Crises & Cycles

Wilhelm Röpke
CRISIS AND CYCLES
In writing this book the author has set himself a rather ambitious and comprehensive task. In recent years the literature on economic crises and cycles has become abounding, and at the same time the discussion on the most controversial points has, under the influence of the urgent problems of practical policies, been carried ever further and deeper, especially among the English economists who have unmistakably taken the lead in this field of economic science. But perhaps there has now come the moment for an attempt at a synthetic presentation of the whole body of facts and thoughts on this all-important subject. To do this within the precincts of a book of reasonable dimensions and in a manner combining scientific responsibility with as little obscurity as possible, is surely a task the arduousness of which might be claimed as an extenuating circumstance for any of its shortcomings.

Since this book addresses itself both to the world of academic economists and to a wider public, it runs the risk partly of repeating familiar things to the former and partly of being too technical for the latter. In order to reduce this risk, the author made the arrangement, rather unusual in England, of reserving the main text of the book, set in normal type, for the more essential and elementary parts, while using small type for explanations of a more detailed, technical, or advanced character. Keeping this in mind, both groups of readers may be able to turn to that aspect of the book which suits their taste or their training. Regarding the rather liberal footnotes, it may also be said that they have been added solely for the benefit of those who will find them useful while the main body of the argument is absolutely intelligible without them. It is hoped, therefore, that the good intentions of the author will not expose him to being criticized for academic pedantry.

Though at every possible occasion references to other theories and opinions have been made, the reader will realize very soon that the author has some definite opinions of his own. What they are the reader will learn during the course of the book. It seems
indicated, however, to say in advance that the author's ambitions went towards a well-reasoned synthesis rather than towards bold originality. In this he cannot hope to please anybody among the more pronounced and pugnacious adherents of the different conflicting schools. All he hopes for is that his attitude will not unduly lack in reason and logical coherence.

As a foundation for this book use has been made of the author's treatise on *Krise und Konjunktur* which was written in 1931 and published in 1932 in Germany, while a somewhat different and enlarged Swedish translation of it appeared in 1934. Large parts have been translated, with many alterations, from the German and incorporated into the present book, while other parts written in English by the author have been added in order to complete as far as possible the account of the facts and to deepen the theoretical exposition. Both the translation of the German and the revision of the English parts are due to Dr. Vera Smith to whom the author is greatly indebted for her fine work. He also wishes to acknowledge his gratitude to Mr. Ragnar Nurkse, at the League of Nations, for having taken the initiative in preparing the publication of this book.

Unfortunately, the book was already set in type when Mr. Keynes' new work "The General Theory of Employment, Interest and Money" (London, 1936) was published. The author believes, however, that the reader will be able easily to discern where and why the bold views of Mr. Keynes do not coincide with those set forth in the present book.

*Wilhelm Röpke.*

*Kadiköy, (Marmora),
March, 1936.*
## CONTENTS

### CHAPTER I.

**Introduction.**

### CHAPTER II.

**The Phenomena of Economic Fluctuations.**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 1.</td>
<td>General Survey</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Three main types of undulation, 14.—Seasonal fluctuations and anticipatory cycles, 14.—Secular trend, 15.—Long waves, 16.—The Juglar Cycle, 17.</td>
<td></td>
</tr>
<tr>
<td>§ 2.</td>
<td>The Nature of the Trade Cycle</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>The trade cycle as a &quot;total&quot; phenomenon, 17.—Its cyclical character, 18.—The average duration of the cycle, 19.—It affects mainly the industrial-commercial section, 20.—Agrarian crises, 21.</td>
<td></td>
</tr>
<tr>
<td>§ 3.</td>
<td>The Typical Course of the Trade Cycle</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>(1) The upward swing of the cycle, 22.—(2) The crisis or the acute reaction, 27.—(3) The depression, 28.</td>
<td></td>
</tr>
<tr>
<td>§ 4.</td>
<td>Economic Crises</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Cyclical and &quot;exogenous&quot; crises, 30.—Definition, 31.—Types of crises, 32.—The credit crisis, 33.</td>
<td></td>
</tr>
<tr>
<td>References</td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>

### CHAPTER III.

**The History of Cycles and Crises.**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 5.</td>
<td>Economic Crises during the Early Period of Capitalism</td>
<td>38</td>
</tr>
<tr>
<td>§ 6.</td>
<td>Cycles and Crises in the Nineteenth Century</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>The cycle period up to the crisis of 1825, 40.—The cycle period from 1826 till the crisis of 1836, 40.—The cycle period from 1837 till the crisis of 1847, 41.—The cycle period from 1848-1857, 42.—The cycle period from 1858 till the crisis of 1866, 43.—The cycle period from 1867 till the crisis of 1873, 43.—The cycle period up till the end of the century, 45.</td>
<td></td>
</tr>
</tbody>
</table>
CONTENTS.

§ 7. Economic Development up till the Outbreak of the World Crisis of 1929, - - - - - - - - - 45
The character of the new period, 45.—The period from 1895 till the turn in 1900, 46.—The period up till the turn in 1907, 47.—The cycle period from 1908 to the outbreak of the World War, 47.—The World War, 47.—The "Paradox of Capitalism," 48.—Economic Development after the war, 49.—The world economic crisis of 1920, 49.—The "‘gay ’twenties," 50.

§ 8. The World Economic Crisis since 1929, - - - - - - - - - 53
The crash on the New York Stock Exchange, 53.—The fall in the prices of raw materials, 53.—The decline in the general price level, 54.—The shrinkage of production, 54.—The decline of world trade, 55.—Unemployment, 56.—Money and capital markets, 57.—International financial troubles and the crises of the balance of payments, 58.—Where we stand at the present moment, 60.

CHAPTER IV.

THE CAUSES OF CRISES AND CYCLES.

§ 9. Introductory, - - - - - - - - - 61
Agreements and disagreements among economists, 61.—Classification of theories, 62.—Methodological questions, 64.

§ 10. The General Sources of Disturbance, - - - - - - - - 70
Unstable equilibrium of a highly differentiated social system, 70.—Connexion with the growth of population, 71.—The roundabout character of production, 72.—Comparison with a socialist state, 73.—Money and credit, 76.—Freedom in the application of money income, 76.—Outside disturbances, 77.

§ 11. Over-Production, - - - - - - - - - 77
Popularity of the over-production theory, 77.—The meaning of "over-production," 78.—Crude views rejected, 78.—Over-population, 80.—The "fear to produce," 81.—Disproportionality, 82.—Restoration of equilibrium creates purchasing power, 83.—Purely symptomatic nature of certain remedies, 84.—Rationalization, 84.

§ 12. Under-Consumption, - - - - - - - - - 85
Types of under-consumption theories, 85.—The purchasing-power theory of wages and national welfare, 86.—The under-consumption theory of the Neo-Marxists (theory of Economic Imperialism), 87.—The Distributional Under-consumption Theory, 88.—Monetary Under-consumption Theories, 90.—The "‘dilemma of thrift," 91.
CONTENTS.

§ 13. Psychological Factors,  - - - - - - - - - 93
Alternation of optimism and pessimism, 93.—The working of the psychological factor, 94.—Unsatisfactory nature of purely psychological explanations, 95.

§ 14. Savings and Investment,  - - - - - - - - - 97
The essence of the cycle is to be found in a rhythmical expansion and contraction of investment, 97.—Importance of technical progress, 98.—The "shortage of capital theory," 99.—Over-investment, 101.—The principle of acceleration, 103.—Origin of over-investment, 105.—Monetary and authoritarian "forced saving," 107.—The theories of Keynes and von Hayek, 108.

§ 15. Money and Credit and the Cycle,  - - - - - - - - - 111
The monetary theory of the trade cycle, 111.—The special case of the recent American boom, 112.—"Credit creation," 113.—The rate of interest and the profit rate, 114.—The breakdown of credit expansion, 116.—Inflationary and compensatory credit expansion, 117.—Qualitative distribution of the money stream as an additional factor of instability, 118.

§ 16. The Secondary Depression,  - - - - - - - - - 119
Necessity of a special theory of the depression, 119.—Primary and secondary depression, 120.—The structure of the secondary depression, 120.—The "price-level complex," 121.—Credit contraction, 122.—Disharmony between formation of incomes and utilization of incomes, 122.—Rate of saving greater than the rate of investment, 123.—Securities markets, 125.—"Deposits disease," 126.—The end of the secondary depression, 127.—The automatic safety brake, 129.—The borderline between the primary and the secondary depression, 129.—The prospects of economy "entropy" by an excess of savings, 131.—The development of the theory of the secondary depression, 132.

§ 17. Summary,  - - - - - - - - - - - - 134
The three tasks of the trade-cycle theory, 134.—The monetary over-capitalization theory, 134.—Theory of the depression, 135.—The present world economic depression, 136.

CHAPTER V.

TRADE-CYCLE POLICY.

§ 18. The Effects of Crises and Cycles,  - - - - - - - 138
The fundamental dilemma, 138.—The positive function of the cyclical movement, 139.—The negative effects, 140.—Effects on
CONTENTS.

§ 18.—Continued.

national budgets, 141.—The example of Germany, 142.—State intervention as a result of depression, 144.—Conclusion, 145.

§ 19. The Bases of Trade-Cycle Policy, —— 145
The aims of trade-cycle policy, 145.—The elimination of the cycle as a whole, 146.—Measures for overcoming the depression, 146.—Symptomatic measures, 147.—References, 148.

1. Measures for Controlling the Cyclical Movement as a Whole.

§ 20. Credit Control, —— 148
The aims of credit control, 149.—Price-level stabilization, 149.—The concept of neutral money, 150.—The technique of credit control, 152.—Discount policy, 153.—Credit restriction, 153.—Open market operations, 154.—Varying deposit reserve requirements, 154.

§ 21. Compensatory Budget Policy and Other Measures, —— 155
Quantitative and qualitative Compensatory Budget Policy, 156.—Objections, 157.—How to hold reserve funds, 158.—Germany as a deterrent example, 159.—Direct interferences with the structure of production, costs and prices, 159.—The influence of monopoly organizations, 160.—Protectionism, 161.—Corporativism, 162.—Planned Economy, 163.

§ 22. Trade-Cycle Policy and the Gold Standard, —— 164
The Doctrine of Alternative Stability, 164.—How far the alternative does not exist, 165.—The example of the United States in 1933, 166.—The real alternative, 168.—Refinements and modifications, 170.—Summary, 172.

§ 23. Summary, —— 173
The technique and criterion of trade-cycle policy, 173.—Some practical difficulties of a rational trade-cycle policy, 174.—Its danger, 176.—What is more important than trade-cycle policy, 176.

2. Measures for Overcoming the Depression.

§ 24. Interference with the Structure of Prices and of Production (Restriction), —— 177
The different schools of thought, 178.—The restrictionist school, 178.—The expansionist school, 179.—The defects of the restrictionist school, 180.—The alleged necessity of "more saving," 183.—The lowering of the level of wages, 184.—Considerations of external equilibrium, 184.

Relative merits of restrictionist and expansionist measures, 185.—Compatibility of expansion and readjustment, 186.—Expansion
CONTENTS.

§ 25.—Continued.
not identical with reflation, 186.—The problem of general over-
indebtedness, 187.—Expansion not identical with devaluation,
188.—Expansion not identical with planning, 193.—Conformable
and non-conformable interventions, 195.—Governmental control
of new investments, 196.

§ 26. The Technique of Expansion: Some Recent Experiences, —
"Provocative Therapy," 198.—Public initiative in enlarging the
volume of credit and demand, 199.—Deliberately creating a budget
deficit, 200.—A German experiment in 1932, 201.—Public works,
201.—How to raise the funds for public works, 203.—The con-
ditions of success, 204.—The American experience, 205.—The
German experience after 1933, 206.—The case of France, 209.


§ 27. Unemployment Relief, — — — — — — — — — — — — — — — 210
Different kinds of relief, 210.—Unemployment relief and the wage
level, 211.—Limitations of unemployment insurance, 212.

§ 28. Other Measures, — — — — — — — — — — — — — — — — — — — — — 212
1. Proportional sharing out of the amount of employment avail-
able, 213.—(a) The shortening of working hours, 213.—(b) The
suppression of "double earning," 214.—2. Productive relief
works, 215.—3. Compulsory labour service, 216.—4. Land settle-
ment, 216.—5. Labour nationalism, 218.

INDEX OF NAMES, — — — — — — — — — — — — — — — — — — — — — 221
INDEX OF SUBJECTS, — — — — — — — — — — — — — — — — — — — — 223
CHAPTER I.

INTRODUCTION.

This volume has been written during the worst and most widespread economic crisis ever recorded in the annals of economic history, that is to say, at a time when the problem of economic crises and cycles may claim to be one of preponderating interest, when the intolerable burden of the depression is threatening to endanger the very existence of the economic system, and when many people believe that it is a question not of a crisis within the capitalist system, but of a crisis of capitalism itself. The writing of this book thus belongs to a time when economic events are crowding close upon each other's heels, when the abnormal is becoming the rule, and when the revision of many principles in the practice as well as in the theory of economics is being forced upon us. While this unique period offers many advantages for the writing of such a book, it also makes for manifold dangers.

It is, for instance, an important advantage that both the author and his readers have the doubtful privilege of having become acquainted with the phenomenon of a crisis in all its forms, expressions, and consequences, in a rather painful and direct manner, and that both parties bring to the subject the passionate interest due to a question which has become a problem of existence not only for countless individuals, but also, gradually, for the whole of the social system of the Western World. On the other hand, we must not overlook the grave dangers. A time when economic events are crowding close upon each other's heels is not the time for distilling and bottling the fine wine of economic knowledge—it is in fact a time when even the science of economics is undergoing a process of fermentation. Many new facts are revealed to the eye of the student who gazes into the maelstrom of the crisis, but a considerable time must elapse before these facts can be incorporated into the structure of economic theory as permanent component parts. The onlooker must therefore try to interpret accurately what he sees, and must disentangle the ever-changing opinions of the passing hour from those new facts which give promise of possessing permanent value in the future and of waiting upon intellectual development without participating in all its nervous spasms. But however earnestly he may try the author cannot prevent a work like the present from becoming more quickly
“dated ” to-day than would be the case in normal times. Nor can he prevent it from paying, in some respects at least, for its greater directness and closeness to life with the danger of more rapidly losing its freshness.

There is another danger of which both author and reader must beware: that of viewing the matter in the wrong perspective; that is to say, attaching too much importance to the events of the moment and consequently failing to see things in their historical perspective. Let us not be too hasty in expressing the opinion that Providence is doing us a special favour by allowing us to witness (or even to be instrumental in introducing) a new epoch of world history, and let us remember that world history is no ephemeral growth. We must have enough historical sense to know that nothing in the world lasts for ever, not even our present social and economic system; but, on the other hand, we must also have enough historical sense to see things in their historical perspective. In a word, let us not be affected by the prevailing nervousness which in certain individuals borders already on hysteria.

Only people devoid of historical sense could so quickly forget that it is a mere matter of fifteen years since the World War brought greater suffering to humanity than the present world crisis has done, and that the alterations in the economic system which then took place (disintegration of world economic relations, national autarky, suspension of the gold standard and all-embracing economic regimentation) have been of far greater import than the changes now being brought about by the pressure of the crisis. At that time, too, there were people who were quick to assume that the war-time economy had come to stay, who talked of the “dethronement” of gold and predicted the end, once and for all, of the competitive economic system, and the definite bankruptcy of Liberalism. And yet, after the war, with almost elemental force, all that was said to be dead—world economy, the gold standard, capitalism and liberalism—came into being again, and swept away the hysteria engendered by the war as if it had been the figment of a dream! It would be well if we at the present time were to keep cool and collected, and to behave in such a way that when in days to come we look back upon the vortex of this crisis we need not blush at the recollection of any hysteria. We may venture, without undue optimism, to predict that those who have not let the outcry of loud-mouthed prophets and reformers turn them from their belief in the lasting validity of the principles which have given the
INTRODUCTION.

economic and social system of the West all its greatness will be proved right in the end. We must at least reckon with the possibility that after this devastating crisis, as after the war, most of what is to-day being so loudly decried and reviled will come into its own again.

This belief that the present world crisis spells nothing less than the total collapse of our present economic and social system, a kind of last judgment, a "crisis to end crises," as it were, is indeed so popular nowadays that the substance of this book would seem rather shallow if we were to pass lightly over this problem. If it were true that we must abandon the wreck of our present economic system, leaving it to break up, and seek salvation on the shores of the promised land of planned, and, necessarily, autarkic economy, then what follows in the subsequent pages would be little short of a necrologue on the Splendours and Miseries of capitalism. It would not be without value, but it would mean something different from what the author intends it to be. Let us therefore consider the problem in more detail.¹

Our first task is to make sure what the problem means. As it is, the question as to whither our economic system is drifting may mean two different things. In the first meaning, it amounts to a prognosis of the economic future of the Western World, by weighing up all the forces and counter-forces and estimating the ultimate outcome, independently of whether we prefer to lend our support to this process or to counteract it. In the second sense, the question assumes a more practical aspect, so that the answer may help us determine what direction the economic policy to be pursued at the present time should take. This will become clear at once if we reflect that, even if we were utterly pessimistic for the future of our economic system, we might still be driven to mobilize all our energies in favour of an economic policy directed against such a disastrous development. Just when we are inclined to give a pessimistic answer to the question in its first sense, in full realization of the peril hanging over the economic system of the Western World, we may feel it the more our duty to advocate a policy which may still have a chance of diverting what we think will be a disaster. Everything depends on the question as to whether the economic system can be preserved if only man will bring his efforts to bear, or whether there are unequivocal forces of an objective nature, mercilessly undermining the system. There can be no doubt that it has happened before, in the history

¹ The author has given to this question a fuller and somewhat different treatment in his article "Die säkulare Bedeutung der Weltkrise," Weltwirtschaftliches Archiv, January 1933.
of mankind, that forces of this kind have brought about a situation where men had to realize that a new epoch had begun. The invention of gunpowder brought the whole period of the knights and their armies to a close, and every attempt to struggle against this trend would have been quixotic foolishness.

