

From the time of the famous controversies of British economists of the thirties and forties over the effect of the excessive issue of bank notes on commodity prices, it became customary to attribute crises to a connection with the organization of credit and currency exchange. According to S. Lloyd (later Lord Overston), Torrens, and others, fluctuations in British industry are caused directly by the incorrect organization of banking in England. The writers of this school maintain that overissues of notes by the Bank

of England raise commodity prices, stimulate British trade artificially, and, when intensification of speculation leads the country to crisis and gold begins to pour out of the bank's till, then the sudden curtailment of credit to which the bank is forced to resort to guarantee the exchange of its notes for hard cash, puts the finishing touch to the calamity and causes a panic on the money market. As is known, S. Lloyd succeeded in winning over Sir Robert Peel, the Prime Minister of England, to his side and in carrying out the famous reform of the Bank of England about which so much has been written in England and abroad. But we shall not concern ourselves with all of these old controversies which are now only of historical interest. The Bank Act of 1844 did not prevent crises and this alone proves that the cause of crises does not lie in the excessive issuance of notes by the Bank of England.

Nevertheless, later attempts to link industrial crises to conditions of currency exchange continued. Many economists had previously seen in the incorrect credit organization the main, if not the only, cause of the periodic recurrence of industrial crises. Besides it is very typical that there are two mutually exclusive views with regard to the main problem in economic literature, which include defects in the modern credit organization. In the opinion of some, crises are caused by monopoly of banking, the privileged position of big banks, which to a greater or lesser degree are state institutions. According to others, on the contrary, crises are created by excessive freedom of banking, by too little control by government over banking operations.

Charles Coquelin,* Adolph Wagner,** (in his first work on banks; in subsequent works A. Wagner altered his views on this question considerably), George Guthrie,† Carey,‡ Macleod,§ and

* Ch. Coquelin, "Les Crises Commerciales et la Liberte des Banques," *Revue des Deux Mondes*, 1848, Novembre.

** Adolph Wagner, *Beitrag zur Lehre von den Banken*, Leipsiz, 1857.

† George Guthrie, *Monetary and Commercial Crisis — An Avoidable Evil*, London, 1859, and *Bank Monopoly, the Cause of Commercial Crises*, Edinburgh and London, 1864.

‡ H. C. Carey, *The Past, the Present and the Future*, London, 1856. Chapter V, also "Management in Social Science," Petersburg, 1869, first book by L. Shakhovsky, Chaps. XXVI-XXIX and other works by the same author.

§ H. D. Macleod, *Theory and Practice of Banking*, London, 1857 and a whole series of other works by this author, devoted almost exclusively to questions of banking.

many others wrote against the monopoly of banking. The usual rebuke to privileged banks is as follows: these banks, being completely secure from the crises which ruin small credit institutions and having at their disposal enormous capital flowing to them from the entire country, artificially lower the discount rate during a period of industrial revival and in this way encourage speculation. When speculation attains such proportions that a crisis becomes inevitable, the privileged banks immediately raise the discount rate and cause a panic, which is disastrous for the whole country but very profitable to them (it is well-known that the dividends of the Bank of England are highest during years of crisis owing to the increase in the discount rate and expansion of discount operation). Freedom of banking makes it impossible to artificially reduce the discount rate and to prevent industrial crises or make them more rare.

On the other hand, in their basic views the opponents of banking freedom (for example, Geyer* and Moriz Mohl** and a whole series of recent writers who insist that it is necessary to regulate the emissive operation of banks) come close to the British supporters of the currency theory. As the latter they maintain that the main or one of the main causes of crises is the issuance of bank notes not guaranteed by hard cash. In the opinion of the writers of this school, freedom of banking would lead to an intensification of speculation, owing to the creation of fictitious wealth by the banks in the form of bank notes, guaranteed by nothing, and would produce industrial crises even more frequent and more ruinous for the country than now.

Thus the arguments of one side are shattered by the arguments of the other. Actually, industrial crises are not directly connected with any specific organization of banking, which is proven irrefutably by the single fact that industrial crises occur in countries where there is wide freedom in the banking business (United States) as well as in countries of rigidly centralized, monopolized credit (France).

* Ph. Geyer, *Banken und Krisen*, Leipzig, 1865.

** Moriz Mohl, *Ueber Bank-Manöver, Bankfrage und Krisis*, Stuttgart, 1858.

But if crises are not caused by one or another organization of credit, then are they not linked to the general conditions of money circulation in countries with expanded credit? In 1865, the well-known Belgian economist Emil de Laveleye published an interesting book *Le Marché Monétaire et ses Crises depuis cinquante ans*. In this book Laveleye tries to prove that industrial crises are caused precisely by conditions of money circulation. Laveleye's reasoning is as follows:

The only condition which invariably precedes all industrial crises, wherever they occur, in Europe or America, is the flow of gold abroad from within the country. Whatever the other circumstances, in this respect all crises resemble each other. For this reason it is natural to assume that the flow of gold abroad is the real cause of crises.

In reply to this it is usually said that in a country like England a reduction in gold reserves by several million pounds sterling is of no great importance in view of the enormity of its capital and the immense size of its internal and external trade. But it can not be forgotten that in England all this trade is built upon the broadest expansion of credit. And the credit, in its turn, is based upon a certain reserve of ready cash. The more perfect the organization of credit and the lower the amount of hard cash a country needs, the more important is the amount of ready money which a country has at its disposal. The entire complicated structure of British trade and British credit rests on the unstable foundation of several millions of pounds sterling of gold and silver which are kept in the Bank of England. These few millions are vitally necessary in order that the hundreds of millions of British capital can circulate properly. If the reserve of gold and silver in the cashbox of the Bank of England diminishes, anxiety spreads through the entire country, credit is curtailed, commodity prices fall because everyone realizes perfectly well that a sufficient supply of hard cash, kept in the Bank of England, is needed for the trade and industry of the whole country.

The lower the metal reserves of a country, the more strongly it is effected by the flow of gold abroad. For this reason England suffers more from industrial crises than France.

Further confirmation of the connection between industrial crises and money circulation is the remarkable fact that crises usually occur in autumn. It is in autumn that the demand for cash is usually high: at this time the main bulk of agricultural products changes hands, rent is paid, purchases are completed for the winter, etc. The banks' metal reserves diminish sharply in autumn and therefore it is quite natural that industrial crises usually occur at this time.

Laveleye says, ". . . elements of crisis are always in readiness or, if you please, there is a constant tendency toward crises but the onset of a crisis is always determined by the export of valuable metals abroad."*

This is the explanation of the cause of crises put forth by Laveleye. At first glance it may appear quite clever; in reality it explains nothing. The outflow of gold is a common symptom of industrial crises but it is in no way their cause. In 1839 the metal reserves of the Bank of England diminished a great deal more than in 1836 or 1847, but there nevertheless was no industrial crisis in 1839. It was exactly the same during the first half of the sixties when the amount of metal on hand fell several times by several million pounds sterling without causing an industrial crisis. The panic of May, 1866 was not connected at all with the flow of gold abroad, since during all of April and May the rate of exchange was favorable to England.

Further, even if a reduction in the ready money of the Bank of England was a direct cause of industrial crisis, it is necessary to point out what causes the periodic recurrence of the flow of gold abroad. A change in the trade balance is a derivative phenomenon which in itself requires explanation; one can agree, with certain reservations, with Laveleye's assertion that the flow of gold abroad always precedes an industrial crisis (before the crisis of 1866 gold did not flow abroad but this crisis was not, strictly speaking, an industrial crisis); but it does not follow from this that this particular circumstance is the main cause of crisis and not a common symptom of its approach. Laveleye's theory is a faithful descrip-

* E. Laveleye, *Le Marché Monétaire et ses Crises depuis cinquante ans*, Paris, 1865, p. 148-50.

tion of the symptoms of industrial crises but it does not explain the secret mechanism which causes this whole complicated set of phenomena — the revival of trade, fall of the exchange rate, flow of gold abroad, and subsequent disturbance of the whole national economy.

The same can be said of the theory of C. Juglar, author of the excellent work, *Des Crises Commerciales and de leur retour periodique* (first edition in 1860 and second in 1889). This work is particularly remarkable in that it proved for the first time the periodicity of industrial fluctuations in England, France, and the United States. Having studied accounts of British and French banks and also the most important banks of the United States, Juglar arrives at the following conclusion: "Without proceeding either from any theory or from any hypothesis but based solely on observations of actual facts, it is possible to establish the laws of periodicity of crises. There are periods of revival, prosperity, and price rises which always end in crisis; they are followed by years of a lull in trade and reductions in prices, which lead industry to a more or less depressed condition."*. . .

Juglar presents the whole mechanism of the development of crisis in the following way.