The question which must be put clearly and directly is this: Can we discover to-day objective forces of development which will finish with the competitive system just as unequivocally and mercilessly as the invention of gunpowder finished with chivalry? All depends on the answer to this question, for if the answer is in the negative no vague and mystical philosophizing can conceal the fact that the disintegration of our economic system is by no means a fate to which we have blindly to submit, but a fate delivered into our own hands.

Exactly what has actually happened that might force us to abandon the competitive system like a sinking wreck? Various answers have been given to this question, but when we come to examine them more closely none of them is really impressive, let alone convincing. The first answer we are likely to hear is that the outlets for capitalistic expansion being greatly reduced, capitalism is condemned to stagnation and internal disintegration. Two things are usually understood by this: the slackening rate of the increase of population and the end of colonial expansion. The idea seems to be that, owing to these two facts, capitalism has to face restricted markets for the surplus product constantly increasing with the advances in productive technique. An argument along these lines sounds plausible, but it cannot stand the test of a more careful examination. Even if we suppose for a moment that the theory of capitalist expansion being hopelessly restricted is true, it seems impossible that this can have acted as a cause of the present depression since it is obvious that the spatial and demographic restrictions on expansion have existed for decades without having prevented a fully fledged boom several years ago. We must allow, however, for the remote possibility that this restriction may have acted, up to the present, only latently, and that after the world crisis had been started by other causes, it may have exerted its paralysing effect openly and to its full extent. Therefore, the fundamental question to be raised is this: Is it really true that capitalism, in order to extend its markets, is continuously in need of fresh supplies of human beings and of unexplored territories? Put this way, the question can, of course, be answered only in the negative, for it is obvious that goods are not paid for with human beings or square miles but with
INRODUCTION.

incomes, and these incomes owe their origin to the successful pro-
duction of other goods. In other words, the fundamental fallacy,
which is at the bottom of the argument in question, is simply
that it confounds human beings and square miles with purchasing
power, and so far it is only an interesting variety of what White-
head aptly calls the "fallacy of misplaced concreteness." It
is a gross error of thinking which might be properly ignored in
merciful silence were it not repeated monotonously every day. At
the same time, it is a good example of the crude overproduction
theory with which we shall have to deal later on (§ 11). It is
interesting to note, moreover, that the neo-Marxian theory of
economic imperialism has been based principally on the same sort
of fallacies, a fact which is a good illustration of the tenacity
with which survivals of Marxist thinking linger on in contemporary
thought on economic, social, and political problems.

To sum up, there is no reason whatever why our economic system
must of necessity rely, for selling its increasing volume of products,
on the wants of fresh supplies of babies or of newly discovered
islands in the Pacific Ocean, and equally no reason whatever why
an increasing productivity of our economic system could not be
used for the fuller satisfaction of the wants of human beings already
in existence or already within the trading area of the present world
economy. There is no secret force within the mechanism of
capitalism which should hinder it from expanding intensively
instead of extensively. Apparently it cannot be too often repeated
that the possibilities of intensive expansion are inexhaustible so
long as the last Hottentot has not become a millionaire, and it
seems that this has to be emphasized again and again before it
is generally understood. It goes without saying that such an
intensive expansion cannot continue without a corresponding
increase of purchasing power, but it is also a matter of course
that, so far as this prerequisite is concerned, intensive expansion
is in no way different from extensive expansion.

We may conclude that the spatial and the demographic restric-
tions on expansion as far as they are real facts, are a long way
from making the decay of capitalism an inevitable necessity. The
wants of men remain just as unlimited as before. This is not
to say, of course, that, owing to the trend of development depicted
above, the composition of wants might not be altered. In fact,

p. 75. Cf. also L. Robbins, "An Essay on the Nature and Significance of

3 This important subject has been dealt with at greater length by the author
in his article "Kapitalismus und Imperialismus," Zeitschrift fur schweizerische
Statistik und Volkswirtschaft, 1934, pp. 370-386.
there are wants which, being easily satisfied for each individual, can, on the whole, only be extended by the increase of men. That is especially true in the case of grain. Consequently it does not seem unlikely that the present agricultural crisis—as far at least as it is a world-wide crisis of grain production—may be closely connected with the falling off in the rate of increase of the population of the bread-eating nations, a causal relationship intensified on the supply side by the improved technique of grain production (the combine, the tractor, and "dry farming" being well-known examples). This unfortunate development has, in turn, contributed tremendously to an intensification of the universal economic depression since the grain-importing countries of Europe, impelled by certain ideologies, did not resist the temptation to avert, by all possible means, from their own grain producers the consequences of the relative over-expansion of the world production of grain. As is invariably the case in State intervention of this kind, the ultimate price to be paid for it was not duly reckoned with. As in so many other instances, these nations thought they could protect themselves against some unpleasant draught coming from the world markets by just shutting the door and living happily ever after. It was quite otherwise. Not only were these drastic measures apt to imperil the other branches of agriculture and to infect them also with the bacillus of depression, but they turned out to be deadly blows for the world economy as a whole and, consequently, also for the industries of the grain-importing countries. Undoubtedly, this has been one of the biggest charges of dynamite to be exploded beneath the foundations of the world economy. There is consequently a subtle causal connexion between the changed dynamics of world population and the present universal crisis of our economic system. But it must be emphasized that the nature of this causal connexion is quite different from what the prophets of doom have in their minds, and that the causal sequence lacks the inevitableness which is generally supposed.

Another argument which seeks to show that capitalism must of necessity go to pieces as a consequence of objective driving forces, supposes, following on the well-beaten tracks of Marxian philosophy, that the tendency towards larger units of enterprise is a natural and inevitable one, and draws the usual gloomy conclusions from this seemingly relentless drive towards the Bigger and Better. Again, it is very doubtful whether the inevitability is as cogent

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4 The same will be shown later on when we come to consider the possibilities of nationalist monetary policies.

5 The whole process has been demonstrated by the author for the case of Germany in his book German Commercial Policy, London, 1934.
as it is supposed to be. It can, in fact, be shown that the very popular opinion to which we are alluding is nothing else than a gross exaggeration which is not always sufficiently recognized as such. In still very important sections of our economic system, i.e., in agriculture, in the small trades and the like, nothing of this sort is going on. But even in the case of industry it can be argued that the trend towards bigger units has, very often, less to do with real advantages derived from the increased size of the unit than with a certain megalomania which has been such a characteristic trait of the "gay 'twenties," with consequences which have become only too manifest during the present depression. Everywhere we witness to-day a decided decline of the "skyscraper principle," not only in architecture but also in the economic sphere.

Almost everywhere it becomes a fact beyond dispute that dimensions have outgrown the optimum size and must now be reduced, by a very painful process, to more reasonable proportions. It would be very interesting to have the testimony of engineers as to how far enterprises have been inflated beyond the technical optimum scale by a pathological predilection for mere size, by considerations of prestige and other irrational motives, and how far the recent development in the technique of machinery—especially the spread of the electromotor and the gasoline engine—has, in many directions, exerted even a lowering influence on the optimum size. In this connexion it should not be forgotten that, for example, the automobile signifies after all the triumph of the small unit over the larger one, so far as the business of locomotion is concerned. Thus it seems by no means true that natural forces are driving the world in the not too cheerful direction of the "skyscraper principle," and so it is equally untrue that we have helplessly to submit to structural changes in our economic system which an inevitable development of this kind might bring about. The breakdown of the "skyscraper principle" would have been still more complete to-day if so many governments had not obstructed the process of readjustment by all kinds of subsidies and interventions. It is beside the point to declare that many firms have become so large that they represent, as the phrase often goes, "national institutions" which the government can no longer leave to their own fate. The recent example of the Citroën Works in Paris, in vain imploring the French Government to socialize its heavy losses, plainly shows that the governments can perfectly well leave these giants alone, without the community as a whole being any the worse off by it. The question as to
whether the State should, in these cases, support the cracking pillars or let them fall is a question of expediency, without any cogent necessity in favour of the former policy, and still less convincing is the alleged necessity for the following up of the socialization of losses by the entire socialization of the whole firm. State subsidies of any kind must remain a very rare exception if the mechanism of capitalism is to work according to its well-tested rules, but it cannot be said that they mark the downfall of capitalism, and still less that, once this policy has been started, there is no way back. Again, we find no sign of any fate from which there is no escape.\(^6\)

The point just considered is very closely related to another one. Modern capitalism, it is widely believed, is not only inevitably drifting toward an economic system composed of ever larger units, paving thereby the way to socialism, but also towards monopoly so that planned economy seems to become more and more a necessity demanded by logic as well as by social justice. In answer to this popular contention, it cannot be overemphasized that it is nothing short of a complete myth. It is absolutely untrue that competitive capitalism is of necessity developing into monopolistic capitalism. On the contrary, the truth is that there is a natural gravitation towards competition rather than towards monopoly, and this gravitation is commonly so strong that very rarely, indeed, has a monopoly come to life in the absence of more or less violent engineering on the part of the State. Even when the natural tendency towards monopoly has the appearance of being extremely strong as in the case of the iron and steel industry in Germany, which enjoys high tariff protection, the government had to do its utmost in order to effect a monopolistic combination. It is doubtful whether there would be many monopolies in the world if the State, in order to offset the natural gravitation toward competition, had not weighted the scales with its authority, its jurisdiction, and its general economic policy in the direction of fostering the formation of monopolies. This must be stated the more emphatically since the opposite opinion is almost invariably maintained in a manner indicating that it is regarded as being beyond any possible

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\(^6\) Even the much discussed case of the great commercial banks in Central Europe (the Creditanstalt in Austria, the Darmstädter und Nationalbank in Germany, &c.) is no real exception though it certainly comes nearer to supporting the argument in question, the averting of the crash really having been a social necessity. But here two points are to be considered. First, the socialization of deposit banks, though hardly to be recommended, cannot be said to jeopardize capitalism, any more than the socialization of the other money-providing institution, i.e., the central banks. Secondly, there is no reason why the governments who kept those banks afloat should, after some necessary changes of the banking system, not go out of the business of banking again after a while.
INTRODUCTION.

discussion. This and the ideological predilection for the monumental, the big scale, for organization and regimentation, is, of course, very conducive towards creating the atmosphere in which monopoly flourishes. So is the widespread feeling that the days of capitalism seem to be numbered, and that the competitive system is a contemptible and petty thing unworthy of our modern age and in need of being replaced by a system rigidly regimented and consciously organized. All the catch phrases of our time like "orderly marketing," "wasteful competition," "rugged individualism," "corporativism," and so forth cannot deceive us as to the enormous contribution they make towards adding to this pro-monopolistic atmosphere. There is no reason, however, why the governments could not reverse their economic policy so as to lend support to the natural gravitation towards competition instead of working against it. True, it does not look just at present as if the governments were particularly eager to do this, but that is evidently less the fault of capitalism than the product of an ideology which we have still a legitimate right to attack if we are concerned for the happiness and welfare of the world.

One of the most characteristic ingredients of the present mass psychology seems to be the general distrust of the mechanism of our economic system, a distrust based on the belief that something has happened to this mechanism which makes it a mechanism no longer to be relied upon. Nobody unfamiliar with the intricacies of this mechanism can be blamed for this distrust to-day when, on the surface of things, everything seems to point to a complete breakdown of the capitalistic machinery. Nor can it be denied that, in the present world crisis, the mechanism, though still working to a perfectly amazing degree, is working extremely unsatisfactorily. But again, the point is, exactly how far this is due to any inherent defect of the machinery and how far it is due to sand being liberally thrown into it, and, consequently, how much hope there is of getting it back into working order so that it may be able to pull the world out of the present impasse. The subsequent chapters will throw some light on all these points by explaining the structure of the machinery and its dynamics and by describing the dominant features of the present situation. Much depends also on the question as to whether there is any real choice left to us, in other words, whether socialism, with its essential technique of planned economy, is a really workable alternative, from which we might legitimately expect greater economic harmony and stability. This question, which is strangely neglected in current literature and as regards which far too much
is taken for granted, will also be specially dealt with in a later section to which the reader is expressly referred as being one of particular importance.

There is one point, however, which should have a more prominent place among these remarks of a more general character. Reverting to the growing distrust in the mechanism of capitalism, we have to note that this distrust, once it is started by a number of circumstances, shows a most unfortunate tendency to amplify itself, since the deterioration of the mechanism engendered by the distrust and by the interventions evoked by it seems to warrant a still deeper distrust and so on. In this respect mankind bears a close resemblance to the centipede who had previously moved quite cheerfully without giving much thought to the complicated machinery of his legs; obsessed, however, by the idea that *laissez-faire* is a thing of the past, planning being the fashion instead, and losing confidence in his machinery of locomotion, he starts nervously to count his legs, but the more he counts the more he loses his ability to move, until, exhausted by the vicious circle thus set up, he goes back to his old well-tested method. This resemblance is most striking to-day in the field of *international economic policies* where it is most obvious that the method of the nervous centipede has made such progress that the end of this part of our economic system is already distressingly near at hand, with disastrous consequences for the structure of the national economies and for the outcome of the different recovery programmes now being conducted on a national basis. This international part of our economic mechanism, which was once a wonderful piece of machinery, is, indeed, utterly out of order to-day, and it is not easy to see how it could be repaired. It must not be forgotten, however, that one of the main reasons for this lamentable development has been the deliberate destruction of the *gold standard*. A nice theoretical case could indeed be made out for a world economy without gold and for a system of managed currencies, and it has been an easy task to ridicule the orthodoxy of the gold standard. But the glove is now on the other hand. The theoretical case has been tested by experience and found utterly defective, its main fault being, perhaps, the fact that the psychological side has been entirely overlooked.

Anyone trying to analyze the ultimate causes of the present-day world economic chaos cannot fail to realize that the destruction of the gold standard and the monetary imbroglio engendered by it has—in addition to the agrarian policy already referred to—played a leading rôle. The experience of the last years has shown how devas-
tating are the consequences if the mechanism of the international monetary system is knocked to pieces, with a contempt, mingled with pity, for an old-fashioned ideal and with an almost cynical delight in the unorthodox. A system, which ran smoothly and provided the world economy with the necessary supply of international credits, has, in fact, been replaced by a system which is characterized by fear, confusion, paralysis, red tape, and illegal trading. Instead of entering on long theoretical discussions with the adversaries of the gold standard and those who despise the idea of stable exchange rates, it seems to be sufficient now to point silently to the present state of the world economy and, perhaps, to add laconically "Your work!"

A world economy without gold has proved, in fact, a world economy suffocated by hysteria and officialdom, mitigated by illegal trading. It will be extremely difficult to get the world out of this state again, but it is obvious that the process of restitution must begin with the restoration of the gold standard which must be followed, if it is to work again to satisfaction, by a complete scrapping of the present watertight compartments between the different nations. There is no reason why this could not be done if only the world wants it to be done, and there is every reason why it should be done. In order to see this clearly, one has to realize that there is no other way out if we want the world to be saved from a disaster of incredible magnitude. The idea that a sort of planned world economy, effected through the present devices of quotas, clearing agreements, &c., developed into an orderly system, might offer a promising alternative is very ill-founded, and that for a reason which is not yet clearly recognized.

It is obvious that a planned world economy is equivalent to a dense network of commercial treaties dealing with the minutiae of international economic relations. It is, therefore, absolutely dependent for its functioning on an atmosphere of honesty, fairness, and continuity which has been a concomitant of the Liberal epoch and which is now slowly dying with it. In a world in which the fundamental principle of a civilized society *pacta sunt servanda* is more and more regarded as a Liberal prejudice a planned world economy is *a fortiori* an absolute impossibility. In other words, the same forces which are undermining the old Liberal world economy are also destroying the moral and legal foundations on which a planned world economy must be based, and the irony of it is that most of the planners are the same persons who are doing their utmost to lend their support to these sinister forces, apparently impelled by the curious idea that you can eat
The world is to-day living from a moral (and intellectual) capital accumulated during the Liberal epoch, and is consuming it rapidly, but the increasing difficulties of the new methods in international economic policies give a foretaste of that to which the world is rapidly coming. So a planned world economy is no real alternative at all, the only alternatives being the return to a Liberal world economy or complete chaos. In either case, the present attempts at planning in international relations have no future at all, the numerous assertions to the contrary notwithstanding. With these attempts the world resembles to-day a man who, having fallen down a precipice, is holding himself above the abyss by aid of a shrub which he happened to grasp: despite his boastful assertions that this is "the real thing," his only choice is to be rescued from above or sooner or later to fall down into the abyss below. Let us add that the rope for rescuing him must not be of paper but must have a strong golden thread in it. Here, as everywhere else, the essential thing is to make the choice clear.

Mention has already been made of the lamentable fact that the world is to-day living from the psychic capital accumulated during the Liberal epoch. I believe that this is the gravest and most important feature of the present situation, and, indeed, the most difficult to alter since it is so deeply rooted in the contemporary mind. But it is also a point which must be rightly understood if we do not want to be misled in our own attitude towards it. What we must always bear in mind is the conclusion which we reached previously, i.e., that nothing has happened to our economic system such as threatens to blow it up just as the invention of gunpowder blew up the feudal system, in an irresistible and objective manner. The things threatening our economic system are no outward forces of this kind but ideologies of every description.

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7 The idea developed above may be explained in yet another way. It is generally recognized that the world economy as compared with the national economy labours under two distinct disadvantages. The first is that there is no international legal system enforced by a World State; the second is that there is no world-wide monetary system. In spite of these two disadvantages, world economy has been able to develop during the last century because it has been possible to find substitutes for the institutions that are lacking. The lack of an international legal system based upon a World State has been compensated by a system of long-term international contracts and by a high degree of loyalty in keeping them. The lack of a world-wide monetary system has been mitigated by the gold standard. Both these substitutes are creations of the Liberal Era.

Planned Economy undoubtedly means an economic system centralized in the State. It is radical "Etatism." But there is as yet no World State. Consequently, international planning means radical "Etatism" without a corresponding State. The thing is even more absurd since to-day international planning is being demanded at a moment when even the substitutes by which Liberalism has been able to mitigate the lack of a World State are being undermined by the same illiberal forces which are behind the demand for international planning.
INTRODUCTION.

The effect may, of course, be just the same, but the essential difference must not be ignored. Just by emphasizing this difference, it may still be possible to hinder the ultimate triumph of these destructive ideologies. For one of the most dangerous aspects of the Antiliberal and Anticapitalist strategy is to discourage any possible resistance by presenting things that are purely ideological as irresistible forces of an objective nature which are taking their course outside our control and regardless of our independent aims. This trick—Invented, by the way, by Karl Marx—cannot be too strongly opposed. This can be done by pointing out that these things are taking their course not outside of our control and independently of our will but with their very aid. Everything depends upon the strength of our control and of our will and upon there being a sufficient number of men in the world who, fighting to the last ditch, are willing to face even the chance of the ultimate defeat of their cause, following the gallant motto: "Victrix causa des placuit sed victa Catoni."
CHAPTER II.

THE PHENOMENA OF ECONOMIC FLUCTUATIONS.

§ 1. General Survey.

Anyone who realizes that all life, whether regarded from the point of view of Nature or of society, is governed by a certain rhythm, will instinctively suppose that it cannot be otherwise in the economic sphere. That it is so need therefore cause no surprise. On the contrary, it would be surprising if the fundamental law of rhythm did not operate here.¹ In fact the first thing which must be pointed out is that the rhythm of economic life is a complex one, consisting in the main of three types of undulation which are distinguishable from one another by their amplitude, their intensity and their extensiveness (that is, their spatial extent), and which, as they occur simultaneously and in close proximity to each other, have a far-reaching effect one upon the other.

First of all we have the undulation with the shortest vibration, a rhythm to which we usually apply the somewhat restricted term “seasonal fluctuations.” I say “restricted,” because seasonal fluctuations do not merely include the actual climatic rhythm of the seasons, which leaves its mark in some way or other on almost every branch of production, particularly, of course, on agriculture, the definitely seasonal industries (building, inland navigation, industries producing agricultural implements, &c.), and foreign trade. They also include every other possible short-wave oscillation, such as those fluctuations connected with fixed habits of payment and delivery, changes in fashion, and many more. We shall deal, then, in general with those economic fluctuations the amplitude of which does not exceed one year. Among these short-wave variations we may therefore also include those economic fluctuations which I have called “Anticipatory Cycles,”² to denote the well-known phenomenon that supply or demand tends temporarily to concentrate—if a change in prices is about to take place or is assumed to be about to take place—by way of advancing future or postponing present transactions (buyers’ strike). This can often happen outside the actual economic cycle (for example, when political events are in the balance or when a new tax on some commodity is expected), but it has, of course, a special significance when it happens within

PHENOMENA OF ECONOMIC FLUCTUATIONS. 15

the compass of the cycle itself, as this attitude of buyers and sellers, which is expressed in the "anticipatory cycle," is apt to accentuate the direction in which the cycle is moving at the moment, stimulating the upward trend or deepening the depression. The consequence of these phenomena, combined with vicissitudes of a local or individual kind, is that, independently of the effects of the economic cycle proper, we always have a certain minimum of unemployed workers and means of production. The resulting "margin of unemployment" in countries like England and Germany, before the World War, was estimated at something like 2-3%. On the other hand, of course, the seasonal fluctuations can easily obscure the picture of the cycle proper, and lead to a false economic prognosis, if seasonal influences have not been eliminated from the statistics relating to the cycle, which is only possible within certain limits.

We must guard against the belief that the seasonal fluctuations form a self-contained rhythm. On the contrary, they are as much influenced in intensity and amplitude by the cycle proper as they in their turn influence the latter. Thus Akerman in particular has shown that the seasonal fluctuations in the production of pig-iron are very marked during a period of depression, while they become insignificant during a boom. Similarly, he advances the interesting theory that seasonal fluctuations play an active part in the course of the cycle, so that, for instance, the seasonal increase in economic activity in spring or autumn may contribute towards turning the tide of the depression. However that may be, one thing at least seems evident, that it is very difficult clearly to separate seasonal fluctuations from cyclical fluctuations.

We turn now from this description of the seasonal fluctuation to the other extreme, the so-called secular trend of development, which leaves its mark on economic history in the shape of giant waves. It is the underlying trend of all economic data, continuing over long periods and through seasonal and cyclical variations of production, population, the volume of business, foreign trade, prices, accumulation of capital, &c. This is the point where the economist must be prepared to give place to the historian and

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3 The most comprehensive study of seasonal fluctuations has been made by Professor R. Bachi in his book "Le fluttuazioni stagionali nella vita economica italiana," Annali di Statistica, V 9, Rome, 1919.

4 It follows from these and other considerations that the phenomenon of "excess capacity," which rightly plays such a prominent rôle in present-day discussions, is a general one, to some extent always in existence regardless of the business cycle. As a certain percentage of the workers is always without employment, a certain part of the plant is almost always idle, a certain part of the lodgings empty, &c. In all these respects, a minimum "excess capacity" (generally being that part of the total capacity that is qualitatively marginal) is necessary in order to give to the whole economic system that indispensable "play" without which it could not work freely. Cf. also J. M. Clark, Strategic Factors in Business Cycles, New York, 1934, pp. 148-151.
historical philosopher, and to let them decide the vexed question of whether it is possible also to discover and determine an economic rhythm, an up and down movement in the long periods of world history, running parallel to the course of political and cultural development. Changes in the basic "data" of national and world economy (changes in technique, in the popularity of articles of consumption, in forms of enterprise, in the organization of the economic system, in the size and composition of the population, changes in the geographical location of markets, in economic ethics, in the political, social, and natural milieu, and many other things) have of late been described as structural changes in contrast to merely cyclical (or conjunctural) changes. Many people to-day are of the opinion that the present world crisis should be viewed not as a cyclical but as a structural phenomenon, just as it was felt that there were many structural factors in the boom which preceded the crisis, especially in the United States. Within the long-run development during the major chronological periods whose laws we are accustomed to examine only from the point of view of the historical philosopher, we observe a certain well-defined regularity to which attention has only comparatively recently been directed. A closer study of the economic development of the last 100 years shows that every 20-25 years or so a period whose general course reveals an upward trend is succeeded by a period whose economic data prove that the general tendency has been downward. Apart from the fluctuations within these periods the average price level, business profits and the production figures in the one period, the depression period, are lower than those in the other, the period of prosperity. These long-term periods of depression and prosperity naturally also lend to the cycles a favourable or unfavourable note. Thus in the period from 1848-1873 the upward tendency dominated, while from 1873-1894 the main tendency was downward, swinging upward again in the period from 1895-1913. The riddle of these long waves of depression and prosperity has not yet been fully solved.5

Of course, it is still permissible to assume that mere chance may have played a large part in determining the situation. This assump-

PHENOMENA OF ECONOMIC FLUCTUATIONS.

...tion is all the more permissible since the statistical material relating to economic events is very incomplete for the greater part of the nineteenth century. Anyone, however, who is not satisfied with this explanation, could suggest two other possible causes. First, it is a striking fact that periods of depression have hitherto always followed a particularly violent crisis, and, indeed, the aforementioned period of depression of 1873-1894 is the best example of this. One may therefore assume that it took the economic system a long time to recover from the convulsions of that crisis. Secondly, however, it is to be assumed that the difference in the average price level in periods of depression and prosperity is connected with corresponding changes in the financial system. This is quite clearly shown by a comparison of the periods 1873-1894 and 1895-1913. Compared with its predecessor and especially with its successor, the first-named period is distinguished by a scarcity of gold relatively to the increased world monetary demand brought about by the international extension of the gold standard, while the period of 1895-1913 shows an increase in the monetary supply, due particularly to the continual spread of the use of bank money (cheques).

Within this double rhythm of the short-wave seasonal fluctuation and the long-wave oscillation from prosperity to depression there vibrates the most important rhythm of economic life, the rhythm of the general trade or business cycle, which has sometimes been christened the "Juglar Cycle," in honour of the pioneer student of the trade or business cycle, the French economist Clement Juglar. 6

§ 2. THE NATURE OF THE TRADE CYCLE.

It is a prevalent custom to give the term "trade cycle" a very wide meaning, making it include every fluctuation to which the market is subject, be it short wave or long wave, local, national or international in nature. It is in this sense that the term is often used in the language of the commercial world. In science, however, it has become more and more customary to reserve the term "trade cycle" for that type of economic fluctuation which is distinguished by the following predominant peculiarities:

1. It is as a rule a total or all-embracing phenomenon, that is, it is one which affects the whole economic process, over and above independent fluctuations of particular branches of economic activity. This "all-embracing" character of the trade cycle can be seen from the fact that as a rule the statistical indices which reflect the general course of the whole economic process change

6 Juglar's book, Des crises commerciales et de leur retour périodique, which made him a pioneer in the study of the business cycle, was published in 1860.
markedly during it. This applies especially to the price level, the volume of money and credit, the rate of interest and of wages, the level of employment, and volume of production. As a "total" phenomenon the fluctuation is also apt to affect the budget and the population figures.

It is in accordance with the logic of economic development, which tends towards an increasing degree of integration of the various branches of the economic system, particularly of late of those connected with money and credit, that the "totality" of the cycle should extend increasingly into the international sphere. Thus one of the chief characteristics of the present crisis is that it is a world crisis in the true sense of the word, and is afflicting the whole earth in varying degrees, sweeping over the globe like a great flood, indifferent as to whether it is inundating rich or poor countries, conquerors or conquered, democrats or dictators, lands in the tropical or temperate zones, agrarian or industrial countries. The details of how trade cycles become international in their effect cannot be fully discussed here. Only one thing must be emphasized, and that is that the connexion between the currency systems of the various countries effected through the gold standard plays a very considerable part in the international diffusion of the waves of the trade cycle. If there is a boom in an economically important country, it is synonymous with an expansion of the supply of credit and with a tendency to drive up prices. The trade balance becomes unfavourable, gold flows out, and starts a similar tendency, to an expansion of credit in the country receiving the gold. That is the basic pattern of the relationship as far as the monetary diffusion of the waves of the economic cycle is concerned. Hand in hand with it goes the international connexion formed by international trade in credit and goods.

2. The form of the cyclical fluctuation is furthermore distinguished by the fact that (as its name implies) it is cyclical and is subject to a characteristic rhythm. That is to say that each phase of the trade cycle is to be regarded as a definite though not always strictly diagnosable phase, which along with other phases goes to form an economic cycle. Each phase develops from the one before—in a way which the theory of economic cycles has to explain—until the initial phase is again reached and a new cycle begins. The phase of the depression (the fall) is followed by the phase of the boom (the rise), which sooner or later, with or without the acute change which we call a crisis, passes into the phase of a new depres-

7 This question will be treated in greater detail and in a somewhat modified form later on when we come to discuss the compatibility of the gold standard and internal stability, pp. 164 et seq.
sion which then makes way for a new economic cycle. This rough picture of the sequence of phases can be analysed in greater detail. Thus, according to Spiethoff, who further subdivides the "cyclical phases" into "alternating stages," the typical course followed by the trade cycle may be analysed as follows: (1) recession, (2) primary rise, (3) secondary rise, (4) boom, (5) shortage of capital, (6) crisis,—recession and primary rise together forming the "slump," and the secondary rise, boom and shortage of capital together forming the "up-swing." The Harvard Committee of Business Research divides the business cycle into five phases: depression, recovery, business prosperity, financial strain, and industrial crisis. The German Institut für Konjunkturforschung has decided in favour of a four-part schema: depression, business prosperity, acute strain, and crisis. These are all refinements of the basic type of the cyclical economic fluctuation, which continually repeats itself in expansion and contraction.

We must not forget, however, that these pictures of the phase sequence only represent a basic schema, which is in reality liable to manifold variations. No trade cycle is an exact replica of its predecessor. Each has its special peculiarities, which also give a special character to the individual phases. They vary in their length, in their intensity, in their predominant symptoms, in their geographical extent and in their effect upon the individual branches of the economic system; and, finally, also in the speed with which they spread. Lastly, economic history shows more than one example of an economic phase relapsing, after a short time, into the preceding phase, as, e.g., a depression being followed by a new depression after a very short period of recovery. Such relapses are so frequent that some students in this field (especially in the United States) distinguish a still shorter cycle of half the duration within the "Juglar Cycle" (the so-called "40-month cycle"). An example of this secondary fluctuation may be seen in the depression of 1903 in the United States, which followed the depression of 1900 after the short space of three years, while there was no sign of it in Europe.

3. This brings us to the question of the duration of the trade cycle, on which we have already touched. Speaking generally, we may say that the trade cycle lies between the short waves of seasonal variations and the long-period waves of prosperity and depression. Basing our calculations on the more or less reliable economic history of the last eighty years, we may assume that the average duration of the trade cycle—from one peak of the cycle

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to the other or from one crisis to the other—is a period of five to
eleven years at the most, although here, too, there is no unanimity
among students of the trade cycle and some assert that the irregu-
larity is still greater. According to Spiethoff's table German
economic history from 1843-1913 shows the following turning points
(from upward swing to recession, sometimes taking the acute form
of a crisis)—

1847-48 Turning point from shortage of capital to recession.
1857 Crisis.
1866-67 Turning point from shortage of capital to recession.
1873 Crisis.
1882-83 Turning point from shortage of capital to recession.
1890-91 Turning point from shortage of capital to recession.
1900-01 Turning point from shortage of capital to recession.
1907-08 Turning point from shortage of capital to recession.
1913 Last turning point before the world war.

According to this table there was a space of six to nine years
between the turning points. Still greater irregularities were calcu-
lated for England and the United States.

Even if it is possible to some extent to determine the absolute
range in the time periods within which the trade cycle has hitherto
run its course, the marked irregularity of the interval makes it
impossible to speak of a real periodicity of the phases and crises
in the sense of a uniformity of interval. All present-day students
of the trade cycle are unanimous in agreeing that such a periodicity
does not exist, although in the teachings of the older students of
crises and cycles it had assumed almost a mythical character, and
had given the trade cycle something of the uncanny inexactibility
of a cosmic process: indeed, they actually associated it with
cosmic processes, especially with the frequency of the maximum
number of sunspots. If, nevertheless, people still talk of a
periodicity of crises and cycles, they can only mean the already
explained cyclical character of business phases, that is, the regu-
larity of the phase-sequence. As this use of the term is liable
to lead to misunderstanding, however, it should be discontinued.

4. Finally, it is a significant peculiarity of the trade cycle that
in spite of that "totality" to which we have already referred,
it is first and foremost a fluctuation affecting the industrial-
commercial section of the economic system, while agriculture,
especially, more or less follows its own laws of movement and
development, which in their turn of course exert a strong influence

Especially the leading authority on all these questions: W. C. Mitchell,
PHENOMENA OF ECONOMIC FLUCTUATIONS.

on the industrial-commercial movement. In this connexion it is essential to remember that the cyclical nature of the fluctuations in economic history can only be established from the moment when this industrial-commercial superstructure of the economic system assumed visible proportions, in other words, from the moment when the modern—"capitalistic"—structure of the economic system came into being. The trade cycle as we know it therefore doubtless made its first appearance in and with capitalism. This of course does not mean that even a socialistic régime, which retains the extensive use of capital and the highly differentiated character of the "capitalistic" economic order, will be exempt from similar rhythmical disturbances of its equilibrium.

That agriculture, on the whole, should obey its own laws of movement and development, follows from its peculiar nature, which clearly differentiates it from industry. The length of the periods of production and turnover, the enormous number of producers, peculiarities in the formation of agricultural prices, the special nature of the agricultural credit problem, the strong conservatism of the farmer (to whom agriculture represents not only a means of livelihood but also a form of life to which he clings despite the most adverse circumstances), the extraordinary irregularity in the supply of agricultural products, the marked inelasticity of the demand, the harassing slowness with which agricultural production costs are capable of adjustment to falling prices—all these things must be held responsible for the fact that while the cycle of rise and fall in agriculture may come into close contact with the trade cycle, it yet forms a movement by itself. It is correspondingly true that agrarian crises generally last very much longer than the industrial-commercial crises within the trade cycle, and easily become lingering and chronic in character. One of the worst agrarian crises of this kind was that which was in the main caused by the rise of the superior competition of the newly opened-up virgin territories (especially in the Middle-West of the United States of America). It lasted from the end of the 'seventies till almost the end of last century. It is, however, surpassed in gravity and international extent by the present agrarian crisis, whose origins may be traced back to 1921 and which represents a gigantic process of contraction and liquidation mainly caused by over-production.

The inner connexions and inter-actions between agrarian and industrial cycles have as yet, comparatively speaking, been little explored, as they are in fact very intricate and by no means easy to define. While it cannot be disputed that prosperity or
depression in the non-agricultural branches of the economy decides to a great extent whether there shall be prosperity or depression in agriculture (especially for the products the demand for which is more elastic, e.g., dairy products), the question as to how the state of agriculture, inversely, influences the state of business, cannot be answered so simply. A depression in agriculture may accompany an industrial-commercial prosperity—more, it may perhaps stimulate this prosperity by bringing down the price of food and raw material, and by driving workers into industry. The proximity of industrial-commercial prosperity and agrarian depression in the United States from 1925 to 1929 is a good example of this. The question must therefore be handled with the greatest caution.  

§ 3. THE TYPICAL COURSE OF THE TRADE CYCLE.

When we speak of the typical course of the trade cycle, we must be careful to remember the already-mentioned fact that every trade cycle possesses features that cannot be compressed into any schema representing the "typical" course of the cycle. Any such schema will always have something artificial about it. And yet the number of typical characteristics in the individual phase of the trade cycle is great enough to justify such a schema of the "typical" course.

(1) The Upward Swing of the Cycle.

We begin at the point where business has reached the end of the period of depression and is in a state of comparative equilibrium, when all the important economic data have more or less settled down and the crisis is finally liquidated, while the forces which will bring about a new rise in economic activity have not yet begun to operate. Commodity prices, business profits, rates of interest and of wages persist at a low level, which combines with the reduced volume of production, the flagging of the spirit of

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enterprise, the lack of effective purchasing power, and the low level of employment, to form an unrelieved picture of economic lethargy. The easy state of the money market corresponds to the low rate of interest. With this, in turn, is connected, in this last stage of the depression, the rise of fixed-interest-bearing securities. This is partly because the easiness of the money market provides credits for speculative operations on the stock exchange, partly also, however, because the nominal interest on fixed-interest-bearing securities tends to be higher than the reduced rate of interest on new loans, and because, with the progressive consolidation of the economic position, owners of saving deposits gradually pluck up sufficient confidence to contemplate transferring their bank deposits into securities, but sometimes fight shy of investing in dividend-paying stock because of the still depressed state of production.