An increase in commodity prices has a natural tendency to impede the sale of goods. For this reason as prices increase, the trade balance becomes less and less favorable to a country. Gold begins to flow abroad to pay for goods whose export ceases to cover the imports. At first this outflow is very insignificant and attracts no attention. But the higher the prices, the more freely gold flows abroad. Finally commodity prices become so high that the sale of goods abroad becomes extremely difficult. Unable to pay for goods by goods, traders begin to renew their promissory notes in the banks up to the expiration dates of their payment and this explains the intensification of the discount operation of banks during the period directly preceding a crisis. But even though the payment has been deferred, it must be made sooner or later. Com-

* Clement Juglar, *Des Crises Commerciales et de leur retour periodique*, Paris, 1889, Chapter XV.

commodity prices fall immediately, bankruptcies of banks and traders follow, and an industrial crisis sets in.

There is nothing to be said against all this: undoubtedly Juglar has observed quite correctly the most typical feature of industrial crises — the fall of commodity prices. However, the direct cause of crisis does not lie at all in a diminution in the supply of cash in circulation, as suggested by Laveleye, but precisely in the reduction of commodity prices which immediately suspends all trade. The most scrupulous trader can become bankrupt if the selling price of a commodity does not cover the purchase price. Juglar also explains very well the cause of the flow of cash abroad in the period immediately preceding a crisis; the increase of commodity prices within a country at the same time retards the export of domestic goods abroad and encourages the import of foreign goods; it is quite understandable that the shortage of export of goods is covered by the export of gold; we have had repeated occasions to be convinced of this, when describing the history of individual crises.

Nevertheless, we do not think that Juglar's theory explains the origin of crises in modern national economy. Compared with Laveleye, Juglar went one step forward — he showed that the disturbance in the sphere of money circulation which characterizes the approach and onset of crisis is the essence of a derivative phenomenon caused by a change in the relative level of commodity prices within a country and abroad. But why is it that commodity prices undergo such periodic increases which end in industrial crises? Juglar says that the yearly savings in those countries where trade and industry increase rapidly has a constant tendency to raise the price of goods. It is impossible to agree with this assertion. If the demand of goods increases, then surely their supply grows and production expands. As we have attempted to demonstrate earlier, in capitalist countries demand does not run ahead of supply, but supply always presses on demand and tries to stimulate it and expand it artificially. There is always a part of surplus capital and surplus goods which find no place on the market. Under such conditions the country's savings are more inclined to lower than to raise commodity prices, since capital enter-

ing a market anew, already glutted with goods, only increases the difficulty of adjusting the supply of goods to the demand.

Thus Juglar's theory does not explain what is most important — increases in commodity prices during the period preceding a crisis. Further, Juglar does not indicate why the increase in commodity prices always ends in their drop and a breakdown of trade. If one assumes that prices rise in one country while the average level of prices does not rise in other countries, as happened during the first half of the 19th century, when industrial ebbs and flows encompassed only a few countries — England, the United States, and, to a lesser degree, France — then it is quite understandable that, having reached a certain limit, the increase of commodity prices must come to a halt because of the impossibility of selling goods on foreign markets where commodity prices have not increased. The first three crises (1825, 1836, and 1847), which we have described above, were of this local nature. But in modern times the revival of industry and trade has spread, one can say, to the entire world. Why then in this case should commodity prices have fallen after every increase? Juglar's theory does not give any explanation for this.

Thus, what causes periodic fluctuations of commodity prices? John Mill gives an interesting reply to this question in an article, "On Credit Cycles and the Origin of Commercial Panics" (*Transactions of the Manchester Statistical Society*, 1867-1868).

The immediate causes of crises, says Mill, are so diverse that one can not seek in them the general causes of crises which have made them regular, periodic phenomena. The causes of this are not to be seen in one or another system of money circulation, for crises occur under various systems.

The explanation of crises must be sought in the mental peculiarities of man, since credit, the fluctuations of which constitute the most typical feature of crises, is a phenomenon of a spiritual order.

Generally speaking, a panic on the money market does not destroy capital, and, yet, its effect is so disastrous to the entire national economy. What then is destroyed during a panic and leaves a vacuum behind it? "It is that subtle, immaterial agent by means

of which inert capital is put into motion and guided to new paths. That agent is credit.”*

Panic is the death of credit. But credit possesses the ability to revive and its life cycle is also the cycle of modern industry. . . .

All that which we have said above concerning the theories of Laveye and Juglar applies to the theory expounded: it represents a description of the phases of industrial development in the capitalist economy rather than an explanation of them. Reference to changes in the mental state of entrepreneurs and capitalists explains very little since we have no methods by which to define the spiritual make-up of a whole social class. Besides, if fluctuations of credit are the only cause of industrial ebb and flow, then at present, when fluctuations of credit have diminished considerably, industrial fluctuations should have correspondingly diminished.

We said above that during the eighties of the last century there was no regular decennial disturbance of credit; nevertheless British industry was in a worse condition during half of the eighties than at the end of the fifties or sixties when credit experienced a severe shock.

The usual system of development of modern economy, pictured in a few words by Lord Overston (“tranquility, improvement, growth of confidence, prosperity, excitement, speculation, shock, panic, stagnation, depression and calm again”) applies fully only to a former time when, actually, every industrial cycle invariably ended in panic, destruction of credit and industrial crisis. For many years now there has been no real industrial crisis in England and yet its industry fluctuates more rhythmically and regularly than ever. Consequently the basic cause of these fluctuations does not lie in credit but in something else; fluctuations of credit are only a reflection of more profound economic processes which occur at the present time just as before.

3. *The Theory of Distribution.*

As we have attempted to show, industrial crises are accompanied by many characteristic changes in the field of credit and

* John Mill, “On Credit Cycles . . .,” (*T. of the M.S.S.*, 1867-1868), p. 18.

money circulation, but these changes do not constitute the basic causes of crises but are rather symptoms of this peculiar illness of the capitalist system. Where then are we to look for its cause? Perhaps in the sphere of distribution and consumption? A whole series of remarkable writers trace industrial crises to a connection with just such causes.

In Malthus' opinion, the industrialists can not use all of the goods produced by them because the chief aim of industrialists is not the use but the saving of their profit, the accumulation of capital. The resulting surplus of unconsumed goods can not be consumed by workers since their wages tend toward the minimum means of subsistence. Consequently a special class of consumers is needed to use the surpluses of national output and this class is the wealthy landowners, whose splendor is no less useful to industry than the savings of the industrial class. From Malthus' point of view, industrial crises are caused by the inadequate growth, in comparison with the increase of production, of the non-productive consumption of the wealthy classes.

Another notable economist — Simonde de Sismondi — arrived at a completely opposite conclusion in the socio-political respect, while insisting, like Malthus, upon the importance of consumption in the national economy.

The question of the causes of commodity overproduction and industrial crises is the cornerstone of Sismondi's economic system. Not a single economist of Sismondi's day gave as much time and labor to clearing up this question as the famous author of *Nouveaux Principes d'Economie Politique*. According to this, Sismondi's explanations of the causes of industrial crises in modern national economy are very complex and it is difficult to cram them into one specific system.

In essence, Sismondi suggests a whole series of explanations of the phenomenon under consideration, explanations, moreover, which are not completely consistent and are based on different points of view. We have set forth one of these explanations above, the essence of which is as follows: under the influence of free competition, the incomes of the working class are reduced, and profits of the capitalist class increase more slowly than produc-

tion. Since the market for the goods produced is limited by the size of the national income, it is quite natural that with the modern organization of the national economy any expansion of production and intensification of competition leads to industrial crisis or stagnation of trade. . . .

Sismondi's explanation of the general cause of industrial crises, given above, had great success in economic literature and was accepted by a whole series of scholars and publicists. Thus, for example, Dühring explains industrial crises as follows: "Production expands more rapidly than the continuously lagging ability of the masses of the people to buy manufactured goods. When shortage of consumption is artificially stimulated, even unchanged production assumes the appearance of overproduction."*

Of the more recent writers, Heinrich Herkner in his not uninteresting book *Die Sociale Reform als Gebot des wirthschaftlichen Fortschritts* advanced the following thesis, in complete agreement with Sismondi's teaching:

"In the first place, circulation, left to its own devices, has a tendency toward great disparity in the distribution of income and property.

"In the second place, the purchasing and consuming power of the mass of the population lags behind the increase in labor productivity, which has been attained by modern achievements in techniques and economics.

"In the third place, this disparity between the purchasing and productive power of the working class causes the domestic market to be glutted with goods and to escape this glut they expand the export and investment of capital abroad. But this latter method runs into greater and greater difficulties owing in part to the glut of goods on the foreign market and partly to the ever increasing competition between the industrial states, which are forced to seek markets abroad because of the inadequate consuming power of the working masses."**

* E. Dühring, *Cursus der National und Socialökonomie*, Leipzig, 1876, p. 222.

** Heinrich Herkner, *Die Social Reform . . .*," Leipzig, 1891, p. 37-38. The same author wrote the article "Krisen" in *Handwörterbuch der Staatswissenschaften* Konrad.

In our opinion, this theory is based on a completely incorrect understanding of the importance of markets in the capitalist economy and for this reason alone it can not be correct. It is disproven theoretically by the theory of the market, which showed that the size of the demand for a social product is not determined by social income. There is no doubt that the expansion of production in the modern national economy, based on free competition, is a very difficult process, sometimes thoroughly impracticable in actuality. But the difficulty of expanding production is not in the least contingent upon what portion of the national output each social class receives. If wages grew to such a degree that all or almost all of the national output were consumed, it would nevertheless be difficult to expand production under free competition.

This history of industrial crises is the practical refutation of the theory which has been expounded. Actually, what characterizes the period of industrial revival? Increase in wages, that is, increase in the demand of the working class for the production of native industry. Nevertheless, crisis follows industrial revival. As we have seen, Sismondi explains industrial crises from his point of view as follows: inadequate demand for goods on the domestic market (caused by the low level of wages) forces industrialists to seek a market for their goods abroad; this market is created by the sending abroad of surplus native capital, but when this capital is spent on acquiring the goods of the country to which the capital belonged, the demand for these goods abroad ceases and a crisis ensues. Everything in this explanation is quite true except the first premise; but the first premise is built upon the correct hypothesis that the size of national demand for goods depends directly upon how high wages are.

Actually, if low wages prevented the expansion of production and the sale of goods on the domestic market, and the sale abroad were possible only as long as capital received from the country exporting the goods was spent, then the development of British industry would have presented the following picture: while wages remain low, production does not progress but experiences periodic fluctuations — from time to time it expands sharply, then contracts just as quickly and returns to the same previous level. As a

matter of fact, social production grows rapidly in capitalist countries. How is it that a few years after a crisis, the market is able to consume considerably more goods, if the cause of crisis was the inadequate consuming power of the market and low wages which, one must remember, are always higher before a crisis than after it? If a crisis is caused by a shortage of consumers, by the inability of increased demand to keep up with the growth of production, then this ordinary fact — that within a few years after a crisis, when wages and profits have been reduced, there is a market for a much greater quantity of goods — becomes absolutely incomprehensible.

Thus, we repeat once again — the fact that a few years after a crisis the production of goods is greater, their value higher, and the quantity of products consumed by a country is larger proves conclusively that the cause of crisis does not lie in the inadequacy of a nation's consuming power, nor in the low level of wages (for the latter do not rise but fall after a crisis), but in something else.

The level of wages, just as of profits, is not the cause of a certain condition of industry but a consequence of the latter. Wages rise or fall depending upon the favorable or unfavorable condition of the commodity market. For manufacturers to create a market for goods by increasing wages would be tantamount to their voluntarily giving up a part of their profits for the benefit of the working class; such a concession might be very desirable in many respects, but it obviously can not be recommended in the interests of the manufacturers themselves, who always prefer to use "surplus" goods themselves rather than give it to the workers.

Another explanation of the causes of industrial crises, by the same Sismondi, proceeded from a completely different point of view. The theory given above was worked out by Sismondi mainly in his first important work *Nouveaux Principes d'Economie Politique*. After this book was published, Sismondi had an opportunity to become personally acquainted with Ricardo and to discuss with him at great length the controversial question of the possibility of general commodity overproduction. The result of this discussion is an interesting comment in *Etudes sur l'Economie Politique*, occupying about seven lines in small print.

In this comment Sismondi analyzes a hypothetical case of commodity exchange at a time when the demand for goods is not growing and labor productivity is increasing. The results of this analysis (rather inconsistent, by the way) turn out to be decidedly in favor of Ricardo's theory, of which the following quotation can convince you: "We arrive at this conclusion, just as Ricardo," says Sismondi, "that when commodity circulation has ended, if it takes place without hindrance, production itself creates demand; but we arrive at this conclusion only provided that, like the German metaphysicians, we ignore completely the elements of time and place, ignore all of the obstacles which can check the circulation of goods; and the more closely we study the problem the more numerous these obstacles seem to us."* But Ricardo never maintained that the transfer of capital from one branch to another is accomplished without any difficulties. His theory is that if capital is distributed among various branches of industry in conformity with demand, then no expansion of production can bring about a glutting of the market with goods which do not find a market. Agreeing with his opponent on such an essential point, Sismondi rejects this theory of crises which we have just stated and which has so many adherents even to the present day.

Nevertheless, Sismondi by no means thinks of laying down his arms and he soon offers a new, no less ingenious, explanation of industrial crises. Sismondi studies the effect of achievements in the techniques of production upon commodity circulation. In addition he assumes that an increase in labor productivity is not accompanied by an increase in real wages. In such a case, in order to restore the balance between production and consumption, the number of workers employed in producing the necessities of life must be reduced and the number of workers employed in producing luxuries (intended for the capitalists whose profits rise as a result of the decline in the workers' share of social goods), increases. . . .

Thus, each technical invention brings about a reduction in the demand for the necessities of life and an increase in the demand for luxury articles; and, since it is very difficult to transfer capital

* Sismondi, *Etudes sur l'Economie Politique*, p. 58.

from one branch of industry to another, a glutting of the market with goods occurs — in other words, an industrial crisis.

This explanation of industrial crises, put forth for the first time by Sismondi, was adopted and worked out in detail by one of the first creators of scientific socialism — Karl Rodbertus-Jagetzow....

... Rodbertus accepts the famous Malthus-Ricardo doctrine of the natural inclination of wages toward a minimum means of subsistence — the doctrine which was later popularized by Lassalle in Germany under the high-flown designation “the iron law of wages.” Rodbertus identifies the not completely correct formulation, which he added to Lassalle’s doctrine, by the phrase “the natural law of wages is just as sound as the law of the relation of cause and effect.”* All of Rodbertus’ subsequent conclusions flow logically and inevitably from this basic point.

Thus, in Rodbertus’ opinion, crises are caused by the reduction of the workers’ share in the national output as labor productivity increases. At the same time it is important to bear in mind that Rodbertus flatly denies that crises could be caused by an absolute level of wages. “I maintain that the cause of industrial crises lies not in the insufficiency of the workers’ share in the social output but in the reduction in this share in proportion to improvements in techniques, and I also maintain that crises could not occur if this even were just as small as it is now but had increased when labor productivity increased, and further, that crises will occur no matter how great this share is, provided it falls when labor productivity increases.”

The logical formulation of this theory is quite correct and the objection which we made to Sismondi’s first theory is not at all applicable to his second theory, which has been developed more fully by Rodbertus. From the foregoing account it is easy to see that Rodbertus proceeds from the same understanding of the conditions of commodity circulation as that expressed by Say in his “theory of markets.” According to Rodbertus’ theory, overproduction of goods is created by insufficient demand for goods in general and not by disproportionate distribution of national produc-

* Karl Rodbertus-Jagetzow, *Kleine Schriften*, Berlin, 1890, p. 320.

tion, brought about by the inclination of workers' wages toward the minimum means of subsistence. All of the consequences which Rodbertus foresaw should really take place provided his first premise is correct.

But the fact is that this premise is entirely false. One can accept or reject the fact of the increase of real wages during extended periods of time, but one thing is beyond question: for short periods of time, money wages are much more stable than real wages. We note that Rodbertus' whole theory of crises is built upon the assumption that the reduction in the workers' share in the national output takes place so rapidly and suddenly that capital has no time to adapt itself to the changing conditions of demand and the changes from producing articles for the consumption of the working class to producing articles for the consumption of the capitalists (whose share in the national output increases). All this is not observed in actuality: progress in techniques is not achieved at one stroke in all branches of industry but proceeds little by little and at a different time in various branches of labor. Today some invention is devised in the iron industry, tomorrow in the cotton industry, the day after tomorrow in the silk industry, etc. If calico drops in price, money wages do not drop instantly in corresponding proportion, since even proceeding from the Malthus-Ricardo theory of wages it must be admitted that the process of adjusting money wages to the lowest subsistence level is a very long process and does not happen within two to three years prior to an industrial crisis but in ten years. But trade revivals in the course of not more than a few years are sufficient for an industrial crisis to occur. Is it possible to imagine that during these few years real wages can have time to drop to their lowest level? Everyone knows, in fact, that before an industrial crisis sets in, money wages are higher *in toto*, not lower, as would follow according to Rodbertus' theory.

Thus, even if a rise in labor productivity and a reduction in the price of goods actually took place before each industrial crisis, this could not reduce the workers' money wages and, consequently, could not curtail the latter's purchasing power. In other words, improvements in techniques can not be a cause of industrial crises

in the sense suggested by Rodbertus. But this is not enough: in reality industrial crises not only do not follow improvements in technology, but, on the contrary, technological advances follow industrial crises. We mentioned several times above the effects of industrial crises on the techniques of production; we cited the opinions of practical people, manufacturers and factory inspectors, to the effect that important inventions are made and introduced into general use during periods of trade decline, when profits are low and the sale of goods difficult. Periods of trade revival, which directly precede crises and cause them, are characterized not by an acceleration of technical progress and reduction in the price of manufactured products, but, on the contrary, by a deceleration of technical progress and an increase in the prices of manufactured goods. One need only familiarize oneself with the change in the price of cotton cloth from year to year to be convinced of the extent to which Rodbertus' theory distorts the true sequence of the phenomenon: it takes the effect for the cause and the cause for the effect.