The longer this situation lasts, the more surely are all these factors of depression transformed into factors of recovery. The low rate of interest, the low prices, the low wages, the pressure of the demand, which was held off during the depression, the rationalization of the whole economic apparatus enforced by the depression—all these things have hitherto never failed in the long run to bring new sustenance to the spirit of enterprise as it slowly begins to revive, and to be spurred on by external stimuli (inventions, political events, bumper harvests, &c.). The depression moves by its own motive force towards the upward swing, which now gradually develops and, avalanche-like, reinforces the symptoms diametrically opposed to those of the depression: rise in demand, gradual clearing of stocks, followed by the beginning of a rise in production, expansion of credit with all the favourable consequences for employment, rates of interest, profits, wages, and prices which inevitably follow once this situation has firmly established itself. All these factors in turn combine to produce a whole series of repercussions.

As we have shown, the earliest symptoms of the revival of business begin to appear in the money market. In the course of the depression an easing of the market, reflecting the increased readiness of the banks to give credit, has taken place, which has an extremely important bearing upon the course of the whole economic process. This easing of the credit market is, as we have already seen, connected with a fall in the rate of interest, which reflects the unwillingness of the entrepreneurs to undertake new investments. The money therefore accumulates in the banks, this being a marked characteristic of the depression and, as we shall see later, one of its chief sources. The further the rate of interest falls, however, and the more distant business is removed in time, spirit,
and substance from the convulsions of the crisis, the nearer comes the moment when the savings deposits, the interest on which has been falling lower and lower, will again be invested in securities, and at the same time the increased readiness of the banks to expand credit will be applied to new investments which seem profitable as compared with the low rate of interest. The first step towards a rise in investments in the economic system is the investment of capital in fixed-interest-bearing securities; this in turn frees the banks from many uncomfortable debtors and thus increases their readiness to give credit. At a later stage of the development there is a rise in share values, while the rise in the price of fixed-interest-bearing securities, as a result of the gradual levelling up in the rate of interest, which is characteristic of the recovery period, gives way to a gradual fall. Not only the Stock Exchange figures but also the issue statistics reflect this characteristic development, behind which, as the ultimate great source of strength for the upward swing, stands the expansion of the volume of credit. This expansion of the volume of credit, again, depends upon two essential conditions: the greater readiness of the banks to lend, and the greater readiness of the business man to borrow, or what is almost the same, to invest. The question as to how this double readiness comes about at the beginning of the recovery period does not concern us here, as it would take us deep into the analysis of the causes of the trade cycle. It is important, however, to recognize at this point that the low rate of interest prevailing at the beginning of the upward swing increases the readiness to invest. Projects which were not profitable at a rate of interest of 5% become profitable when the rate of interest falls to 4%, and the further the rate of interest falls, the wider becomes the range of profitable investments for capital. And this brings us to a problem which has become specially important during the present depression: the problem whether the low rate of interest exercises always and under all conceivable circumstances the instigating influence attributed to it. The present experiences show clearly that it does not, for even a rate for short-term money of 1% or less fails to lead to a corresponding increase of investments. It has to be noted, however, that it is hardly conceivable that an unusually low rate for long-term credits, i.e., on the capital market, would not be a strong stimulus for an increase of investments. This is especially to be expected in the building industry. There is nobody who would not take advantage of a long-term rate of 1% for building a neat little villa. The building industry is, indeed, playing an important
rôle in turning the tide of the depression. It is obvious, however, that the transference of the abundance of the money market to the capital market is an essential prerequisite for economic recovery, a fact which has a special bearing on the recovery programmes of the present day.

The rise in the volume of investment—this much of the mechanism of the economic recovery is already clear—gradually sets the whole economic system in motion in a nexus of reciprocal reactions leading finally to a mobilization of all the reserves of material and human factors of production and thereby completing the picture of the boom. Production and employment increase and with them the national income and the national wealth. But it should also be quite clear at this point that this rise appears first and foremost in those industries which produce the capital goods necessary for the expansion of the productive equipment (machines, iron and steel, building materials, &c.) and are thus known as capital goods industries in contrast to the consumption goods industries. Modern trade-cycle theory is indeed unanimous concerning the fundamental principle that the alternation of boom and depression is first and foremost an alternation in the volume of long-term investments and thus in the activity in the industries producing capital goods. All economic phases, and especially the boom, are wont to attain their maximum effect in these industries: hence the striking increase in the consumption of iron and coal.

The animation of the whole economic process which characterizes the period of recovery leads further to a rise in prices, not only in single branches of the economic system or in particular markets, but as a rule throughout the whole economic system, so that certain economists (Hahn, for instance) have interpreted the general rise in prices as the most important symptom of the recovery. This general rise in prices has, at the first glance, something paradoxical about it, as it is during a period of increased production that it takes place. Indeed, such a rise in prices would not be logically possible, if the

2 In the exact assessment of this rôle there is still a great deal of divergence of opinions. One holds (for instance, Spiethoff, *Boden u. Wohnung*, 1934) that building reaches its peak at the end of the depression and in the early stages of the recovery. This also seems the view of J. M. Clark, *Strategic Factors*, &c., pp. 27-33. Other authors (especially A. Aftalion, *Les Crises Périodiques de Surproduction*, Paris, 1913, vol. 1, pp. 127-131) believe that building is essentially a boom industry. In the opinion of E. Wagemann, the Director of the Institut für Konjunkturforschung in Berlin, residential construction is essentially a depression industry, while public building has been concentrated in the past in times of boom (E. Wagemann, *Einführung in die Konjunkturlehre*, Leipzig, 1929, pp. 124-126). Wagemann’s view is confirmed by experience and reflection, though it must be admitted that the problem is a complicated one. In English literature, it seems to have been curiously neglected. Cf. A. K. Cairncross, “The Glasgow Building Industry (1870-1914),” *The Review of Economic Studies*, vol. 2, October 1934, and W. H. Newman, *The Building Industry and Business Cycles*, Chicago, 1935.
tendency of prices to fall owing to the increased output of goods were not counter-balanced by tendencies on the money side for prices to rise, either through an increase in the amount of money and credit, or through a speeding-up of the velocity of circulation of money. We come very near to understanding the essential nature of the trade cycle if we imagine the boom as a small inflation and the depression as a small deflation, and thereby link up our conception with ideas that have become familiar to us through the great currency upheavals of recent times. The overheating of the economic machine, the rise in prices, the urge to get out of money into goods and into real property, the speculation fever, the tremendous building activity—all that we know from the time of the great German inflation recurs in a lesser degree during every economic boom.

We also know from our experiences of the inflation that while the rise in prices is indeed general, it is by no means uniform; it is, we might say, general but not universal. The prices of raw materials and of half-finished goods are apt to rise more quickly than those of finished goods, and wholesale prices more quickly than retail prices. Above all, the increases in the rates of wages and of interest, that is, of two very important prices, usually lag behind the general rise in prices until the last stages of the boom, while the incomes of government employees and of rentiers remain right behind. The gradation in the increase of prices also implies a corresponding stratification of incomes. This lag in the various groups of prices and incomes is, as will be shown later, an extremely important link in the mechanism of the boom. As a consequence of these changes in the price and income structure it is obvious that consumption must also undergo typical changes: the degree of change will depend in each individual case on that factor which the economist calls "elasticity of demand," which denotes the degree, varying with each individual commodity, in which demand reacts to changes in the consumers' purchasing power and changes in prices. The greater this elasticity is, the greater the variations to which the consumption of a commodity will be subject during the trade cycle. When income is rising during the boom, the increase in purchasing power affects first and foremost those goods of which one consumes little when times are bad and much when times are good. The consumption of bread is therefore more constant in general than the consumption of gramophone records. That is why boom periods are often the times when certain articles, hitherto confined to a few persons as
being articles of luxury, find their way to the masses. A particularly good example of this may be seen in the recent boom period from 1925-1929, especially in the United States. It was during this period that the automobile, for instance, first became a popular means of transport, and gramophones, wireless sets, vacuum cleaners, and similar articles also benefited from this circumstance.

Finally, we may mention that in the course of the boom, owing to the rise in prices, the increasing demand of industry for raw materials, and the increased importance of the home market, there appears a tendency towards an adverse balance of trade, with a corresponding tendency to an increase in foreign indebtedness (that is, a tendency to borrow more from abroad than is lent abroad).

(2) The Crisis or the Acute Reaction.

At this juncture we shall leave out of account the question of what forces, sooner or later, finally bring about the end of the boom, and shall confine ourselves to describing the symptoms in which this turning point is expressed. At the top of the list we must place the tensions on the money and capital market which appear in the course of the boom period, and finally lead to those disruptions which we call a crisis, an expression which we shall examine more closely in the next paragraph. The difficulties of financing investments increase, and with them the rate of interest rises, reflecting the decreasing readiness of the banks to give credit (a reluctance concomitant with impaired bank liquidity), as well as the continued and now more and more pressing urgency of the need of credit—all phenomena which are summarized in the term "shortage of capital." The rising rate of interest on the money market makes speculation on the stock exchange more and more difficult, the more so since the stock exchange is quickest and most nervous in registering the change in the outlook. Security prices go down, and the more the acute reaction assumes the character of a crisis, the more dramatic and the heavier is the crash in prices. New issues fall to a minimum, thereby stopping up one of the principal sources of industrial finance. As it is no longer possible for industrial undertakings, which have got into debt with the banks owing to the enlargement of plants during the boom period, to liquidate these debts by the issue of new shares or debentures, and so to "fund" their debts, the banks make the unpleasant discovery that a large part of their advances are "frozen," that is, that they cannot be called in for some time, and that no further turnover of the corresponding deposit accounts takes place. The banks become anxious
and still less willing to give credit, which in the end makes the situation still more acute. The position of the banks may immediately become precarious, if they have invested a large part of their assets in securities whose decline in value now affects them directly, and if, in addition, their depositors become panic-stricken and cause a "run." At this moment the crisis begins to subside into its worst and most dramatic form: the credit crisis.

The more or less sudden contraction on the money and capital market leads first of all to a cessation of the expansion of production, and then to a decline in production, with its accompanying phenomena of increasing unemployment, fall in incomes, collapse of firms, and drop in prices. The drop in prices, combined with the rise in the rate of interest, the contraction of credits, the decline in the velocity of circulation of money, and the resultant repercussions on production, produces an unhealthy state of affairs which we may describe as a deflation, with the same justification as we called the boom period a small inflation.

(3) The Depression.

The acute collapse, the particularly violent form of which we call a crisis, gradually passes into the state of chronic reaction known as the depression, which represents in general a reversal of the boom. It is characterized by the fact that the collapse of the towering edifice of prices, production, and credit, erected by the boom, is gradually retarded and finally brought to a standstill. The economic process then generally lingers for some time at this extreme low level. The liquidation comes to an end, the weakest firms are eliminated, all kinds of irregularities which had crept in during the optimistic period of the boom, are now recognized as impossible of continuance, and are gradually tightened up, production is cut down to the uttermost, security prices are practically halved, and stocks are cleared. In short, the general clean-up is now at an end, but the new upward trend does not follow immediately. The end of the liquidation phase on the one hand and the falling off of production and of the spirit of enterprise on the other now lead to a continuous decline in the interest rate, especially for short-term credit (money market), in which available money is now invested because of the fear of long-term investments. With this glut of funds on the money market, the interest rate for short-term credit may sink to 1% or even less, as happened in Switzerland and other countries during the depression of 1930. The official rate of discount of the central banks is also correspondingly low.
PHENOMENA OF ECONOMIC FLUCTUATIONS. 29

It is at this point that the full force of the effect of the collapse of the boom upon the labour market is apt to be felt, and the unemployment figures are driven up above the level prevailing at the time of the acute reaction. This is in the main to be explained by the fact that for some time many contracts still run on and firms try to keep their employees going by producing for stock and by working shorter hours. The output of the capital-goods industries, which reached a particularly high point during the boom period, now drops inversely to its lowest level, and only improves when at the beginning of the upswing there is an increase in building activity, which pre-war experience shows to have reacted at a very early stage to the stimulus given to new investment by the low interest rate. In Germany there was before the war a correspondingly early rise in the values of mortgage debentures. This rôle which building-production played before the war as a branch of production, which used to expand as early as at the later stage of the depression, is so important that we must earmark it for future theoretical analysis. It will be clear even at this stage that it acted as an important brake on the depression in the same way as it had a modifying influence on the boom period by its early decline. An important safety-valve for production when the home markets are stagnant has hitherto been the export trade, through which many industries are able at such a time to find an outlet to compensate for the lack of demand at home. This safety-valve function of the export trade is based in general on the fact that in spite of the increasingly international character of the trade cycle, the world market, by reason of its size, of the national nuances in the course of the cycle, and of the difference in the economic structure of the individual countries (industrial states—agrarian states!), offers many possibilities of getting round the depression in the home market. The best historical example of the fact that the depression has a tendency to stimulate a favourable balance of trade was the development of the German export trade in the year 1931, when under pressure of the crisis an export surplus of nearly 3 milliard RM. was achieved.

§ 4. ECONOMIC CRISES.

Scientific research into the phenomena of economic fluctuations started out from the study of the crisis. This is understandable when we consider that the crisis is the most marked expression of...
the fluctuations of economic equilibrium and must be of particular interest to the economist because of the practical need to help and to alleviate the situation or to prove or repudiate reproaches levelled against the capitalist system as a result of the havoc wrought by the crisis. To-day, when we are in the midst of the most devastating of all economic crises, this starting-point is more comprehensible than ever, and we can also understand better than we did before that economic crises may claim a special treatment, even though we do not renounce our hard-won point that crisis is only a phase within the trade cycle. Once we understand that point, we have made an important advance on the earlier idea that the crisis is an accidental disaster in economic life. The attempt to explain the recurrence of such accidents led to the building up of special "theories of the crisis," while according to the modern conception the explanation of crises must be deduced from the explanation of the trade cycle, and there is therefore no room for a special theory of the crisis outside of the general theory of the cycle. To explain periodic economic crises means, according to the idea prevailing to-day, to explain the boom and the forces leading to its collapse.

This is not, however, to dismiss the question as to whether every crisis is necessarily a cyclical crisis, or whether there may not also be crises which are essentially independent of the cycle. As far as agrarian crises are concerned, this question has already been answered in the affirmative. But it is also possible to imagine crises of the whole economic structure, which come in from outside, and cannot be construed as a reaction to a preceding boom. The causes may be political or natural catastrophes. The probability of such "exogenous" crises is not, however, very great. We are brought face to face with the intricate relationships of the innermost heart of our economic system when we remember that a political catastrophe like the Great War or a natural catastrophe like the Japanese earthquake of 1923, instead of retarding economic life, generally enlivens it, and thus tends to bring about not a crisis but a boom. Certainly catastrophes lead to an impoverishment of the economic system, but we must guard against confusing impoverishment with a crisis, all the more so as this confusion is an extraordinarily common one. If we agree to understand by an economic crisis a temporary paralysis of the economic process which leads to a disturbance of the exchange apparatus with its consequences of over-production, surplus stocks, and insolvencies, we realize that it is characterized not by a scarcity but by a superfluity of goods, while the hallmark of impoverishment is a deficiency of goods. This deficiency of goods generally spurs on the economic
machine to make the highest number of revolutions of which it is capable, as was very markedly the case during the war. An economic crisis is therefore not an expression of shortage but of abundance or—to put it better—of what seems to us “abundance” because of the temporary paralysis of the process of exchange and of the economic process in general. That it leads in the long run to an impoverishment of the economic system is self-evident, but this does not affect the question of the origin of crises, which is the question we are discussing here. Nevertheless the possibility of non-cyclical crises cannot be flatly denied, for it is precisely these that are meant when it is asserted that the present world-economic crisis is not merely a cyclical but a structural crisis, which, it is alleged, reflects the inner rottenness or instability of the economic structure and is accordingly to be described as a permanent crisis. To prove this people refer loosely to the presumed inevitable collapse of the world-economic system, the emergence of anti-capitalistic tendencies, the ossification of capitalism, the political and economic chaos of the world, the technical revolutions of the last ten years, and much more of the same kind. The question as to whether we are justified in interpreting the present world crisis as a structural and permanent crisis has already been discussed in the introductory chapter and something more will be said about it later. In any case it cannot be denied that it started from a cyclical crisis.

To revert to the “normal” cyclical crisis, we shall now seek to answer the question whether the reaction which follows the boom need necessarily always take the form of a crisis. The answer to this question depends on the definition which we give to the term crisis. If we reserve this expression for that form of the reaction which is marked by the suddenness and the stormy nature of the collapse, we shall find many examples, in the very recent history of business cycles, of reactions which were no crises in this dramatic sense of the word. Real crises happened in Germany in the years 1857 and 1873 and in the United States in the year 1907, whilst the cyclical reaction in Germany in the year 1907 showed just as few marks of a crisis as in the years 1913-1914. There can of course be no doubt as to the real crisis character of the present world-economic crisis. As we base the meaning of crisis on the characteristic signs of the “suddenness” and the “stormy nature

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4 The fact that the crises of the pre- and early capitalist period were generally such non-cyclical crises, arising out of political or natural catastrophes or adventurous speculations, will be specially emphasized in the next chapter.
of the collapse," we cannot of course possibly claim that this definition has any precision. How fast and how far must security prices fall before we can speak of a crisis? How great must the number of bankruptcies be? In many cases, therefore, the decisive factor must be the feeling whether the reaction is accompanied by a definite credit crisis or not. It is therefore understandable that some economists\(^5\) should call every transition from boom to depression a crisis, and that, on the other hand, an authority like Mitchell\(^6\) is emphatic in refusing to apply the term "crisis" to any definite cyclical phase.

The cyclical crisis, like the entire trade cycle, must of necessity be conceived as a "total" crisis, which differentiates it from the crises of isolated branches of the economic system (partial crises), which can be traced to the most varied causes and are of no interest in this connexion. Partial crises (a crisis in shipbuilding, in the English coal industry, in vine-growing, &c.), may naturally crop up in any phase, though they are apt to be modified in the boom phase and made more acute in the depression phase. The grave crisis of the American bituminous coal-mining industry (in Kentucky and West Virginia) during the recent unprecedented boom in the United States is a significant example of the lack of connexion between the trade cycle and the emergence of partial crises.\(^7\)

The fact that the cyclical crisis is "total" in character does not prevent it from appearing at times in different forms and coming to a head in this or that sector of economic life. In so doing it would of course lose its character of a "total" cyclical crisis and become a mere partial crisis, if it remained confined to that particular sector. This must be kept in mind when considering the numerous attempts to find a classification of types of crisis.\(^8\)

For it is either a case of partial crises, when any attempt at classification would be meaningless since it would amount to nothing more than a catalogue of all the branches of economic activity; or it is a question of "total" crises, in which case the only purpose a classification can have is to show the possible variations of the crises with respect to their starting-point and climax, the danger here being that the character of "totality"

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\(^7\) Even stock-exchange crises and financial stringency may emerge without connexion with the trade cycle. Examples: Germany, 1877; England, 1878; Argentina, 1891; United States, 1896; China, 1912, &c.

may be obscured. With this reservation in mind, we reproduce Spiethoff's classification, which distinguishes the following types of crises:

1. Credit crises, which are characterized by the collapse of the credit system and the general scramble for cash.
2. Speculation crises, whose sphere of influence is that of the pricing process. Their sub-divisions are:
   (a) The stock-market crisis, with over-speculation in security transactions.
   (b) The commodity-market crisis, with over-speculation in commodities.
3. Promotion crises, arising out of over-speculation in the promotion of new enterprises, based on wrong expectations or not fully financed.
4. Capital crises, arising out of over-speculation in loans and investments in undertakings which have been begun, but for the completion of which there is an insufficient supply of capital available in the economic system.

Among these various types of crises the credit crisis deserves most attention, because it is representative of the crisis in its most acute and devastating form. How it comes about and how it usually runs its course has been shown in a particularly vivid manner by the recent credit crisis in Germany in the summer of 1931. The result of the Reichstag elections in the autumn of 1930 had, by reason of the alarming gains of the radical parties, especially of the National-Socialist party, deeply shaken confidence in the future course of political and economic events, at the same time leading to a noticeable disturbance of the German credit system. Following on this the distrust of the creditors (particularly of the foreign creditors) of the German banks became daily more acute in the early summer of 1931, under the influence of the failure of the Oesterreichische Kredit-Anstalt in Vienna and the revelation of the gravity of Germany's situation by the Hoover Moratorium. The Oesterreichische Kredit-Anstalt collapsed on the 11th of May; from the 23rd of May credit-withdrawal notices began to pour into Germany from abroad like an avalanche; on the 20th of June, Hoover, the President of the United States, announced the one-year moratorium on political debts, but as the matter had to be debated for a fortnight with the French Government, the psychological effect of Hoover's announcement was not only entirely wasted but was even the exact opposite to what had been intended, as the attention of the whole world had now
been drawn to Germany's desperate plight. The withdrawals of credit—strengthened by the flight of capital at home—went on increasing. Between the end of May and the 1st of July withdrawals from the Reichsbank in gold and devisen amounted to 1400 million R.M., beside the 500 million or so which the banks had drawn out of their own reserves. To increase the tension there then came the failure of a big wool concern (the Norddeutsche Wollkämmerei und Kammgarnspinnerei) in Bremen. The desperate efforts of the Reichsbank to get new credits from abroad could no longer avert the disaster. On 12th July the Darmstädter and National Bank, which had suffered particularly heavy losses through the failure of the Norddeutsche Wollkämmerei had to declare itself insolvent. On 13th July the run spread to all the banks.

As the Reichsbank failed tragically to recognize the need of the hour—the immediate provision of any amount of cash required regardless of reserve regulations—the banks could only satisfy the demands of a portion of those who wished to withdraw their money, which only increased the panic. Finally, business over the counter was stopped entirely (a bank "holiday" was proclaimed), to be gradually resumed later. As the Reichsbank was unfortunately very slow in realizing that the greatest liberality in the placing of ready money at the disposal of its customers was the most effective and least harmful means of combating the panic, the German economic system had for more than a fortnight to suffer the agony of, first, a complete and, later, a partial crippling of its whole financial machinery. After many, to some extent very useful, relief measures (the establishment of a transfer association "Überweisungsverband," and of the "Acceptance and Guarantee Bank," the guaranteeing by the Reich of the deposits of the Darmstädter and National Bank, the taking over of the preference shares of the Dresden Bank, &c.) and after the Reichsbank had raised its discount rate on 1st August to 15%, bank payments were resumed, partially on 3rd August and wholly on 5th August. The resumption proved a complete success. Only the withdrawals from the savings banks continued till the end of the year, temporarily causing great anxiety. The stock exchanges, which had been closed on 13th July, were not reopened until 3rd September, and were reclosed after a few weeks, on 21st September, until further notice, as a result of the new shock of the credit crisis in Great Britain.

The credit crisis of Great Britain was a direct result of the German credit crisis, which indeed shook the credit
system of the whole world. As Britain had very large sums involved in the short-term credits which were "frozen" in Germany, international distrust now turned towards that country also, in a way which increasingly took on the characteristics of a panic. Repeated though moderate increases in the discount rate of the Bank of England failed to stem the outflow of short-term money, and even the aid obtained from repeated raisings of credits could not close the hole which had been torn in the British gold reserves, while the publicity given to the great deficit in British finances and the growing agitation for the devaluation of the pound and the abandonment of the gold standard, caused the distrust to become greater and greater. In face of this "run" by the creditors and after no less than 200 million pounds had been paid to creditors abroad within eight weeks, the British Government announced on 20th September, 1931, the suspension of the convertibility of notes into gold and thereby of the gold standard. The value of the pound was left to the free play of supply and demand in the foreign-exchange markets, which resulted in a short time in its depreciating by almost a third of its value.

The British credit crisis differed from the German credit crisis substantially in that in the British case there was absolutely no run of the home creditors on the banks, and thus no crippling of the internal financial machinery. The run remained confined to the foreign creditors. While Germany succeeded in a short time in re-establishing to some extent the value of the mark by a number of artificial means (compulsory exchange control, legislation to prevent the flight of capital, standstill agreements), in Britain the external stability of the currency was abandoned. Other countries also were drawn into the international credit crisis and a number of them let their currencies follow the fall in the pound, particularly the Scandinavian countries and the British dominions. Later Japan also entered this group of countries abandoning the gold standard. At the end of the year the credit crisis flared up in the United States, where the public were getting more and more nervous, and very many of the smaller banks fell victims to the creditors' panic. The full explosion came here more than a year later in the spring of 1933, just when the new Roosevelt administration took office. As is invariably the case, the avalanche was started by a minor accident (the difficulties of the Union Guardian Trust Company of Detroit), but out of this there grew a panic which forced every bank in the country, including the twelve reserve banks themselves, to close their doors. The essential difference between the credit crisis in the United
States and in Europe was that the American crisis had all the characteristics of a real panic and that it was absolutely confined to an internal drain, the flight of capital, and sudden withdrawals of foreign funds being almost totally absent. Even in France the nervousness was noticeable in anxious withdrawals, hoarding of cash, and a few bank failures (particularly that of the Banque Nationale de Crédit).

The credit crisis of 1931 was without any doubt the most dramatic collapse of the kind that the world had ever seen. The consequences made themselves felt in a general intensification of the crisis, in an increase in the hindrances to the functioning of the international financial machinery (exchange control, clearing agreements, &c.) and in a further shrinkage in the volume of production.

The closest great historical predecessors of the credit crisis of 1931 were the American credit crisis of 1907 and the Japanese one of 1927. The first-named in particular won a certain measure of fame as the events of the year 1907 were mainly responsible for the reform of the American system of banks of issue by the Federal Reserve Law of 1913. The American credit crisis of 1907—christened the "Knickerbocker Crisis" after the Knickerbocker Trust Company, the institution which was principally concerned—led to the wholesale suspension of payments by the American banks, to the shooting up of the rate of interest for call money to fantastic heights (as high as 125%) and, lastly, to the utilization of various substitutes for cash payments (particularly the Clearing-house Certificate).

The real essence of the credit crisis is the collapse of the psychological foundations of our economic system, which cannot exist without a definite minimum of confidence, as it depends on credit—which really means confidence—in all its forms. The modern credit system cannot stand a sudden loss of confidence, since it is extremely sensitive and has been shaped according to the utmost limit of pressure which it can stand. If the psychological net tears, the experience of every crisis teaches us that there is only one method of restoring equilibrium at once: the promptest and most unsparing readiness of the banking system to repay every deposit in cash. This readiness presupposes that the central bank, unreservedly and without hesitation or petty

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chicanery, should place at the disposal of the banks all the cash desired by the panic-stricken public. The dangerous hesitation which central banks often betray in stamping out the fire of the banking crisis has perhaps much to do with the general failure to realize cold-bloodedly that this crisis is at bottom nothing but the sudden preference on the part of the public for one sort of money (cash) instead of another (bank money). This momentary metamorphosis, which amounts to an atavistic recession, can, if given free play, have disastrous consequences, but the widespread belief that it involves an inflation of some kind is really unfounded. There is therefore no reason why the central bank should not apply its extinguisher instantaneously and liberally.

The more quickly this "bold generosity" is declared, the less—as Anglo-American banking literature is never tired of recommending from first-hand experience—it will require to be used, the more quickly will the credit crisis be overcome and the less marked will its repercussions be on the circulation and production of goods. Again and again experience teaches that at such times of panic the public only wants the money it cannot get, while it does not want the money which it can get. The longer one hesitates, however, the more fatal will these repercussions be, the more difficult it will be to overcome the crisis, and the greater sacrifices it will cost when one is eventually forced to do what one should have done in the very beginning, viz., keep the banks open to satisfy the claims of everyone desiring payment. This old truth was forgotten in Germany in the summer of 1931.

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2 It is known that the Deutsche Bank effectively prevented a run of deposit creditors at the beginning of the Great War, on Helfferich's advice, by answering the first rush with the opening of new counters for the paying-out of accounts and thereby at once stopping the panic.
CHAPTER III.

THE HISTORY OF CYCLES AND CRISIS.

§ 5. ECONOMIC CRISSES DURING THE EARLY PERIOD OF CAPITALISM.

Any account of the historical course of cycles and crises is always made very difficult by the fact that even for the nineteenth century, and still more for the earlier period, we are dependent upon very scrappy and inaccurate data, which are for the most part based more upon impressions than upon economic statistics. We must therefore exercise so much the more caution in attempting to interpret the mechanism and the character of the cycles and crises which occurred during the early period of capitalism. In spite of the inadequateness of these data, however, we are quite justified in considering that the crises which have been handed down to us from the seventeenth and eighteenth centuries were more or less fortuitous accidents occurring outside the actual production process, and that they lack the totality as well as the cyclical nature of the crises of the capitalist age. Accordingly, there is practically no sign of any real economic cycle during these centuries, the crises which occurred during them being always mere speculation crises, centring sometimes round the wholesale trade and sometimes round the securities market. At first these crises characteristically affected only the small capitalist superstructure of the economic system (which was, after all, feudal and pre-capitalist), but their influence extended as the superstructure grew, until finally the whole of economic activity was drawn into the stream of the capitalist economy. It is again quite in accordance with our idea of the recklessness, the greed for profits, and the love of speculation of the early period that the speculation crises of which history tells us should appear to have been unusually violent. This has always made them interesting, of course, more from the psychological and human point of view than from the economic. We shall therefore restrict our description of them to a very few references.¹

A speculation fever of classical purity and also of irresistible humour was the tulip crisis which afflicted Holland when a speculation mania broke out in the year 1637, the commodity being, curiously enough, tulip bulbs. This is probably the strangest "boom" the world has

ever seen. Less naive but much more serious was the crisis which broke out in France in 1719 when the "bubble" concerns founded by Louis XV's Scottish financier, John Law (the "Banque Générale" and the "Mississippi Company"), collapsed, after a period of unprecedented "booming" of their shares. This speculation crisis was not isolated but was part of an international financial crash. Law's passion for promoting enterprises was paralleled in England by the so-called "South Sea Bubble," in which the shares of the South Sea Company played the same rôle as the Mississippi shares had done in France, with the result that the speculation mania soon spread to other doubtful objects of speculation (so-called "bubbles"). In these concerns the unscrupulousness of the promoters seems to have been surpassed only by the credulity of the public. In Holland and Hamburg also there appeared similar speculation movements at about that time, but as they were far from approaching the degree of speculative frenzy in England and France, they did not exhibit such grave crisis symptoms. All accounts of the English and French speculation mania, and the subsequent financial collapse in both countries, give one the impression that in both cases the excessive gambling must have bordered on madness. Especially did the rise and final crash of Law's concerns in Paris make a deep impression on the memory of the time. The familiar "paper-money scene" in Part II of Goethe's Faust was a last echo of that deep effect.

The Law boom and the subsequent crisis of 1719 is of special interest, as it reveals, in a most conspicuous manner, the inflationary origin of every boom and every crisis following a boom, a point which was curiously neglected in the older literature on the history of cycles and crises, but which has recently been brought very forcefully into the foreground by Mr. Keynes. Of all the "one-sided interpretations of history" (other examples being the Marxian materialistic interpretation and the military interpretation), the monetary interpretation, which stresses inflations and deflations as the most important motive forces of the dynamics of history, contains at least as much truth as any other attempt to simplify history. It should be noted, moreover, that this is also a point of view which is very much in sympathy with the general trend of this book.

§ 6. CYCLES AND CRISSES IN THE NINETEENTH CENTURY.

With the beginning of the nineteenth century we enter the second phase of the history of cycles and crises. It is characterized

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2 J. M. Keynes, A Treatise on Money, London, 1930, vol. 2, chap. xxx. Mr. Keynes draws attention also to the very interesting investment boom of 1692-1695 in England, largely instigated by the recovery of a Spanish treasure ship. As we shall see later, the machinery for starting a boom has been much modified since.

by the fact that it is at this time, with the development of capitalist economy, first in England, then in the other increasingly industrial States, that the phenomena of fluctuations which we have recognized as typical of our economic system, first begin to emerge. And the crises, which in the early period of capitalism were of the nature of unregulated speculative excess, now become a definite part of the general economic rhythm. Crises naturally first took on this character in England, as that country was first to develop modern industrial capitalism. Any account of the crises and cycles of the nineteenth century must therefore give most attention to the economic events in that pioneer country of capitalism.4

The Cycle Period up to the Crisis of 1825.

Following on the Napoleonic wars there had occurred in England in 1818 disturbances in the nature of a crisis which bear a certain resemblance to the upheavals of 1921, which were directly connected with the World War. Further similarities with our recent experiences may be found in the general boom in economic activity beginning in 1822, which ended suddenly in the crisis of 1825, just as the boom of 1925-1929 ended in the world crisis of 1930. The boom of 1822-1825 may be described as the first real capitalist boom. All that is typical of such a boom was then, for the first time, represented almost to the full extent: an initial glut in the capital market, with a low rate of interest, the resulting increase in investment and in the production of capital goods, the expansion of credit, the rise of prices, and, linked up with all this, over-speculation on the stock exchange. The objects of the increased investment activity were at that time mines, factories, ironworks, shipbuilding, and canals; railways being reserved for the next cycle period. The collapse of this boom took place in the year 1825. The fall of prices was drastic in some cases (for instance, the price of wool dropped 60%). The crisis became particularly acute with the failure of numerous provincial banks (the so-called "country banks") and the extraordinary fall in the price of shares. It is worth noting that the Bank of England, during the whole of the boom, kept its discount rate unchanged at 4%, which forced it, at the beginning of the crisis, to adopt precipitate measures of credit rationing. Discount policy in its modern sense was then still unknown. It was first developed in England in the following decades, as the fruits of experience. It is also worth noting that in the year 1825 the Bank of France came to the help of the Bank of England with a substantial loan: the first act of international cooperation between banks of issue.

The Cycle Period from 1826 till the Crisis of 1836.

The long and heavy depression connected with the crisis of 1825 ended in 1830, and a way was thereby made open for a new period of

recovery, which seems to have been greatly favoured by a series of good harvests. A decisive part was played, however, by the increase of railway construction, the building of new canals and the opening up of new coal mines. The increase in the volume of investments was accompanied as always by an increase in security issues and a renewed expansion of credits. A new and important factor was the founding of numerous new banks, not only of issuing banks (country banks) but also of joint-stock deposit banks, which were now allowed for the first time and became henceforward an increasingly important instrument for the expansion of credit and at the same time for the abuse of credit. Moreover, it was significant that parallel to the English boom there was a boom in the United States, the collapse of which gave the first impetus to the collapse in England. Railway construction, land speculation, and inflation of credit characterized the boom in the United States, which throughout the century remained a field for experiments with note-issuing banks, and in consequence a hot-bed of speculative excesses.

The crisis which broke out in the year 1836 was on this occasion, for the first time, ushered in by a rise in the rate of discount of the Bank of England (to prevent the flow of gold to the United States). The collapse of prices followed at the end of 1836. Simultaneously there set in a serious credit crisis which emanated from Ireland, but was very soon checked in England by the energetic support given by the Bank of England to the other English banks. By the policy of raising the rate of discount and the courageous application of measures for the immediate combating of the credit crisis, the Bank of England on this occasion, for the first time in the history of banks of issue, established that rule procedure in financial policy which has been followed ever since, on repeated occasions, in England as in other countries, in times of crisis.

The Cycle Period from 1837 till the Crisis of 1847.