In general, for all its logical harmony and persuasiveness, Rodbertus' theory was formed completely *a priori*, completely ignoring actual facts. Which inventions caused the industrial crises of 1825, 1836, 1847, 1857, and the following years. It is interesting that, in describing the history of British crises of the first half of this century (in the first "Social Letter"), Rodbertus himself seems to forget completely his own theory and does not even attempt to show that in periods preceding crises, the share of the working classes in the general national output decreases as a result of an increase in labor productivity. He points out that expansion of production and revival of trade preceded each crisis; this no one denies, of course, but expansion of production still does not mean increase in labor productivity; but, according to Rodbertus's theory, crises are caused not only by the latter circumstance alone but also by the drop in the workers' share in the national output which accompanies it. Rodbertus indicated neither the one nor the other in his account of the history of British crises.

Let us turn now to the latest explanation of crises, which is Sismondi's.

Ricardo and Say contend that human needs are unlimited and, therefore, the demand for every commodity can not lag behind the supply. But, in Sismondi's opinion, this assertion is based upon the following sophism: the concept of unlimited demand for commodities in general is replaced by the idea of unlimited demand for each commodity separately. But if the first thesis is true, then the second is completely false. The demand for individual kinds of goods is always limited, and an increase in the production of them results in their not finding a market.

If the production of all goods suddenly increase, the first result of this will be an increase in the demand for luxury articles and, in general, the better kinds of goods, and a corresponding drop in the demand for the coarser kinds of goods. . . .

Thus, according to Sismondi, every rapid expansion of production must have the following effect on the commodity market: demand for all coarser kinds of goods (necessary articles) should be relatively curtailed and the demand for the more elegant kinds (luxury articles) should increase completely independently of how wages and the workers' share in the general national output change. In other words, expansion of production must always bring about a change in the character of demand and an overproduction of all articles of prime necessity, that is, the vast majority of goods. Consequently, industrial crises are essentially the inevitable result of rapid accumulation of wealth and expansion of production which can not instantly be adapted to the changing demand.

There is no objection to this theory in the abstract. It is possible to acknowledge that rapid expansion of national production has a tendency to change the character of demand in an indicated direction. But does it follow that industrial crises are really caused by this specifically? Not at all.

It still can not be concluded that because one or the other circumstance can cause an industrial crisis, therefore a crisis is actually caused by this circumstance. This can not be done. Just as Sismondi pointed out, the natural tendency toward expanding production is really so insignificant in comparison with other causes of crises that scarcely any significance can be attached to it. Actu-

ally, in contemporary society the bulk of the population is so poorly provided with necessities that the production of the latter can increase many times without causing consumers to turn to other goods of better quality. According to Sismondi's theory, it appears that before a crisis the demand for cotton cloth drops because consumers have completely satisfied their need for cotton and want to buy better kinds of cloth — linen, for example. This can not be said to be true. Silk production suffers from crises no less than cotton, and, consequently, it is impossible to see the cause of crises in the increase of the demand for luxury articles.*

According to Rodbertus' theory, the cause of crises lies in a drop in the share of the working classes in the national output. One can cite as a counterpart of this theory that of J. S. Mill, according to which crises are caused precisely by an increase in the workers' share in the output of labor and a drop in the share of capitalists and industrialists.

"When a country," says Mill, "has for a long time had high production and a large net income, as a source for savings; when, therefore, it has long been able to supply capital with a large annual increase, then one of the attributes of this country's everyday life (if it does not have, as America, a large reserve of still uncultivated fertile land) becomes the fact that the rate of profit there is kept to the very limit of the minimum, and, because of this, the country finds itself on the very borderline of a stationary situation."**

This tendency toward the minimum is caused, according to Mill, by the continuous tendency of the value of wages toward the minimum. If the population does not increase while capital is growing, wages must rise in their real as well as in their monetary form, until profit falls to the lowest limit and the growth of capital stops. But if the population increases, real wages do not increase but the value of them grows owing to the rise in the cost of the workers' foodstuffs (caused, in its turn, by turning to the

* This objection is just as applicable also to Sismondi's two preceding theories.

** John Stuart Mill, *Principles of Political Economy*, Second Edition, St. Petersburg, 1873, II, 265.

cultivation of poor quality land). "Crises occur almost periodically because of the tendency of profits to diminish. When a few years have passed without any crisis, so much capital is accumulated in addition to what there was formerly, that it is impossible to find a use for it at the customary profit: all social funds rise to a high price, the interest on first grade commercial promissory notes drops very low, and all business people complain that there is no profitable turnover. The decrease in all unrisks profits makes people disposed to accept readily all schemes which offer hope of higher profits even at the risk of loss; from this arise the speculations which with subsequent reactions destroy or transfer to foreigners a considerable amount of capital, produce a temporary increase in interest and profits, make room for new accumulations, and then complete the very same circle again."*

Everything that we said above concerning the lack of explanation of industrial crises by the intensification of speculation applies to J. S. Mill's theory.†

Finally, Henry George finds the cause of crises in the field of land rent. According to him, "the main cause of periodic industrial crisis, which obviously is characteristic of each civilized country separately and of all of them as a whole, lies in the speculative increase in the price of land, which curtails the income of labor and capital and checks production."** In a growing society, land rent has a tendency to increase constantly. Each landowner, therefore, counts on an increase in the value of his property without any work or trouble on his part. This gives rise to an inclination toward speculation in land, and prices for land rises to such a limit that agricultural production ceases to justify its cost and its growth is held back. Crisis follows, caused by nothing but a "speculative increase in rent or the cost of land, tantamount to a lockout of workers and capitalists by landowners."†

This theory has such a strong national imprint that it is scarcely

* *Ibid.*, p. 269.

† Prof. Wilh. Neurath also finds the cause of industrial crises in the field of credit.

** Henry George, *Progress and Poverty*, London, 1886, p. 185.

† *Ibid.*, p. 190.

necessary to point out its inapplicability to the explanation of British crises. As we have said before, land property in the United States is actually a favorable object of speculation in periods preceding crises (although it does not follow from this that land speculations constitute the cause and are not a symptom of the onset of crisis). But in England nothing similar to this is observed and consequently George's theory, in any case, can not explain the origin of all industrial crises, not only American but also European, as its author asserts.

CHAPTER VI: CAUSES OF PERIODICITY OF CRISES.

A historical survey of British crises has shown us the periodicity of the ebb and flow of capitalist industry. True, this periodicity is far from a mathematical periodicity: an industrial cycle can expand or contract depending upon the concrete conditions of a given moment. Jevons thought that the cause of the periodicity of industrial crises was to be found in the periodicity of the appearance of sunspots. The unsoundness of all such attempts to relate complicated social phenomena like industrial crises to periodicity observable in nature has already been demonstrated by a simple chronology of crises. For several decades crises occurred in England approximately within the very same intervals of time. The crises of 1825, 1836, and 1847 are divided by eleven intervals; but the next crisis was in 1857 — in 10 years and then in 1866 — in 9 years. The industrial depression of the seventies began in 1873 and ended in 1879; that of the eighties began in 1882 and ended in 1887; and that of the nineties began in 1891 and ended in 1895. There were two periods of crises — 1901-03 and 1908-09 in the first decade of this century. Obviously the industrial cycle began to shorten — during the last three decades of the past century the moments of deepest crisis occurred in 1878, 1886-87, and 1894-95, within intervals of 8-9 years. But then the industrial cycle lengthened — after the crash of 1890, 11 years passed before the crisis of 1901. On the other hand, the latter decade numbers two periods of depression.

Thus, the periodicity of the phases of capitalist industry is not at all of such a rigid nature as Jevons assumes.

Capitalist development is periodic in the sense that it is made up of alternating phases of revival and depression, rise and decline. A capitalist cycle covers roughly (but only roughly) a decade. For several years of each decade industry finds itself in a depression; then there follows a revival which develops until it assumes the nature of stockjobbing, of promotion; this kind of market condition heralds the onset of a reaction which may or may not be accompanied by a panic and stock market crash, depending upon the degree of speculative activity of the preceding years. The existence of this industrial cycle also makes it possible for us to speak of the periodicity of the ebb and flow of capitalist industry, although I repeat once more, this periodicity is not at all of a mathematical nature. As the history of British crises has shown, the capitalist cycle covers a period of 7-11 years.

What then causes this periodicity?

The problem of crises can be solved satisfactorily only on the basis of a correct theory of the market. But since modern economic science, in the vast majority of its representatives, is based on a false theory of the market, it is not at all surprising that the problem of crises also has turned out to be insoluble.

The theory of the market has shown us the complete falsity of the idea that surplus social production in capitalist society is the result of a failure to consume all that has been produced. However, it cannot be denied that general overproduction occurs during periods of industrial stagnation. From the theory of the market which has been expounded, it seems to follow that overproduction can be only partial; the fact that during periods of crises overproduction acquires practically a universal nature requires further explanation. On what basis can general commodity overproduction arise, if the demand for goods is determined by the production, and the supply of every new commodity creates new demands on the market?

In order to understand the nature of general commodity overproduction, it is necessary to compare capitalist economy with the conditions of more primitive economic systems. For example, let us take natural exchange — the exchange of product for product without money as a medium. Let cloth, for example, be exchanged directly for grain. In this case, if, in comparison to cloth,

a surplus of grain has been produced, then its price will fall below that of the cloth, but the price of the cloth will rise above that of the grain; the surplus production of grain will be equivalent to the insufficient production of cloth, the drop in the price of one product will be compensated by the rise in the price of the other. There obviously can be no general overproduction of both products, for the price of both the grain in relation to the cloth and the cloth in relation to the grain cannot fall simultaneously. Like the drop in price, overproduction can in this case be only partial.

Let us now consider a money exchange. Let the price of the grain and cloth express itself in a third commodity — money. Let us assume that more grain has been produced than the producers of cloth need; in this case the money price of the grain drops. This reduction can be so considerable that the general amount of money received by the grain producers diminishes: the grain producer receives less money for a larger quantity of grain. In this way the grain producer's purchasing means is reduced. And since the grain producer buys cloth with these means, the money demand for cloth is also reduced, which leads to a reduction in the price of cloth. And cloth drops in monetary value after the monetary value of grain has fallen.

In other words, there will occur a general increase in the supply of goods as compared to the money demand for it, a general reduction in price; but the general price reduction is felt by the market as an expression of general commodity overproduction.

But in this instance partial overproduction, unequal distribution of the people's labor is the basis of the general commodity overproduction. More of one commodity is produced than is needed — this brings about a drop in its money price; and since there is a well-known connection between the money values of goods, price reductions embrace other commodities also. Thus, in the given instance, general overproduction is nothing else but a peculiar expression, under the conditions of money exchange, of partial overproduction, unequal distribution of social labor.

Thus, in a simple commodity economy, general commodity overproduction is possible, but by no means inevitable. On the contrary, since in a simple commodity economy the people's needs

regulate social production (capital accumulation is not an end in itself), social production, in a commodity economy is just as conservative and changes as little as social consumption. When demand is stable, social production easily achieves proportionate distribution — distribution corresponding to demand. This disturbance of the proportionality is brought about not so much by social, as by external, material causes — for example, by poor harvests due to atmospheric conditions, etc. Thus in a simple commodity economy of small producers, in an harmonious economy, general commodity overproduction is a fortuitous disturbance of the normal course of economic life.

Something else is observed in a competitive capitalist society, where it is not the population's needs but capital accumulation which determines the amount of social production. In a capitalist economy capital accumulation creates a continuous tendency toward the expansion of production. Capital is constantly putting pressure on production, as it were, is striving to push it forward. But, in order to sell goods, there must be a proportionate distribution of social production. But the capitalist economy as a whole is chaotic and disorganized. With social production so disorganized, its expansion under the influence of capital accumulation creates a continuous tendency toward overproduction, which expresses itself in this constant difficulty in finding markets for goods, a continuous excess of the productive forces of capitalism as compared to the possibility of using them, which is so typical of capitalism even in a normal period. Therefore this difficulty of a market is an expression of nothing but the difficulty of achieving proportionate distribution of social production under the conditions of capitalist economy. During a normal period this difficulty does not prevent production from expanding in a capitalist economy. But from time to time it becomes aggravated and then capitalist production temporarily arrives at a kind of state of paralysis — at what is called an industrial crisis.

A circumstance which intensifies these crises is a peculiar instrument of circulation of the capitalist economy — credit. If money establishes the connection between the prices of goods, then credit makes this connection far more intimate. Credit, which rises as

easily as it falls, increases a society's purchasing power many times during a favorable period and collapses instantly at a difficult moment. Thanks to credit all the fluctuations of the economy acquire much greater range and the social economy rises higher only to fall from this greater height.

But credit is only a condition which intensifies crises and is by no means its basic cause. The crises of capitalism are more deeply rooted in the very nature of the capitalist economy. Their inevitability arises from three characteristics of this economic system — from the fact that 1) the capitalist economy is an antagonistic economy in which the worker is simply a means of production for the leaders of capitalist enterprises; 2) in distinction from other antagonistic economies (slavery and feudalism), the capitalist economy has a tendency toward disorganized distribution of production (as a means for accumulating capital); and 3) the capitalist economy as a whole is a disorganized economy which lacks planned distribution of social production among the different branches of labor. Because of these three characteristic features of capitalism, economic crises inevitably arise.

However, this still does not explain the periodicity of industrial crises, of the capitalist cycle. Why do the phases of industrial advance and decline replace each other with such amazing regularity? The answer to this is to be found in the actual history of crises.

One of the most typical characteristics of industrial fluctuations is the movement of the price of iron, which is amazingly regular and coincides with phases of the capitalist cycle: during a phase of industrial upswing the price of iron is invariably high, during a phase of industrial decline it is inevitably low. The prices of other commodities do not fluctuate so regularly at all. This indicates that conditions of demand for iron are intimately related to phases of the capitalist cycle. The phase of industrial advance is, at the same time, the period of increased demand for iron; the phase of depression, of a slackening of this demand. But iron is the material of tools of labor. Demand for means of production as a whole can be judged according to the demand for iron. This means that the ascending phase of the capitalist cycle is charac-

terized by an increase in the demand for the means of production, the declining (phase) — by a slackening in the demand for them.

But the means of production (iron, coal, wood, etc.) are in increased demand when a country's new fixed capital is being created — when new railroads, factories, mills, homes, etc. are being constructed. The phase of upswing is the period of increased building and construction of new industrial enterprises. Recently, phases of advance are usually connected with intensified railroad construction. In the entire world the railroad system has expanded in spurts during which the periods of intensified construction in the whole capitalist world coincides with phases of industrial advance. Railroad construction almost ceases during phases of depression.

According to a correct observation of Nasse, "in the majority of civilized countries the railroad system was created in spurts — not systematically, according to a single plan, but periodically, with the construction at one time ceasing completely, at another proceeding with increased energy."* This connection is particularly obvious in the United States. All American crises of the last decade have been preceded by an exceedingly energetic expansion of the railroad system. The same can be said concerning the last crises in Argentina and Australia.

In England the connection between crises and railroad construction is not so direct. It is easy to prove this regarding two crises: that of 1847 and to a lesser degree that of 1836. Subsequent crises were not brought about by the construction of railroads in England itself. And this is quite understandable. England is such a small country that its need for railroad lines was satisfied very quickly. There was no room, as it were, for further expansion of the railroad system. This only complicated but did not wipe out the connection between English crises and railroad construction. In portraying the history of British crises we have seen how large a role the flow of British capital abroad played in the origin of crises. And since, in those countries to which British capital was

* E. Nasse, "Die Verhütung der Produktionskrisen durch staatliche Fürsorge," *Jahrbuch. für Gesetzgebung etc. im Deutschen Reich*, 111, 153.

sent, the construction of railroads was the most important form of investment for capital, indirectly, British crises too have been brought about by the expansion of the world's railroad network.

Another distinctive feature of many crises is increased speculation in real estate, particularly in urban land. In the United States crises are almost always preceded by an extraordinary expansion in purchases of state lands and the great increase in land prices resulting from this; this is such a typical feature of American crises that Henry George based his particular theory of crises on it, as has been shown. But, of course, to see the principle cause of crises in the periodic rise in land prices means simplifying the matter to an extraordinary degree. Speculations in the purchase of land during a period of industrial activity is very typical but only as a symptom of intensified expansion of a country's fixed capital. It is much more a symptom of the illness than its cause.

Speculations in urban real estate and the building fever reached enormous proportions in Vienna on the eve of the famous crash of May, 1873; in Berlin, during the same period; in Australia and Argentina, at the end of the eighties, etc. True, in England itself speculations of this kind do not play a large part as moments which cause crisis. But here we must remember once again that British capital plays a part in the speculations of almost all other countries. England is the heart of the capitalist world, and, therefore, everything that occurs at any spot in the world economy is reflected immediately in England also.

It can hardly be disputed, however, that what the British call "investment," investment of capital takes place during periods of industrial activity. The most common characteristic feature of this condition of the national economy which precedes crises and one which is given again and again in all descriptions of crises by all historians of them, lies in the expression the "mania for founding (something)." At this time they all vie with each other in hurrying to invest their free resources in some kind of enterprise, and smart market operators take advantage of these occasions to profit at the expense of an over-trusting public.