In England, the United States, and to some extent also in France the crisis of 1836 was again followed by a grave and wearisome depression, which was made worse by a number of bad harvests, the collapse of a gigantic cotton speculation in America, and credit crises in France and Belgium. Germany at that time still played too slight a part in world economic affairs and was still too much at the beginning of her industrial development to be perceptibly influenced by the violent economic spasms in Western Europe and the United States. At that time Germany's position was that of the economically cautious country with steady business trends—a position which was later to fall to France, when that country, partly under the influence of a falling birth-rate, exchanged its progressive economic activity for a cautious conservatism. Germany is a country which was very late in waking from economic and political lethargy, but which, urged on by an extraordinarily heavy increase in population, developed an economic activity, behind which many people in France are to-day inclined to detect a mysterious and typically German dynamic force, not realizing in what a short time these two countries have exchanged their economic spirit and their place in world economy under the influence of external factors. Surely this is an example of the fact that we should not theorize too much about such matters, and especially that we should not think that anything lasts for ever, and so lose our sense of historical perspective.
The long-drawn-out depression which followed the crisis of 1836 was probably one of the worst periods of distress ever suffered not only by England, but also by all the industrial countries. Unemployment at that time reached an extraordinarily high figure, and while provisions were made dearer by bad harvests and agricultural duties, public assistance was practically non-existent. The political ferment expressed itself not only in the formation of radical parties, but even in riots and acts of violence (the Chartist movement). The distress of the people was also reflected in the fact that while the marriage-rate dropped, the figures of crime rose.5

In England as on the Continent the recovery did not begin until the 'forties, when it was again favoured by good harvests and by the opening up of the Chinese market, as a result of the "Opium War" between England and China. The feverish activity in the promotion of new companies that now set in again chose railways with renewed zeal as its object. Connected up with this there was the expansion of the iron and steel industry and of coal mining. This upward movement in the industries concerned with producers' goods then spread to the industries producing consumers' goods, especially to the textile industry, which at that time had its great boom period in England. The recovery continued in spite of the bad harvests of 1845 and 1846, and did not break down until the year 1847. Germany took its full share in this boom, but was practically unaffected by the subsequent crisis, although of course the depression both increased and lengthened the political unrest of the year 1848 in Germany as well as in France.

The Cycle Period from 1848-1857.

The recovery period which began in 1852 was influenced first and foremost by the sensational discovery of gold in California in 1848 and in Australia in 1851, which opened up new overseas markets and extended the monetary basis of economic activity. It is not surprising, therefore, that this boom period should be even more than before encouraged and influenced by the stormy development of the United States. The building of railways was continued, and the steamship and the telegraph also came in. At the same time the first great commercial banks were established on the continent of Europe (the Crédit Mobilier in Paris in 1852, and the Darmstädter Bank in 1853). The Crimean War, which broke out in 1853, served rather to stimulate than to hinder the boom, which was more international than any of its predecessors. The inflationary nature of the boom was clearly expressed in the rise in prices, which, according to English statistics (Sauerbeck's index), was about 50% for the period from 1849-1854. In Prussia the active note circulation from 1855-1856 rose from 23 to 51 million taler. The Crédit Mobilier paid out a dividend of 40% in the year 1855, and the dividends of many other companies were not far behind. For duration, international scope, and intensity it was a boom such as the capitalist world did not experience again for another fifty years. The crisis of 1857 started in August with the crash of the New York capital market, and then spread to England and the Continent and even to South America and Australia. If the boom had by its international extent already registered the ever-growing spread of capitalism, more countries

5 On these and similar consequences of cycles and crises cf. Dorothy S. Thomas, Social Aspects of the Business Cycle, London, 1925; and Maurice B. Hexter, Social Consequences of Business Cycles, Boston and New York, 1925.
than ever were now involved also in the crisis, the extensiveness of which was paralleled by its gravity and intensity. As in the crisis of 1847, the limitation on the amount of the note issue which had been imposed by the celebrated Bank Act of 1844 had again to be suspended in England.

The Cycle Period from 1858 till the Crisis of 1866.

The new boom began in 1861, and again it was characteristic that the outbreak of the American Civil War (1861-1865), while causing considerable disturbances in world economic affairs, stimulated rather than retarded economic activity. One of the worst disturbances caused by the Civil War was the "cotton famine," which forced the cotton industry in Europe substantially to cut down production, but did not prove a lasting or serious hindrance to the boom as a whole. The effect of the famine was all the less felt as the era of free trade, which was at this time introduced into Western and Middle Europe and which lasted till the 'seventies, proved to be a recovery factor of the first rank. Again the construction of railways and the iron and steel industry were the foci of the promotion of new enterprises and of investment activity. A further outlet was now provided by building activity, especially in France.

After the boom had been interrupted in 1864 by a credit crisis, which, however, had scarcely any effect upon the movements of prices or production, a reaction set in in 1866. It was only in England that this assumed the nature of a serious crisis. It ran its course on the Continent without any marked upheavals, notwithstanding the war of 1866 in Germany.

The Cycle Period from 1867 till the Crisis of 1873.

The boom which preceded the crisis of 1873 was as remarkable as the crisis itself and once more confirmed the law of the balance of action and reaction which operates in economic fluctuations as elsewhere. If England and France had hitherto been the leaders in the cyclical movement, the storm centre now seemed to shift, and to move to Germany and the United States in proportion as these countries began to catch up with England and France in industrial development. There is, however, no doubt as to the special importance of the fact that during this period both Germany and the United States attained their national unity following on a successful war (the American Civil War of 1861-1865 and the Franco-Prussian War of 1870-1871), a fact which gave an immense impetus to their economic development. This was particularly the case in Germany, where the stimulus provided by the French war indemnity played its part, while this same circumstance greatly retarded the boom in France, and was also partly responsible for that country's being the only one of the Great Powers to be spared the crisis of 1873.

If we now turn to the development of the United States, we find that the most striking event is the rapid expansion towards the Far West which set in after the Civil War and was accomplished in an astonishingly short time. The most important aid to this expansion was the construction of the great transcontinental railways, among the first of which was the Union Pacific, completed in the year 1869. The

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railways again caused a mania of speculation, in which vicious promoting and stock-exchange manoeuvres played a great part. The railway mileage was a little more than doubled between 1860 and 1873. The output of pig-iron in America increased from 1.6 million tons in 1870 to 2.5 million tons in 1873. The industries in the North-east of the United States sprang up rapidly and gave a still greater stimulus to the investment and promoting fever. The improvement and cheapening of the production of steel by Bessemer (Bessemer's converter) did the rest, by making it possible to use steel rails in the construction of railways. In Pennsylvania, where the first petrol wells were sunk, petroleum entered upon its triumphant career through the world. The crash came dramatically in September 1873, when one of the banks connected with the railway-promoting companies in Philadelphia had to close its doors. On 19th September came "Black Friday" on the New York Stock Exchange, which had to remain closed for ten days. In the space of one year there were 5000 bankruptcies. A period of stagnation followed, which lasted for half a decade.

As far as the simultaneous development in Germany is concerned, it would be false to try to impute it solely or even principally to the economic and spiritual effects of the successful war. The boom had already set in before the war, and was international in character. The particular degree of the boom as well as of the crisis must, however, be traced to those effects of the war. The extent of the boom can be judged from the single fact that the consumption of iron per head was more than doubled from 1866 to 1873. This period was characterized by the orgy—unrestrained also from the moral point of view—of company-promoting, which earned it the lasting name of "the golden age of the company promoter." All the childish ailments which England had already suffered and overcome in earlier epochs now afflicted Germany—over-speculation and that credulity of the public which, accompanied by its greed for profits, drove it into the arms of unscrupulous swindlers. This delirium was centred round railways and the iron and steel industry. The rise in pig-iron production is shown in the following table:

<table>
<thead>
<tr>
<th>Year</th>
<th>Output of Pig-Iron (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1840</td>
<td>143,000</td>
</tr>
<tr>
<td>1850</td>
<td>208,000</td>
</tr>
<tr>
<td>1860</td>
<td>529,000</td>
</tr>
<tr>
<td>1870</td>
<td>1,391,000</td>
</tr>
<tr>
<td>1873</td>
<td>2,241,000</td>
</tr>
</tbody>
</table>

Speculation in real estate and building was rife, and there sprang up those ill-famed edifices which were to remind later generations of the bad taste of the "golden age of the company promoter." Luxury and rich living became the order of the day. The Viennese at that time used to pay 200-300 gulden to hear one performance by Madame Patti!

It was also from Vienna that the first sign of the collapse came, when on 9th May 1873 the speculation on the Stock Exchange collapsed in panic fashion. From there the crisis spread at once to Germany, burying the new enterprises beneath it in shoals. Huge sums were involved in this crash of 1873, which was the gravest crisis recorded up till then by capitalist history. Indeed, it remained the gravest until it was far surpassed by the world crisis in 1930.
The extraordinary gravity of the crisis of 1873 was matched by the gravity of the depression which followed it and which kept the economic systems of almost every country in a state of exhaustion for years. For ten years there was no real recovery, and accordingly there is no real, i.e., complete, crisis to report for that period; except that at the beginning of the 'eighties France became involved in a belated fever of promoting and speculation, which started with the Union Générale, one of the banks founded by Bontoux. (These events in Paris formed the basis of Emile Zola's novel, L'Argent.) The Bontoux crisis of 1882, however, remained fundamentally a purely French event, just as a crisis in the United States in 1884 remained purely American. Corresponding to the depression prevailing in industry at that time was the agrarian crisis which has already been mentioned in other connections (see p. 21). The scarcity of gold, caused by the decrease in the production of gold and the increase in the demand for it (due to the spread of the gold standard), also played an important part. It was only at the end of the 'eighties that business began perceptibly to improve. The European stock markets showed a lively interest in overseas, especially South-American, issues. It was here also that a crisis originated which struck a heavy blow to the London market in the year 1890 through the failure of the Bank of Messrs. Baring Bros., a firm which was engaged in Argentinian business. 1891 to 1894 were again years of depression everywhere. It was only in the year 1895 that a recovery set in and put an end to this long period of stagnation, during which many changes had taken place in the structure of economic life (reform of company law, formation of trusts and cartels, protection, social insurance, colonial policy, &c.); and, finally, the forces had gathered for a new and violent upward trend in the development of capitalism.

§ 7. Economic Development up till the Outbreak of the World Crisis of 1929.

The year 1895, in which a new and vigorous upward movement begins, also introduces a new phase in the history of economic cycles and crises. If up till then it had seemed as though the violent crisis of 1873 and the chronic depression which followed it had fulfilled the gloomy prophecies of the Marxist theory of the breakdown, it now appeared that the promoting crash was nothing but a severe "growing pain" of capitalism, which was only just beginning to develop, and that the period of chronic depression had been nothing but a long period of readjustment, rest, and gathering of strength. And it was only now that capitalism entered upon the epoch of its most stupendous growth, and right up till the outbreak of the World War it remained unshaken by disturbances of equilibrium and of growth anything like as severe as the great promoting crisis of 1873. The crises did not become more and more severe, as Marx had foretold, but more gentle, and even the alternation from boom to depression became less violent than before. The period from 1895 until the outbreak of the World War was a period
of very great development for the economic forces of the world—the value of world trade had exactly doubled itself between 1900 and 1913—but this development proceeded along much more restrained and subdued lines than before, thanks mainly to the improvement in the monetary and credit system of the principal countries (the conquest of the world by the gold standard and the general introduction of the central banking system). Thus the gloomy prospect of crises becoming graver and graver, as the promoting crisis had seemed to indicate, could give place to the hope that the rhythm of economic life would become gentler and gentler and thus reduce the "total" economic crisis to a thing of the past. The inner development of the economic system during this period was such as fully to justify this hope, until the outbreak of the World War destroyed the political hypotheses on which it was based, and introduced decades of the gravest disturbances and upheavals ever recorded by the history of modern times. These reached their peak in the world crisis which broke out in the late autumn of 1929, and the end of which is not yet in sight in 1936.

If we realize that the economic system has been invaded by a policy which follows its own laws—or rather its own lawlessness—we see clearly that the events since 1914 do not mean a process of self-disintegration of capitalism, but the threatening of capitalism by forces and powers fundamentally alien to it.

**The Period from 1895 till the Turn in 1900.**

The unusually vigorous upward movement which set in in 1895, and was especially strong in Germany, was doubtless favoured externally by the more liberal trade policy and by the new discovery of gold in the Transvaal. In Germany it was principally fostered by the electrical industry. It reached its peak, however, as usual in the development of the iron and steel industry, in which the general upward trend in economic activity is usually focused. The boom also showed a certain strength in the United States and Belgium, while it was less marked in France and England. Its intensity in Germany can be judged by this fact among others, that from being an emigration country, Germany became an immigration country, and that despite the rapid increase in its own native population. The production of coal rose from about 79 million tons in 1895 to about 102 million tons in 1899, while the production of pig-iron rose in the same space of time from about 5-5 million tons to 8-1 million tons. The capital of the five greatest German shipping companies increased from 142 million marks in 1896 to 267 million marks in 1900 and the tonnage of the German merchant fleet from 1-3 to 1-86 million gross register tons.

The turn of the tide began in the autumn of 1899 with a panic in Russia, which led at the end of the year to the Reichsbank's raising its rate of discount to 7%. By the following year the depression had become general, and was rendered much more acute by the failure of mortgage banks.
THE HISTORY OF CYCLES AND CRISSES.

The Period up till the Turn in 1907.7

The depression continued in England, Germany, and France until 1903, when there began a new boom period which lasted till 1907. This was substantially supported on the agrarian side by good harvests and by the recovery from the agrarian crisis. Once more the movement was strongest in Germany, until it was surpassed after 1905 by the American boom.

The reaction which set in in 1907 took the form of crisis—if we neglect the smaller countries—only in the United States, where it was extremely grave. Its repercussions on the money and capital market have already been described (p. 36).

The Cycle Period from 1908 to the Outbreak of the World War.8

Following the turn of the economic tide in 1907-1908 there was a depression which lasted till 1910, and which in Germany was for the first time rendered perceptibly more acute by the keeping up of cartel prices. The beginning of the boom in 1910 was already darkened by the shadows gathering on the political horizon. Thus the Morocco crisis of September 1911 (caused by the sending of the gunboat "Panther" to Agadir) led to a collapse of prices on the Berlin Stock Exchange. The confusion in the Balkans was also an element of tension of the first rank which acted as a check on the boom in 1912. Added to this was the fact that on the Continent the rising prices of provisions meant that the masses shared in the general improvement in social conditions less than in previous boom periods. Thus all the symptoms seemed to indicate that hard times were about to take the place of growing prosperity and politically undisturbed economic development. It is true that the depression of 1913, which in Germany was once more made very much worse by the rigid price policy of the cartels and trusts, was of comparatively short duration, but before a normal boom could develop, the World War, which had for many years been looked upon as almost inevitable, broke out in August 1914.

If the decisive sign of a boom is the mobilization of the productive reserves of the economic system leading to a maximum of employment, with prices tending to rise, the World War deserves the title in every sense of the term. This point must be well borne in mind, since, in this respect, the World War has the merit of being the most stupendous example of the gigantic heights to which the productive forces of capitalism can rise under circumstances which occur also, on a smaller scale, during every boom period, i.e., whenever the capitalist system is subjected to very high pressure from the demand side. It will be remembered that before, and at the outbreak of the Great War, most people were strongly convinced that a war on the modern scale could not last more

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than a few months, because no country could stand the enormous economic strain longer than that, and it is with an indulgent smile that we think of the many people in Germany who at that time attributed great importance even to the war treasure of a little over one hundred million marks in gold kept at the famous Juliusturm in Spandau. All these notions merely betray a total lack of understanding of the real dynamics of capitalism, but though the Great War has at least had the one merit of having shown it through a magnifying glass, minor errors of this kind are always recurring, proving that the mysteries of capitalism are very rarely understood. What we have to face is the plain fact that while the Great War lasted not just a few months but four and a half years, the economic system was not only able to "finance" this greatest consumption of all times and to provide for the new industrial investments necessary for the production of war materials, but was also able to sustain the population at a level not so much inferior as is commonly supposed (at least up to 1917, and outside of Germany and Austria), and all this with the majority of the male population of the most productive ages busy killing each other; nor, until the very last stage of the war, was the monetary strain unbearable. The case was most conspicuous in the United States, who were able, by way of the Allied purchases of 1915-1916, to send abroad several billion dollars' worth of goods and to add substantially to their industrial plant, in addition to having more real income left for domestic consumption than ever before. The fact that spending sometimes-augments the total social product more than saving is corroborated by recurrent experiences and, in the normal course of events, by every major boom. It constitutes a real problem, which might aptly be called the Paradox of Capitalism, and which has to be faced by every economist no matter how orthodox his views. It is, as it were, almost a case not only of eating one's cake and having it but of having even more of it—notwithstanding the grave digestive troubles that are sure to follow!

What we have said about the war boom was of course not said in order to eulogize the war or even the boom phenomenon, but only to stress a point which is most important for the theme of this book. The vast difference between the war boom and any normal boom must be obvious to everybody. The difference is that in the war the great effort to produce goods did not lead to an increase in material prosperity, but to unbounded impoverishment.

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1 This theme will be developed more fully later on (§ 14 and § 15).
and loss of capital, and upset the economic equilibrium in the world for decades. These destructive effects of the war are imprinted on the economic development of the post-war period and are still playing a very great part in the world economic crisis of to-day.

_Economic Development after the War_ is characterized up till about 1925 by the fact that there were rifts in economic international relationships, the extent of these rifts being proportionate to the different directions taken by the currency development in the various countries. This explains the characteristic contrast between the economic development in the inflation countries of Central Europe and that in the majority of the other countries in the world, so far as they attempted, during the first post-war years, to normalize their currency systems which had fallen into disorder during the war. This disruption of the international homogeneity of cycles after the war is a confirmation of what has been said earlier (p. 18) about the forces working for this homogeneity.

Outside the inflation countries the boom continued till 1920, thanks mainly to the credit expansion in the United States and to the famine in goods which made itself felt in Europe directly after peace had been declared. As a result of this famine in goods in Europe the overseas countries which produce raw materials were particularly fortunate in enjoying a good run of business from May, 1919, till March, 1920. People set to work feverishly to repair the fabric of world economy shattered by the war, and this showed itself especially in the extraordinary increase in shipbuilding, which in 1919 reached more than double the figure of 1913. Over-speculation and over-production were unusually pronounced when at the beginning of 1920 fate intervened in the shape of the first great world economic crisis of post-war times.

*The World Economic Crisis of 1920* began in those overseas countries which had also been the main seat of the boom. After the fall in prices had already set in in the United States under the influence of a deflationary credit policy on the part of the Federal Reserve Banks, a real crisis, which forced the stock exchange to close, broke out in Japan in March, as the result of the failure of two banks which were involved in a great silk speculation. Soon every state, whether industrial or whether engaged in the production of raw materials—the whole world, indeed, with the exception of the inflation countries—was drawn into the crisis, which may be described as a deflationary and contracting process of the very first rank. Why then do we hesitate to call it a "deflation crisis"?
Simply because every economic crisis would deserve this name for reasons which will be discussed later on. At the same time, however, the efforts of countries to re-establish the pre-war purchasing power of their currencies were fundamentally different from the type of credit deflation which generally starts and accompanies every crisis. The success of these strivings for normalization, which was particularly disastrous to production, was expressed by the fact that the index figures of prices (taking July 1914=100) from April 1920 to April 1921 fell in the United States from 266 to 154, in Great Britain from 323 to 206 and in France from 600 to 354. The economic development of the individual countries (always excepting the inflation countries) reveals numerous deviations during the following years, and thus no longer admits of general description. If we confine ourselves to the economic development of the United States, which has become more and more important since that time, we shall see that the basic direction of the development from the time the depression was overcome in 1922 till the end of 1929 was on the whole upward ("structural prosperity"), but was at several points subjected to manifold oscillations, corresponding to the fluctuating tendencies in the credit policy of the Federal Reserve Banks, which was more and more guided by the intention of deliberately reducing the upward and downward movements of economic variations. Thus during that period the Federal Reserve Banks made several successful efforts to nip in the bud a boom that was attaining dangerous dimensions.

With the stabilization of the disorganized currencies in Central Europe the even pace of international economic activity was gradually restored from 1924 onwards, and Germany was brought back into international economic affairs, although the course of economic development in that country did not lose certain distinctive depressing elements (repatriations, capital losses resulting from the inflation, and the direct and indirect effects of the unsuccessful war and the peace treaty). The same was true of England, which, in addition to the weakening of her economic position

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2 Of. "Recent Economic Changes in the United States," Report of the Committee on Recent Economic Changes, 2 vols., New York and London, 1922; W. R. Burgess, Reserve Banks and the Money Market, New York, 1928; H. L. Reed, Federal Reserve Policy, 1921-1930, New York, 1930; Hearings before the Committee on Banking and Currency (Stabilization), H.R. 7895, Washington, 1927; F. A. Hayek, "Die Währungspolitik der Vereinigten Staaten seit der Überwindung der Krise von 1920," Zeitschrift für Volkswirtschaft und Sozialpolitik (Vienna), vol. 1, 1926, pp. 254-317. — Generally speaking, it has to be remarked that the American boom up to 1929 has not yet been entirely satisfactorily treated in economic literature. There are still many points the obscurity of which has not been sufficiently elucidated.
through the changes that took place in world economic affairs at that time, had, after the restoration of the gold standard in 1925, to suffer from a too high level of costs (relatively to the external value of the pound), until in the autumn of 1931 she got rid of this disparity by going off the gold standard. With these reservations, to which we must add an indication of the peculiar course of economic events in France connected with the currency developments there, we may describe the period from 1925 to 1929 as a time of international prosperity which from 1927 onwards passed into a boom.

Although the economic tendencies in the individual countries sometimes ran counter to each other, there can be no doubt that during the time from 1925 to 1929 the productive powers of the world had grown to an extraordinary extent. That this growth was not organic, but was accomplished amidst tremendous economic and, particularly, political tensions, was one of the main causes of the collapse at the end of 1929. World production and world trade increased from year to year and finally surpassed the pre-war level. An ever-broadening stream of credits poured from the countries with a surplus of capital (the United States, England, France, Holland, Switzerland, and Sweden) to the parts of the world where capital was scarce, Germany and South America being in the forefront of the latter. The advance of technical knowledge with its tendency to reduce production costs put everything that
had gone before in the shade. The increase in investment activity, which on this occasion also was the chief characteristic and chief stimulus of the boom, was due principally to the new industries connected with the production of durable consumption goods (the automobile industry, the electrical industry, &c.), and to the activity in building. This growth was matched by a widespread tense optimism which in the end deteriorated into lack of perspective and discipline. This optimism went so far in places that people began to believe that there was such a thing as "permanent prosperity," and that economic crises could be eliminated. It reached its peak in the United States, but even on this side of the ocean people were not quite insensible to it. It is a dreadful irony that a time which surpassed all previous boom periods in exuberant optimism should have been followed by an economic crisis of hitherto unparalleled gravity and duration. When we think to-day of that period of growing prosperity and unshakeable trust in the future that came so suddenly to an end in 1929, we may feel a kind of emotion similar to that of the visitor to the ruins of Pompeii, who thinks of the days before the wholly unexpected eruption of Vesuvius which annihilated that gay city one August day in A.D. 79. Eight years after the end of the Great War the world seemed to be healed of those terrific wounds received in the course of the struggle; and for several years this belief had held sway. The immediate destructive consequences of the war had long since been wiped out and people were now concerned with making good the more remote devastation it had caused. With production and trade increasing month by month throughout the world the moment actually seemed in sight when social problems would be solved by prosperity for all; and the feeling that the dreadful past was being left behind, together with the psychological reflexes induced by a state of universal plenty, went far to create an atmosphere of goodwill, broadmindedness, and tolerance which made the air during that period almost everywhere more breathable than at any previous time. Thinking back to those "gay 'twenties," we cannot help but be inclined to regard them as one of the most remarkable and astonishing periods in modern history. Probably economic history had never before beheld such a speed, or such a scale of material progress and improvement in the technique of production and organization. It is a curious token of human fickleness that ten years later men are simply wallowing in abuse of that period and are decrying its spirit almost as a strange abomination, an attitude which is all the more curious and even tragic as this total reversal of atmosphere is one of the main reasons for the persistence of the present depression.
THE HISTORY OF CYCLES AND CRISES.

§ 8. THE WORLD ECONOMIC CRISIS SINCE 1929.

The present world economic crisis started in the United States, that being the country in which the curve of the upswing reached its highest peak. After several months of speculation in stocks and shares, which grew more and more unrestrained and was fed with speculative funds from all over the world, there followed on 24th October, 1929 ("black Thursday") a first violent drop in prices on the New York Stock Exchange. This was soon followed by further shocks, which put an end to all initial hopes on the part of the "bulls" of a recovery and drew security quotations on every exchange throughout the world after them. How tremendous the effect of this collapse of prices was may be shown by a few examples. The shares of General Motors fell from a maximum of 91 2/3 dollars in the year 1929 to a minimum of 31 1/2 in the year 1930, Chrysler shares from 135 to 14 1/8 and the shares of the General Electric Company from 40 3/8 to 41 1/4. If the expectation that this was only a temporary setback proved false, the hope that the crisis would be confined to the Stock Exchange also vanished gradually. Actually in 1930 the crisis expanded with uncanny inexorability into a disaster from which, in the end, scarcely a country or a single branch of economic activity escaped, and the sad result was a crisis which in completeness, intensity, and spaciousness surpassed all previous historical examples. We shall see later, when we come to examine the causes of the world economic crisis, that the crisis on the New York Stock Exchange was not the cause of it, but was merely an event which set it in motion. That the explosion in New York did have this effect and that it must be cited first in the chronological order of events, cannot be doubted.4

The effects of the crisis on the most varied spheres of economic activity give some idea of the devastation which it wrought. Particularly striking, apart from the already-mentioned collapse of share prices, is the fall in the prices of some important raw materials in world trade. Agriculture throughout the world was particularly affected by the fact that the price of wheat fell to a previously inconceivable level, and by the middle of 1931 had already lost about 60% of what had been the prevailing average price in 1928. The pre-war price had been far higher. For instance, wheat on the Chicago Exchange in 1913 averaged 91 cents per bushel (= about 60 lbs.) while the price in 1932 hovered around 60 cents. This

fall in the price of wheat was eclipsed, however, by the fall in the prices of other commodities. Thus the gold price of rubber fell to 13% of the price in January, 1929, while that of silk dropped to about 23% of that level. Maize, meat, wool, cotton and metals also fell to an extent that would at one time have been considered inconceivable. Naturally the overseas agrarian countries and those producing raw materials (South America, Australia, Canada, and Africa) were specially hard hit by this drop in the price of raw materials, while its effect upon the individual industrial countries depended on the relationship between the profit resulting from the lower cost of raw materials and the loss caused by the weakening of the overseas markets. The catastrophic effect of the drop in the prices of raw materials upon the countries producing these raw materials may be illustrated by the extreme example of the Gold Coast, which was thrown into such poverty by the depreciation of cocoa that her imports of the chief necessities and luxuries declined by 50-70%. The fact also that in Chile in 1930 the value of exports declined by 42% compared with the previous year speaks volumes.

The drop in prices in the raw-material markets of the world was accompanied by a less marked decline in the general price level in every country. Thus the level of wholesale prices in Germany at the end of 1931 had already reached the level of 1913, while in 1929 it had been still a third above that level. The prices of the so-called cyclically sensitive commodities were even at this time far below pre-war prices, while retail prices and monopoly prices of all kinds followed the general price movement only very hesitatingly. If we take an international average for the end of 1931, we can say that at that time the economic crisis had on the whole restored the pre-war price level, and thereby raised the purchasing power of money about 30% compared with 1929. It is therefore obvious that we are dealing here with a large-scale deflation.

But the saddest and most obvious expression of the world crisis is to be found in the shrinkage of production throughout the world. If we take the volume of industrial production in 1928 at 100, the chief countries had reached the following figures in June, 1932: 6 Germany, 60.7; Great Britain, 89.4; U.S.A., 53.2; Sweden, 76.9; and France, 73.2. And the shrinkage of production in particular

6 Taken from World Economic Survey, third year, 1933-1934 (by J. B. Condliffe), Publication of the League of Nations, Geneva, 1934, p. 90. These annual surveys of the League of Nations which were started in 1931 by Prof. Ohlin's The Course and Phases of the World Economic Depression, give an admirable account of the development of the present crisis. A more detailed treatment may be found in another publication of the League: World Production and Prices, 1925-1933, Geneva, 1934.
branches of economic activity falls far below this average. Thus building activity both in Germany and the United States had fallen at the end of 1931 to half of what it had been in 1929, while the level of employment in the German machine industry had fallen in November, 1931, to 34% of the nominal figure, and the volume of automobile production in the United States went down to 49% of the average of 1929.

Even more sensational than the shrinkage of production has been the continuous decline of world trade since 1929. If this decline is expressed as a percentage of the gold value of world trade in 1929, we get the following figures:

Percentage Decline in the Value of World Trade, 1929-1934.

<table>
<thead>
<tr>
<th>Year</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>100</td>
</tr>
<tr>
<td>1930</td>
<td>81</td>
</tr>
<tr>
<td>1931</td>
<td>58</td>
</tr>
<tr>
<td>1932</td>
<td>39</td>
</tr>
<tr>
<td>1933</td>
<td>35</td>
</tr>
<tr>
<td>1934</td>
<td>34</td>
</tr>
</tbody>
</table>

These figures, however, need some explanation. First we must remark that they give a grossly exaggerated picture of the extent to which world economic relations may legitimately be said to have broken down. The decline in value terms reflects not only the shrinkage of the volume of international trade but also the heavy fall of prices, measured in gold, which is especially important since this fall has been most pronounced in the case of raw materials, which bulk so largely in international trade. It is not surprising, therefore, to find that if the influence of falling prices is eliminated, the decline of world trade in quantity terms appears to be far from sensational (slightly over 25 per cent. between 1929 and 1934). Even this, of course, is bad enough, but it certainly does not warrant the wild statements now current about the end of international trade. A second conclusion to be drawn from the above table is the interesting fact that the full brunt of the crisis has fallen on world trade only at an advanced stage of the depression, while in the years from 1930 to 1932 the decline in world trade was markedly less than the decline in world production (and even slightly less than the decline in the industrial production of the world). As in accordance with previous experiences, foreign trade served, in the first years of the depression, as a partial outlet for the countries first and hardest hit.

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CRISES AND CYCLES.

by the crisis, while, later on, the full effect of the trade restrictions, which had progressively increased since 1931, made itself more and more felt. These new trade restrictions, with their ruthless suppression of the normal course of foreign trade (higher tariffs, quota systems, foreign exchange control, clearing agreements, import boards, foreign trade monopolies, tampering with currency, &c.) must also be regarded as one of the most conspicuous and most ominous results of the world depression. Another feature of the later phases of the depression, which has added greatly to the decline of world trade, has been the almost complete break-down of international credit, brought about by the international credit crisis of 1931, and the consequent abandonment of the gold standard in most countries. In view of these terrific obstacles, it really seems almost a miracle that world trade—even if reckoned in gold prices—has not actually sunk to still greater depths.

If we want to probe fully into the tragedy of the present depression in terms of human misery, we must, of course, revert to the statistics of unemployment and of the destitution connected with it. Despite the well-known difficulties of calculations of this kind, we may safely say that the great depression condemned twenty to thirty millions, together with their families, to keep their hands idly in their pockets (when not raised in threats against our economic and social system!) and to go without food except to the extent to which they get it from private benevolence or public expenditure, and this at a moment when gigantic masses of raw materials and foodstuffs are glutting the markets and so much industrial plant is lying idle—materials which could convert bitter want into prosperity if the world’s economic organization were again restored to orderly operation. While wage rates have shown a very significant power of resistance in the leading countries, the total earned incomes, and still more the total income of the working classes of those countries declined heavily in face of the mass unemployment. Earned incomes fell most heavily in the United States (to almost one-third of the quarterly average of 1929, by the beginning of 1933) and in Germany (to almost one-half by the beginning of 1933), and much less in Great Britain (to 87 per cent. by the third quarter of 1932). So far as the standard of living is concerned, the effect of the decline in nominal incomes was, of course, partially offset by the declining cost of living. The decline in consumption has been, however, very substantial, which may be illustrated by the significant examples of beer consumption in Germany, and of the consumption of silk fabrics in the United States, both of which reached their lowest point
at about 50% of the pre-depression consumption. The same story is told by the fact that sales in the retail trade in Germany declined in 1933 to 60% of those of 1928. Sad as all this is, however, it must be noted that it is again a tribute to the elasticity of our economic system and to the richness of its resources that it has been able to carry along its millions of unemployed for such a long time at a level of sustenance which has certainly not been inferior (if, indeed, it has not been actually superior) to the standard of living of the average Russian worker employed during these years. Alongside the example of world trade already discussed, here is again a fact which before the depression only the most sanguine optimists would have thought possible. This is not said to belittle the human tragedy of unemployment, but it seems certain that, bad as it is, the material significance of unemployment is, on the whole, surpassed by its moral and psychological effects.

Special mention must be made of the effects of the crisis on the money and capital markets of the individual countries, because they introduce anomalies which are essential to the understanding of the crisis. We have already referred to the extraordinary fall of share prices. In the United States this amounted on the average to 60% from September, 1929, till June, 1931; in Holland, to the same figure from March, 1929, till June, 1931; in Germany, to 61.7% in April, 1927, till June, 1931; and in France, to 55.7% from February, 1929, till June, 1931. In hardly any of the countries did the rate of interest for long-term investments show a marked tendency to drop during the greater part of the depression. On the other hand, the interest rate for short-term investments (the interest rate on the money market) in the principal creditor countries fell to quite an extraordinary extent (in some countries like England and Switzerland even approaching zero).

The banking statistics are of special interest in this connexion, since they reflect the process of credit contraction (deflation) underlying the more general process of business contraction. Especially significant in this respect are the figures of the decrease of bank credits and advances, of the turnover of bank deposits (velocity of circulation of bank deposits), and of the volume of bank clearings. Bank credits and advances had dropped in 1932 in Germany (Big Berlin Banks) and in Austria to almost one-half compared with 1929, in France and Holland to two-thirds, and in the United

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8 A detailed account is to be found in the illuminating publication of the League of Nations, Commercial Banks 1925-1933, Geneva, 1934.
States, England and Wales, and Italy to about three-quarters. The velocity of circulation of bank deposits (ratio of bank debits to the average of bank deposits) declined, in the United States, from the peak rate of 3 in October, 1929, down to the rate of about 1 at the end of 1932 and in the first months of 1933. The percentage of bank clearings in 1932 as compared with the average of 1929 was: in the United States (New York City) 27.9, in the United States (outside New York City) 46.4, in Switzerland 37.7, in Holland (Girotransfers at the Central Bank) 39.5, in Germany 43.7, in the United Kingdom (Metropolitan) 69.7, in France 72.4, and in Sweden 87.5. The position of banking has been very different in the several countries and during the progress of the depression. While the banking systems of a number of countries (especially of Germany, Austria, and the United States, to some extent also of Italy) were temporarily paralysed by the waves of credit crises, the process of increasing liquidity, normal to every major depression, went on without marked interruption in the other countries, especially in Holland, Switzerland (until 1933), and in the United Kingdom. It has been calculated that in the United Kingdom the commercial banks' advances, which in more normal times were estimated at 50-55 per cent. of their total deposits, had fallen to 38.2 per cent. in January, 1934, leaving a margin for about 200 million pounds worth of new investments before the traditional ratio would be reached. At the same time, there was a large amount of hoarding of cash and of gold in most countries and a universal slackening of the velocity of circulation of cash (as distinct from the velocity of circulation of bank money shown in the above figures of the turnover of bank deposits in the United States). The amount of new gold hoarding (minus dishoarding) which took place in 1933 alone has been estimated by the Bank for International Settlements at more than 3 milliard Swiss francs. It is mainly due to the hoarding of cash that the volume of notes in circulation did not fall off in most countries proportionately to the actual degree of deflation and in some countries (France, Belgium, Holland, United States, and Switzerland) even increased.