Promotion — the setting-up of an enormous number of new enterprises — precedes every crisis without fail. But promotion is

really nothing other than the creation of a country's new fixed capital.

The following statistics of stock exchange quotations (government securities, bonds, shares, etc.) in millions of pounds sterling, which I extracted from the annual surveys of the London *Economist*, can give some idea of the connection between crises and the creation of new fixed capital in general:

Year	Million Pounds Sterling	Year	Million Pounds Sterling	Year	Million Pounds Sterling
1870	92.3	1880	122.2	1887	111.2
1872	151.6	1881	189.4	1888	160.3
1873	154.7	1882	145.6	1889	207.0
1874	114.2	1883	81.2	1890	142.6
1875	62.7	1884	109.0	1891	104.6
1876	43.2	1885	78.0	1892	81.1
1877	51.5	1886	101.9	1893	49.1
1878	59.2				
1879	56.5				

Year	Million Pounds Sterling	Year	Million Pounds Sterling	Year	Million Pounds Sterling
1894	91.8	1904	123.0	1910	267.4
1895	104.7	1905	167.2	1911	191.8
1896	152.7	1906	120.2		
1897	157.3	1907	123.6		
1898	150.3	1908	192.2		
1899	133.2	1909	182.4		
1900	165.5				
1901	159.4				
1902	153.8				
1903	108.5				

In this table the years are arranged according to industrial cycles. It is easy to see that the early years of each industrial cycle are characterized by an increase in the issuance of shares; but only a few years are required for the issuance of shares to reach its peak. However the regularity of this picture is obscured by the fact that the issuance of securities takes place not only for industrial purposes (state, municipal, and other loans).

Fluctuations in the number of newly-established joint-stock companies, cited earlier in the account of the history of individual

crises, also illustrate clearly the connection between crises and promotion. Finally, statistics on unemployed workers, of which I shall speak in a subsequent chapter, reveal that just those branches which create fixed capital are most susceptible to fluctuations. Llewellyn Smith, chief of labor statistics of the British Ministry of Trade, presented interesting evidence on this question before the Parliamentary Commission of 1895. In Smith's words "cyclical fluctuations have a particularly great influence upon such industries as shipbuilding, manufacturing of machinery and similar kinds of work, which Walter Bagehot called 'instrumental' (instrumental trades). The general volume of a country's production fluctuates little from year to year . . . but even these insignificant fluctuations are sufficient to cause great shocks (violent oscillations) in industries which manufacture tools of production."*

Why is it that years of intensified creation of fixed capital are at the same time years of general industrial activity, and years when the expansion of fixed capital stops, years of general depression? It is because all branches of industry are so closely connected.

By the mere fact of its existence, each industry gives rise to a demand for other goods. You cannot produce something from nothing; in order to produce new goods, it is necessary to acquire raw materials, tools, consumers' goods for workers. The expansion of production in each branch of labor always increases the demand for goods which are produced in other branches of labor; a spurt toward increased production passes from one branch of labor to another, and, therefore, the expansion of production is always contagious and tends to embrace the entire national economy. The demand for all goods rises sharply during periods when new fixed capital is being created.

In order to build a factory or railroad, it is necessary to buy building material (wood, brick, iron, etc.) and acquire various machinery, hire workers, etc. Like machinery, building material does not fall from the sky but is produced by other branches of industry. An increase in workers' earnings increases the workers'

* Llewellyn Smith, *Third Report from the Select Committee on Distress from Want of Employment*, 1895.

demand for the objects which they consume, food, clothing, furniture, etc.

Demand for consumers' goods of higher grades likewise grows, since general industrial activity increases the owners' incomes. Thus, little by little all of the country's industry, the entire commodity market, reached an enlivened state thanks to the fact that new fixed capital is created — new railroad lines are laid, factories and houses are constructed, ships are built, etc.*

But why then does fixed capital expand not gradually but by periodic jolts? Let us take a look at the mechanism of the accumulation of capital.

It has been stated above that, under modern conditions of the economy, free capital not committed to any branch of industry is quickly accumulated in every rich capitalist country. This capital appears on the money market in the form of loanable capital. It is made up of the saved part of the incomes of the most diverse social classes and from the ready cash which any entrepreneur or a rich man has at his disposal. Thanks to banks, reservoirs for absorbing and investing free capital, every person obtains the possibility of converting his cash on hand, which is not needed for current expenses (and sometimes, owing to human custom, even all cash on hand), into capital. For this one need only put into the bank free money in the form of a deposit in a current account. But the principal part of loanable capital on the market is not the available cash of individuals but the saved part of the national income which is not invested where it originated. The growth of loanable capital is by no means the same as the growth of productive capital. As Marx correctly pointed out "each increase in loanable capital does not indicate the accumulation of real capital or expansion of the process of the reproduction of capital at all."** The clearest distinction is that between productive and money capital in state loans. The government contracts a loan for non-productive purposes. The capitalists who lend the required money capital are the state's creditors. When the state

* See Marx, *Das Kapital*, II, 231-232.

** *Das Kapital*, Book III, Part II, p. 22.

spends this sum, the capital of the state's creditors is not reduced, although the country's real productive capital disappears in a case of non-productive expenditure of the sums received. An owner of government securities in reality has the right to appropriate for his own use a certain share of the country's surplus production. "The accumulation of capital of the state debt is nothing but the growth of a class of state creditors who acquire the right to a certain amount of the tax" (Marx). An increase in the state debt apparently does not indicate an increase in the country's real capital, and meanwhile the bonds on the money market are exactly the same capital as either the bonds or stocks of an industrial enterprise which represented productive capital in its material form.

Thus the accumulation of money capital is something completely different from the real growth of production and productive capital. Money capital can be accumulated both during expansion and depression and even during a curtailment of production. And it not only can but actually is accumulated.

In a capitalist society there is a whole series of incomes whose size does not depend or depends very little upon the state of national production. Of all categories of the national income, the entrepreneurs' profit fluctuates most from year to year, depending upon the state of trade and industry, then follow workers' wages. These two forms of income rise when production is expanded and industry enlivened and fall during a period of commercial stagnation. But income based not upon a person's work but only upon ownership of land or some kind of capital, scarcely fall under the influence of the fluctuations of industry. Thus, for example, the interest on state loans, mortgages, bonds, etc. is paid just as punctually, as a general rule, in depression years as in years of industrial activity. Land rent can change a great deal over extended periods (thus, for example, land rent has fallen considerably during the past 20 years), but short-term fluctuations of commerce and industry can have no effect on it because leases are usually contracted for more extended periods.

Income of this kind make up a large part of the national income. Thus, in England, so far as can be judged from income tax statistics, incomes from land, houses, state loans, foreign and colonial loans

constitute a little less than half of the entire national income which is taxed.

Thus, in England, as in every other capitalist country, a whole series of incomes is completely independent of the fluctuations of industry or depend very little upon them. There is no basis for thinking that during a period of industrial decline, *rentiers* of different kinds turn a smaller part of the income into money capital than during a period of industrial activity. On the contrary, during a trade depression commodity prices are low and the cost of living and of all kinds of expenses in general fall, and therefore the "savings" of *rentiers*, as generally of all those who have a steady income (civil servants, pensioners, etc.), tend to increase. But on the other hand during a period of industrial depression, the savings of the rest of the population, entrepreneurs and workers, must diminish sharply. In any case the accumulation of money capital proceeds more evenly than the expansion of production: capital is accumulated continuously, but production expands in spurts.

When describing individual crises, we repeatedly have had to call the reader's attention to the fact that an extraordinary growth of bank reserves is observed during depression years. The deposits of banks also increase a great deal during a depression. This indicates accumulation of money capital which is not invested in industry. The low discount rate, which always follows the liquidations of an industrial crisis and stubbornly prevails on the loan market for a number of years, is evidence of the abundance of uninvested capital. In general, just as the years of industrial upswing are periods of intensified capital investment, of its transition from a free to a fixed state, so the years of depression represent the period of accumulation of free, disposable money capital.

This is so obvious that many economists (particularly J. S. Mill) have held that the reduction in the discount rate, which brings about speculation on the money market and consequent crash, is the direct cause of crises.

But, of course, fluctuations in the discount rate are only a reflection on the surface of the money market of deeper changes in the capitalist economy — changes which Mill does not explain at all.

In any case Mill is completely correct when he turned his attention to the connection between a low discount rate and speculations. Many witnesses who gave evidence before the Parliamentary Commission of 1832, which studied the 1825 crisis, explained the crises by the conversions of the state debt which lowered the profitability of state securities. Several witnesses before the Parliamentary Commission of 1848 in the very same way cited the 1847 crisis in connection with the unusually low discount rate during the period of 1843-44. In general the discount rate is usually low during the period directly preceding an industrial upswing.

Thus there is a continuous increase in money loan capital; but the expansion of production and the investment of this capital in industry meets obstacles which the accumulating capital has to overcome. The existence of such obstacles cannot be doubted. During depression years the market is filled to overflowing with money capital which cannot be turned into productive capital because, as was shown above, the expansion of production without loss to the producer requires a certain proportionality in the investment of capital. If the free loanable capital were distributed proportionately between all branches of industry, then production would proceed without any glutting of the commodity market. But with the national economy disorganized, proportionate investment of free capital runs into great economic and technical difficulties. The following situation is created. Free money capital is accumulated, and it desperately seeks investment and cannot find it. Uninvested capital does not yield its owners an income and therefore it is quite understandable that the greater this capital, the more energetically it strives to penetrate into industry. On the one hand, industry resists accepting new capital; on the other hand, capital keeps putting more and more pressure on it. Finally so much free capital is accumulated that industry's resistance is overcome, capital penetrates into industry and finds a place to be invested. A new period of industrial advance sets in.

In expanding production the first step is difficult; but owing to the interdependence of all branches of industry, the expansion of production tends to spread like an epidemic from one branch to another, until it covers the entire national economy. Free money

capital (for example, that which is lying in the bank in the form of a deposit and is not spent by the bank for discounting notes, etc.) represents latent purchasing power. This purchasing power, which has accumulated during the years of industrial depression, has no effect upon the commodity market while money capital remains free. But as soon as capital is invested in one or another form, all of this latent purchasing power at once passes into an active state. The capital breaks up, that is, it is spent on purchasing different commodities. A rapid creation of new fixed capital occurs which calls forth an increased demand for means of production as well as for consumer goods. Industry seems suddenly to discover a new market; this market is created by the expansion of production — by the spending of tens and hundreds of millions of the capital which was lying idle in the banks' tills. For industry it is a matter of indifference what caused the sudden increase in demand. The only important thing is that the demand has actually been increased by the whole amount of capital which was accumulated and is now being spent. Commodity prices rise and production is expanded all along the line.

Several years pass in this way. The capital which had been accumulated previously is spent little by little. True, the expansion of production created vast new capital. But the market rapidly absorbs this capital since everyone strives to take advantage of the favorable situation, goods find a market, and every entrepreneur tries to invest in business all of the capital which he can lay his hands on. All reserves of capital are put to work. The energetic investment of capital is indicated by the extraordinary expansion of credit, so typical of this period. Just as before the possessors of loanable capital were continuously offering it to businessmen but found few who wished to use their capital, so now the demand for money capital by far exceeds its supply.

Increase in the discount rate, usually observed at the end of a phase of industrial upswing, is a true sign that there is not enough free loan capital in the country for the needs of industry. To the general surprise, it turns out at this time that money has suddenly "risen in price"; actually it is not money but loan capital which has become dearer and it has become dearer because little free, unused capital is left on the loan market.

It is very typical that stock market crises preceded industrial crises by many months.

Thus, before the industrial crisis of 1836 there was the stock market crises of 1835; before the industrial crisis of 1847 there was the financial crisis of 1845; the stock market crises of 1856 and May, 1873 preceded the industrial crises of 1857 and 1873. The crash of Bering in 1890 preceded the industrial depression of 1893. This is explained in the following way: a stock market crisis means that free money capital ceases to flow into the stock exchange and to increase the securities' exchange rate. When a surplus of money capital is offered, then the rate of exchange of stock market prices is high. When little free money capital remains, the stock market rates must inevitably fall. Therefore, a stock market crisis serves as a signal that the flow of capital into the stock market has come to a halt, that free capital is almost exhausted. Nevertheless industry still can remain in an active state for some time, since industrial activity is propped up by the expenditure of disposable capital, and capital is spent not suddenly, not at once, but gradually. Thus, for example, in England already in 1845 speculation in railroad shares ended with the fall of their exchange rate and the flow of capital to the railroads slowed down; but the expenditure of the capital only began at this time.

When the expenditure of capital comes to an end, then an industrial crisis follows, which took place in England at the end of 1847. In a similar way the Viennese crash of May, 1873 immediately brought about a drop in stock market prices throughout all Europe. The amount of newly issued securities was severely cut in the whole world, but even in 1874 British industry was not in a depressed state; the expenditure of money capital had not yet ended. It was only several years after the crisis began that British industry felt it completely.

In the same way the Bering crash in the beginning affected only the stock market; the market found it difficult to place new issues of stock. Industry became depressed considerably later, however, when the expansion of real capital was reduced.

The statistics on stock issues cited above indicates the same thing. The issues reached a peak in England in 1874; but the in-

dustrial depression followed much later. At the beginning of the eighties the issues are at a maximum (in 1881 — a year or two before the crisis); in the second half of the 80's the same maximum falls in 1889 — a year before the Bering crash and several years before the beginning of an industrial decline.

Why is it that an industrial advance always ends with a reaction and decline? Firstly, because of the fact that the expansion of production uses up the free capital, the free, unfettered purchasing power whose accumulation on the money market was the direct cause of its activity. While a railroad is being built, its construction creates a demand for a vast quantity of goods. But a railroad system cannot expand each year with the same speed as it does during periods of industrial advance. This would require a capital more enormous than any single country has at its disposal. We have seen in the history of the American crisis of 1873 that the inability to realize new railroad loans on the European and American money markets was the first step toward a crisis. Capital was exhausted — and construction had to be curtailed. Secondly, the high commodity prices and high profits which accompany years of industrial activity cannot help but cause an expansion of credit and speculation of every kind. A favorable commodity market leads inevitably, within a certain time, to a state of speculative excitement. High profits are like an intoxicating drink, the consumption of which in great quantity can knock the sense out of the head of the most steady and reasonable man. And if the British commodity market is not experiencing anything like the speculations of former times, it is only because the intensity of industrial activity in the England of our day does not achieve its former proportions.

As Juglar quite correctly noted, the periodic fluctuations of industry are linked directly to the periodic fluctuations of commodity prices. The years of industrial upswing are years of high prices, the years of depression, years of low prices. An industrial depression manifests itself and is directly brought about by a drop in commodity prices. To explain the periodic changes in commodity prices means to explain the periodicity of crises.

After all that has been said this explanation cannot meet with difficulties. Industrial expansion is caused by the fact that money

capital accumulated during the preceding years and representing purchasing power in a potential form is spent, creating a new demand for goods. Therefore prices rise. Under favorable market conditions, the increase in prices rapidly passes reasonable limits and degenerates into speculation which is followed by a crash. But even if the price rises are not large enough to cause a crash, a reaction must inevitably set in.

Actually the capital previously amassed must be spent sometime. During a period of expansion, new fixed capital is created. The entire industry of the country takes a peculiar turn: the production of capital equipment is greatly increased. Iron, machinery, instruments, ships and building materials are both demanded and produced in increased quantities. But then the expansion of fixed capital is completed, factories have been built and railroads laid. The demand for all the materials which make up fixed capital ceases. The distribution of production becomes disproportionate: fewer machines, instruments, less iron, bricks and wood are required than previously owing to the fact that fewer new enterprises come into being. But since the producers of the means of production cannot take capital out of their enterprises and in addition the very enormity of this capital, in the form of buildings, machinery, etc., required the continuation of production (otherwise the owners will lose interest on the idle capital), overproduction of capital goods becomes inevitable. Because of the interdependence of all branches of industry, partial overproduction becomes general, the prices of all commodities drop and a general depression sets in.

In this way a general disorganization of trade directly follows its increased activity, and the industrial cycle comes to an end with a depression. During the depression, free money capital accumulates; there follows a new period of industrial activity when this capital is spent, then a crisis, etc., etc.

The operation of the whole mechanism can be compared with the steam engine. The accumulation of free money capital plays the role of the steam in the cylinder; when the pressure of the steam on the piston reaches a certain fixed norm, the resistance of the piston is overcome, the piston moves, reaches the end of the

cylinder, a free way out opens for the steam and the piston returns to its former place. In the same way accumulated free money capital, having reached certain proportions, makes its way into industry, moves it, is spent and industry again returns to its former state. It is natural that under such conditions crises must recur periodically. Capitalist industry must continuously traverse the same cycle of development.

The existence of foreign trade makes this process still more complicated. For a country like England which imports enormous quantities of goods from abroad, the foreign market is absolutely necessary. In England free capital is very quickly accumulated, but expansion of production in England is impossible without a corresponding increase in the demand for British goods abroad. This barrier is gotten round, as Sismondi pointed out in *Nouveaux Principes d'Economie Politique*, in the following way. When the accumulation of free British capital reaches a certain degree of intensity, this capital is invested in the following manner: part of it remains in the country and is spent there on the expansion of production; the other part flows abroad in the form of loans to foreign countries or for the construction in other countries of industrial enterprises, railroads, etc. This transfer of capital to foreign markets is a constant symptom of industrial activity in England. But emigrating capital is not lost to British industry. It creates a demand abroad for British goods and in this way that part of the national capital which remained at home finds a productive use for itself. When free capital has been used up in England and stops flowing into countries importing British goods, then these countries lose their purchasing power, the growth of British export stops, and an industrial crisis sets in in England.

Foreign trade has disguised somewhat the real causes of previous British crises. During the early decades of the 19th century, the cotton industry suffered most from crises, an industry which manufactures not capital goods but consumers' goods. Nevertheless then as now, the cause of industrial advance lay in the creation of new fixed capital. Since England enjoyed an industrial monopoly, but at the same time owing to the unwieldiness of machinery encountered great difficulty in exporting them due to the poor develop-

ment of steam transport (exportation of machinery from England was even forbidden before 1842), it is natural that the increased demand for commodities abroad, created by the construction in these countries of new enterprises with British capital, was reflected in the exporting from England not of capital goods but of British manufactured goods — mainly textiles. Thus the upswing and crisis of 1825 expressed itself in an enormous expansion and then a drop in the export of British cotton textiles to Central and South America. Why is it that the demand for British textiles increased in America? Because the influx of British capital led to the formation, in that country, of a great number of new enterprises, that is, it led to the creation of new fixed capital which caused an increase in the demand for all kinds of goods, among them textiles. Now England has lost its industrial monopoly and the export of capital goods has lessened and we saw above that in recent times major fluctuations are to be observed especially in the export from England of capital goods.

The capitalist world is subject to its own special laws, which operate with an elemental force. So-called common sense is a poor guide to the understanding of these laws. From the point of view of common sense production is a means to consumption. Actually in the capitalist economy the relation of production and consumption is exactly reversed. It is not consumption which governs production in a capitalist society but production which governs consumption. The periodic ebb and flow of industry is caused not by the laws of consumption but by the laws of production. Production is expanded during years of upswing not because consumption increases during this period, but, on the contrary, consumption increases during this period precisely because production is expanded. The capitalist world is an evolving and exceedingly complicated system, whose atom is the individual. Each individual person is governed in his own economic activity by his own personal interests; for each participant in production, consumption is the end and production the means. But out of the totality of individual wills, independent of each other, there is created something qualitatively new — the elemental complex of the capitalist economy, without consciousness, governed by no will, imbued with no idea, but, nevertheless, harmonious, firm and regular.

The laws of motion of this complex are not determined by the wills of the separate individuals which form it; on the contrary, each separate individual is subject to these laws. On the basis of the antinomies of the living individual with his aims and aspirations and of the capitalist complex, obedient to its own laws and disregarding the interests of this individual — on this basis are engendered the contradictions of the capitalist system.

The causes of the changes of the industrial fluctuations in England lie mainly in the fact that England has lost its former industrial hegemony in the capitalist world; at the present time the phase of industrial expansion does not express itself so sharply as before and therefore the subsequent slump moves more gradually. Countries with a rapidly developing industry, like the United States and Germany, for example, are now experiencing the same severe industrial crises as England experienced in former times. Thus Germany went through a very severe crisis in 1900, and the United States in 1907.

For a long time economic science failed to solve the problems of crises because economists sought the causes of crises in one or another separate sphere of the economy, in the area of production, exchange, or distribution; actually crises arise from the whole aggregate of occurrences in the social economy and therefore cannot be timed to one particular area of it. As the circulation of social capital, which leads inevitably to the capitalist cycle and crises, includes production, so it also includes exchange and distribution. Capital changes successively from one form into another, in this way surmounting specific difficulties of the given economy — capitalism. Crises and the capitalist cycle are engendered in the soil of overcoming these difficulties, thanks to the processes whose nature has just been explained.

What were the internal causes of the last American crisis? There is almost no agreement on this question. We read, for example, in *National Economic Annual*, a leading German economic journal, "The industrial advance (of America) was too rapid for the accumulation of capital to keep pace with it. Other factors could not cause such a violent shock to the economic organism of North America as that which occurred in the autumn of 1907

owing to the discrepancy between the formation and consumption of capital.”* “The change which set in before the panic,” says Hasenkampf, author of a book on the American crisis, “was caused by the fact that during the last decade economic development outstripped the formation of capital. Too much working capital was converted into fixed capital. . . Furthermore, too large an amount of capital was actually wiped out.”** In general, almost all of the numerous articles in the special periodic press of England, America, Germany and France, devoted to the American crisis, point out with surprising unanimity that the most profound cause of the crisis was the lack of free capital.

Thus, it was not an abundance of disposable capital, which had not been invested, but a deficiency of capital which caused the last world crisis (as well as the preceding crisis). From this it is obvious how groundless is the theory of surplus capital in the capitalist economy. Even America, which attracts the capital of old capitalist countries, does not have too much capital, but too little to feed its industry during the ascending phase of the capitalistic cycle.

However, from the point of view of the theory of crises which has been set forth here, it is obviously difficult to explain the absence of an industrial crisis in America in the beginning of this century, and generally the fact that American phases of industrial advance usually last longer than European. Of course in America the development of industry proceeds at a much swifter tempo than in Europe. This obviously should have led to more frequent crises. However America copes with crises more easily than Europe and almost avoided the widespread crisis at the beginning of this century.

However, it is precisely here that the expounded theory finds its confirmation. Crises are caused by the fact that during the phase of expansion consumption of capital proceeds more rapidly than its formation; therefore the smaller the capital which a country has at its disposal for the support of its industry during an upswing, the sooner the upswing must come to an end. But the old

* *Jahrbücher für Nationalökonomie*, III, F. T. 35, 3rd issue, p. 832-33.

** Hasenkampf, *Die wirtschaftliche Krisis des Jahres 1907 in den Vereinigten Staaten von Amerika*, 1908, p. 51-52.

capitalist countries invest only a part of their capital at home, the rest goes abroad. On the other hand, the United States works not only with its own but also with foreign capital, capital flows to it from other countries. In this influx of foreign capital lies the essential advantage of America over Europe, in the regard considered. It is precisely the influx of European capital, as Lescure points out, which helped America to avoid a crisis at the beginning of the present century.*

In a certain sense it can be said that the basic cause of crises is the poverty of the people, the low level of demand of the working classes. Actually, the formation of surplus capital and the saving in general of a large part of the national income is caused directly by the insignificant share of the working masses in the products which they produce. If it were not necessary to find investment for new capital, if production did not attain intensified development thanks to the plowing back of profits, then proportionate distribution of production would not meet with any difficulties. In that case production would be governed directly by consumption, as in the economy of small commodity producers. The accumulation of capital by capitalists presupposes that the surplus value is assimilated by persons who do not participate in producing it — that the producer is robbed of a part of the product which he creates. The smaller the worker's share, the higher the capitalist's

* The theory of crises set forth in the text is organically connected with the theory of markets developed in the preceding chapter, both theories stand and fall together. However, they have had very varied success in scientific circles. The theory of the market has met with no sympathy and has been accepted by very few (among them Prof. Spiethoff should be noted; see his article "Die Krisentheorien von Tugan-Baranowsky und Pohle," (*Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*, 1903); the theory of crises, on the other hand, won supporters very quickly and lay at the basis of the investigations of Spiethoff, Pohle, Eulenburg and others, who adopted it as a whole or in a large part. Proceeding from it, Lescure, in his extensive study of the history of crises, tried to explain industrial crises in other countries beside England. In his report on the German crisis of 1900, read at a meeting of the "Union of Social Politics" in 1903, even Sombart, who disagreed with it, acknowledged it as an "extraordinary step forward and undoubtedly the highest form of the theory of crises" (see *Schriften des Vereins für Socialpolitik*, V. 113, *Verhandlungen der Generalversammlung* in Hamburg, 1904, p. 130.) Meanwhile, as has been stated, one theory presumes the other; if the theory of crises is accepted, then its logical basis, the theory of markets, must be accepted, however paradoxical this latter theory may seem to those who have not adequately studied the laws of the capitalist economy.

share, and the more quickly is the capital accumulated, by necessity accompanied by shocks and crises.

Thus the poverty of the popular masses, poverty not in the absolute but in the relative sense, in the sense of the insignificance of the worker's share in the general national output, is a necessary condition of industrial crises. But the connection between poverty and crises must be clearly understood. The widespread view (which Marx also shared to a certain degree) that the low level of popular consumption and slowness with which this level is raised make it impossible to realize the products of ever-expanding capitalist production. We have seen that production itself creates the market, consumption is only one aspect of capitalist production. If production were organized according to plan, if the market possessed full knowledge of the demand and the power to distribute production proportionately, to transfer labor and capital freely from one branch of industry to another, then, however low consumption might be, the supply of goods could not exceed the demand. But, under the complete disorganization of national production, under the anarchy which governs the commodity market, the accumulation of capital inevitably leads to crises.

Planned organization of labor in a capitalist factory raises its productivity to an enormous degree. Only capitalism has put technology on a scientific basis, has perfected techniques through the law of producers' competition. But the technical powers of modern industry cannot be spread throughout the whole world because of social barriers against which they clash, owing to the disorganization of the entire national production. This is also a source of the inevitability of crises.