A particularly disastrous feature of the present depression have been the international financial troubles and the crises of the balance of payments of numerous countries. Several factors concurred to bring this about. In the first instance, a huge amount of international short-term funds had been piled up which was estimated by the Bank for International Settlements for the begin-

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1 World Economic Survey, 1933-1934, p. 279.
ning of 1931 as at least $10,000 million,\(^2\) and this avalanche came down in the summer of 1931 with most fatal consequences, though it is again to the credit of our economic system that it proved possible to mobilize and transfer about one-half of this enormous amount of indebtedness within one year. Another strain, increasing year by year, was the international long-term indebtedness which had also reached sky-high dimensions, especially on account of the political indebtedness (reparations and inter-allied debts) and its implications. With the declining volume of world trade and the complete collapse of the prices of raw materials, the burden of this foreign indebtedness became increasingly unbearable for the greater part of debtor countries, especially for the countries producing raw materials. This, in turn, had disastrous effects on the banking systems of the creditor countries. So it was that numerous bank failures in the United States were closely connected up with the South-American failures. In addition to all this, irregular movements of capital, directed by the motive of security rather than by the motive of economic yield, gained an importance unheard of hitherto. The most fatal case, in this respect, was perhaps the flight of capital from Germany after the rise of political radicalism had become appallingly manifest by the sweeping victory of the National-Socialist Party at the end of 1930. Considering the ultimate effects of the breakdown of the German financial system, it is not too much to say that the triumph of the Nazi movement has been one of the heaviest blows to economic conditions not only in Germany but also in the world at large. Later on, with the waning number of stable currencies, political insecurity as a factor making for irregular capital movements was supplemented by the instability of currencies. In view of all these extraordinary circumstances, it is not to be wondered at that the monetary and financial system of the world went thoroughly out of order. One of the most conspicuous effects of this development—not its cause, as it is sometimes believed—has been the grossly unequal distribution of the world's gold reserves among the different countries, a factor which, in turn, has gone far to intensify the economic crisis. At the end of 1934, the central banks and treasuries of all countries held nearly 700 million fine ounces of gold, but of this total nearly 400 millions was held by the United States and France alone while the United Kingdom, in spite of her pre-eminence in world trade and finance and the position

\(^2\) The figure given by the Berlin Institut für Konjunkturforschung is still higher (about $12,000 million). The normal pre-war volume of the international short-term indebtedness has been estimated by the Institut as 2-3,000 million dollars.
of sterling as a basis for other currencies, held less than one-fourteenth of the total, and no other country held more than about one-eighth of the quantity held by France alone. It goes without saying that this distribution is absolutely out of harmony with the share of the different countries in the world's trade and finance and that it is a sure symptom of the world's financial mechanism being thoroughly out of gear.

Inadequate as this account of the present world crisis must of necessity be, it surely suffices to show that it has, in a rather short time, developed into dimensions which are at once catastrophic and unique in economic history. True, the depressions after the Napoleonic wars and after 1873, in their tenacious duration and their intensity, come very near the present depression, but all statistical comparisons show convincingly that this latter depression has outrun all previous examples. On the other hand, it has to be noted that, at the present moment, there is some evidence that the worst may be over so long as the rather insecure basis of the recovery which has been recorded since 1933 should not give rise to a new recession, especially in those countries where, as for instance in Germany, some real concern in this respect is warranted. The figures showing the increase of industrial activity and the decrease of unemployment since 1933 are, on the surface, quite impressing, and in some countries as in Great Britain and in Sweden the actual recovery seems sound enough. But nobody can fail to feel uneasy in comparing these figures with the still crumbling world trade, the still growing obstacles to international commerce, the persisting monetary troubles, the crude and haphazard socialism rampant everywhere and thriving under different political colours, and—last but not least—with the political atmosphere so incongruous with that spirit of confidence, optimism, and easiness without which all recovery programmes will rest on sandy ground.

CHAPTER IV.

THE CAUSES OF CRISES AND CYCLES.

§ 9. Introductory.

In the preceding chapters an attempt has been made to acquaint the reader with the general phenomenon of crises and cycles, both from a morphological and from an historical approach. Our next and infinitely more difficult task must be to find out the cause or—what even prima facie seems more probable—the causes, of the said phenomenon. This is not only in order that we may satisfy our scientific curiosity, but also that we may discover, through an understanding of the causation, what policy should be followed in order to control and moderate the driving forces behind economic fluctuations and disturbances.

The history of doctrines which have attempted to clear up the mystery of recurrent disturbances of economic equilibrium is now more than one century old, Jean Baptiste Say and David Ricardo being perhaps the first to grasp the real problems involved. But though present-day economic science may be said to have made great advances towards a better and deeper understanding of the intricate questions to which the study of economic disequilibrium gives rise, and of the working of the mechanism of our economic system under the influence of disturbing factors, it would be unduly optimistic to assume that there has been found a solution of the problem of the causation of crises and cycles which leaves nothing to explore or which is satisfactory from all points of view. As in every other branch of economic science, a communis opinio doctorum on the origin of crises and cycles cannot be expected, and even on some of the most important points serious divergences of opinion still exist, though with a fair chance of being diminished as time goes on.

On the other hand, however, the theory of crises and cycles has that also in common with economic theory in general that the extent of actual agreement is much greater than is generally supposed by those who are not thoroughly acquainted with the subject, and who often betray their very ignorance by censuring economic science for hopeless divergences of opinion. It would be easy to show that the science of medicine gives the appearance of a still wider disagreement on very important questions of pathology and therapeutics, but every medical man will tell us that the bitter warfare in his science is being conducted on a rather broad groundwork of
universally accepted principles. More often than not, it is not the principles in medicine as in economics that are at stake but the conclusions to be drawn from them, their arrangement and combination, the emphasis to be placed on the different factors, the interpretation of new experiences, and the expediency of practical measures—though, in fairness to the outside observer, it has to be conceded that the embittered spirit in scientific warfare must sometimes give the impression that there are unbridgeable abysses hopelessly separating the opponents. Finally, there is the human element which accounts for the fact that the real differences of opinion are often much exaggerated, common vanity and pugnacity playing a prominent part. It is all too common that an economist—and the writers outside of academic circles are sometimes even worse—wants to make himself immortal by presenting a brand-new theory of cycles and making room for it by abusing all the others and emphasizing the differences rather than the similarities. In direct contrast to these tendencies, it is the special aim of the present author to keep watch for every possible reconciliation and to endeavour to combine elements from different and even opposed schools of thought. This is not to be done in a spirit of a kind of scientific pacifist who shuts his eyes to secret armaments, nor is the author unaware of the danger of easy compromises. What he is striving after is a synthetic attitude rather than an eclectic one. This is, he believes, an urgent necessity in present circumstances.

It would at first seem to be an attractive idea to start the analysis by giving a synoptic account of the doctrinal history of the theory of crises and cycles. On second thoughts, however, this idea loses much of its attractiveness. In order to be of any value, such a synopsis must be more extensive than is compatible with the scope of this book. But even if this difficulty were overcome there would still arise the more serious difficulty of how to arrange the different theories in accordance with their most significant characteristics, which is essential if the synopsis is not to be merely a pointless chronology. A systematic classification of the theories of crises and

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1 A good and up-to-date history of the doctrines on crises and cycles is still lacking. The only comprehensive monograph on the subject, to the best knowledge of the author, is: E. v. Bergmann, Geschichte der nationalökonomischen Krisentheorien, Stuttgart, 1895, but the point of view of this book is somewhat antiquated. Other references are: Alvin Harvey Hansen, Business-Cycle Theory, Its Development and Present Status, New York, 1927; J. Lesure, op. cit., pp. 315-414; W. Fischer, Das Problem der Wirtschaftskrisen im Lichte der neuesten nationalökonomischen Forschung, Karlsruhe, 1911; K. Zimmermann, Das Krisenproblem in der neueren nationalökonomischen Theorie, Halberstadt, 1927; Rolf Wagenführ, Die Konjunkturtheorie in Russland, Jena, 1929. Views of different writers on the present status of trade-cycle theory are assembled in the Festschrift for Arthur Synthoff: "Der Stand und die nächste Zukunft der Konjunkturforschung," Munich, 1933.
cycles is difficult to attain because almost every theory so far developed, save the most eccentric ones, contains some elements belonging to another type of explanation so that an attempt at systematic classification inevitably leads to numerous overlappings and cannot do justice to the theories in question. To quote only one instance, it is almost impossible to draw a clear dividing line between the under-consumption theories and the over-capitalization theories, there being a large margin of overlapping, and even the division between monetary and non-monetary theories, though indubitably a very important one, has many loopholes. This accounts also for the fact that none of the several attempts which have been made at systematic classification of the theories of crises and cycles seems really satisfactory.

This is true even of the most successful attempts at classification among which those made by Wesley Mitchell and Alvin H. Hansen are especially noteworthy. Mitchell divided the different theories into three large groups: firstly, theories which trace crises and cycles to physical processes (cycles of crop yields, &c.), secondly, theories which relate crises and cycles to emotional processes (especially with mass alternations of optimism and pessimism), and, thirdly, theories which connect crises and cycles with institutional processes, i.e., with factors arising out of the structure and the institutions of our present economic system. The large third group is then subdivided into a great number of subordinate groups with different points of view. Hansen, while clearly demonstrating the difficulties and shortcomings of any classification, distinguishes (1) the Capitalistic Economy schools, which stress either the capitalistic process of distribution or the capitalistic process of production; (2) the Exchange Economy school, which considers crises and cycles to be a function of the competitive exchange economy and points particularly to recurrent errors of judgment (the psychological school in Mitchell’s classification), and (3) the Money Economy school which believes that the root of crises and cycles lies in the monetary and financial mechanism of our economic system, a school which is, broadly speaking, equivalent to what is more generally known as the monetary theory of crises and cycles.

In view of these difficulties, the present writer has preferred to forego a classified presentation of theories and theorists, and to adopt a different approach. The programme of this chapter is to examine all the elements and circumstances which offer any chance of

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3 Alvin Harvey Hansen, *op. cit.*, pp. 1-10.
explaining the origin of crises and cycles and to set aside for a final analysis those elements which, in the process of sifting, prove useful in this respect. In the last two paragraphs, special attention will be given to the problem of the origin and course of the present crisis. Following this programme, it is to be hoped that the analysis may seem less scholastic than is all too often the rule in these matters and may seem more realistic without losing its rigidly scientific character.

There remains the cumbersome but indispensable task of dealing with certain methodological questions which the problem involves. Among these the most important and also the most controversial question is to ascertain whether the method of deductive analysis or that of empirical description offers the better chances of bringing us nearer to a solution of the problem.

While the older literature on crises and cycles was principally based on deductive reasoning, though of necessity starting from the facts presented by the actual history of economic fluctuations, there has sprung up, in the last decades, a new school which claims, emphatically and with ill-concealed scorn for "theoretical" analysis, that the collection of statistical data, their intelligent arrangement, and their mathematical analysis constitute the only method appropriate to the problem. This method is sometimes spoken of as "quantitative analysis" (in contrast to the "qualitative" analysis of the deductive school), as "descriptive analysis" (Mitchell) or in the German literature, as "Konjunkturforschung" pure and simple (in contrast to the "Konjunkturtheorie" of the deductive school). Its general background is always the curious but ineradicable misconception of scientific methodology which was the characteristic of the late Historical school and which has been evolved further in its modern reincarnations, especially by the Institutionalist school in the United States. The recrudescence of the fundamental error inherent in this whole methodological trend is closely connected with the activities of the numerous research institutes which have been founded in the last decade in the United States and also in many other countries, with a view to obtaining a better diagnosis of economic conditions and their fluctuations and also, in the eyes of the more optimistic workers in this field, a prognosis of changes in economic conditions. These institutes—among which the Harvard Committee of Economic Research, the National Bureau of Economic Research in New York (with Wesley C. Mitchell as one of the directors), and the Institut für Konjunktur-

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forschung in Berlin (with E. Wagemann as president) are the most noteworthy—have been developed into large economic laboratories where, with a most refined apparatus of mathematical distillation, the raw material of statistical facts is worked up until we get the finished products in the form of all kinds of "cycles," of "coefficients of correlation," of "trends," of "moving averages," of logarithmic scales, of business "indices" and "barometers," of "isolated time series" and what not. It is easy to understand that, in this atmosphere of institutionalized science with its air of exactness and progressive technique, not many escape the temptation to look down upon old-fashioned "theory," with its small business unit of the private study, as something hopelessly behind the times and to claim for their descriptive and statistical method a wider field of application than is compatible with the logic of scientific methodology. Instead of confining themselves to the more modest but very meritorious task of collecting, arranging, and interpreting all the available facts and statistical data and of verifying the results of deductive reasoning, these men thought it possible to replace deductive reasoning entirely by their empirical and statistical method. Deductive theory, essentially centring around the static conditions of economic equilibrium, was declared to be totally unsuited to explain the disturbances of this equilibrium; the new "Quantitative Economics" was claimed on many sides, as the only suitable method for complying with the desideratum of Dynamic Economics. Other writers of this same school—for instance, Wagemann and to some extent also Mitchell—go so far as to deny that the search for causal relations in crises and cycles is a legitimate object of economic science.

Now, there cannot be the slightest doubt that the development of statistical research work, with its refined methods of observation and interpretation of the facts of cycles and crises ("Konjunkturforschung"), has been, in its proper field, a great advance, and there is nobody who does not appreciate very highly the work done by the several research institutes. The picture of the phenomenon of crises and cycles given in the second and third chapters of this book has been largely based on this work. The empirical basis on which the theoretical analysis of crises and cycles must necessarily be constructed has been broadened by it in a manner which leaves

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5 Most distinguished work was done also by the Russian Institute for Cycle Research in Moscow established after the war, with men like Kondratieff, Wainstein, Oparin, and others among its staff. Unfortunately, this activity was abruptly stopped, several years ago, because the Government deemed it "reactionary," and the staff was sent to Siberia or shot. It is in reverential commemoration of these fine men, some of them personally known to the present writer, that this note has been added.
less room for mere guesswork and vague hypotheses, and also there is no disputing the educative influence emanating from the work of the empiricists on the mental sobriety of the theorists. On the other hand, however, it is equally indubitable that the scope of the work that can be usefully done on these lines is rather more limited than was believed in the early enthusiasm of the 'twenties. The present crisis, which has reduced so many extravagant expectations to more reasonable proportions, has also exploded the more far-reaching hopes of the cycle statisticians. The attempts at prognostication especially have lamentably failed as was most conspicuously demonstrated by the breakdown of the "Harvard Barometer." Since this is a striking example of the inherent defects of this kind of work, it may be useful to explain that the diagnosis and prognosis given by the Harvard Committee was based on the combination of three time-series the temporal order of which was supposed to follow a regular course so that, at a given moment, the point in the business cycle corresponding to the constellation of the curves at that moment could be determined.

It was indeed an ingenious idea to apply the principle of nautical astronomy to economic forecasting, but there was one fatal flaw. For as long as we have not made a thorough investigation into the causal relationships between the time-series, the mere temporal sequence does not tell us any more than that something has happened in the past which might not happen in the future if some variables in the causal mechanism should change. But in investigating the causal relationships we are thrown back from statistical empiricism to "theory" in the deductive and analytical sense. Hence this whole procedure of the empiricists falls little short of the reasoning of the legendary army doctor who, being informed that a foot-soldier sick with typhoid fever had quickly recovered after having eaten by mistake a liberal portion of sauerkraut, decided that sauerkraut is a cure for typhoid fever. And many hasty attempts at introducing some sort of theory, after the flaw in the empirical procedure has been detected, come quite near to the reasoning of the same army doctor who, after having applied his recipe on an unfortunate lancer with fatal effect, corrected his first deduction by saying that everything depends on the kind of arms. A great deal more could be said on this subject to show that the whole idea of forecasting, whatever its methods, is based on a number of misconceptions which go far to rule it out as a useful undertaking.  

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of the more modest task of economic diagnosis encounters great difficulties. The errors in diagnosis and prognosis made by the Cycle Institutes in the last five years have, indeed, been so many that it is really to be wondered whether the world would not have been better off without these more ambitious activities, considering the harm done in economic policy by misleading diagnosis and forecasting. These experiences are closely connected with methodological misconceptions about the merits of statistical empiricism and the demerits of analytical theory. It can be safely assumed that, to-day, there is perhaps a better understanding everywhere of the fact that no intricate statistical research work, no calculations of “coefficients of correlation,” “trends,” and “moving averages” can bring us a single inch nearer to the solution of the problem of the causation and of the mechanism of crises and cycles. By the statistical method, we ascertain facts, but we cannot explain them, i.e., bring them into logical order so that we “understand” them. Only analytical theory can do that, and if there has been, in recent years, any furthering of our insight into the mechanism of crises and cycles, this has been the work of the theorists and not of the empiricists.

While it can be safely assumed to-day that the legitimacy of the method of analytical theory is hardly contested any longer (with the possible exception of very hard-boiled Institutionalists in the United States), there still continues a lively discussion about the real nature of the problem involved in the phenomenon of crises and cycles and about the type of theory appropriate to it. For all our aversion from every kind of “prolegomenism” and from philosophizing endlessly about tools without really getting to work, it is well to be clear on two points: first, that the phenomenon of general economic disequilibrium as revealed by crises and cycles constitutes a problem unexplained by general economic theory which is essentially a theory of economic equilibrium and of the forces working interdependently for its continuous restoration, and, second, that, in spite of this, there cannot be any doubt that the problem constituted by the recurrent disruption of the economic equilibrium must be tackled by the same type of analysis as that applied to the problems of economic equilibrium. To decry this type of economic

7 The literature on this subject is mostly in German, for instance: F. Lutz, _Das Konjunkturproblem in der Nationalökonomie_, Jena, 1932 (a very commendable book); A. Löwe, “Wie ist Konjunkturtheorie überhaupt möglich?,” _Weltwirtschaftliches Archiv_, October 1926, pp. 165-197; E. Carell, _Sozialökonomische Theorie und Konjunkturproblem_, Munich, 1929; E. Preiser, _Grundzüge der Konjunkturtheorie_, Tübingen, 1933. Some very relevant remarks are now also to be found in English in the English translation of F. A. Hayek’s book, _Geldtheorie und Konjunkturtheorie_ (Monetary Theory and the Trade Cycle, London, 1933).
analysis as "Static Theory," and to clamour for a "Dynamic Theory" instead, is to confuse a question of method with a question of subject and to misconceive the real nature of analytical economic theory which must of necessity be the same whether applied to questions of Statics or to those of Dynamics. The real task and purpose of the theory of cycles and crises, therefore, is to modify and enlarge the scope of general economic theory so as to include the explanation of the recurrent disruptions of economic equilibrium. Since practical economic life has been up till now continuously caught in the ups and downs of disrupted equilibrium, the theory of crises and cycles is of special importance in making the whole body of economic theory more realistic. Such a theory, it must be repeated, is not a new and independent kind of theory with methods of its own, but a part of the general body of economic theory, based, as a kind of superstructure, on the theory of economic equilibrium and modifying or enlarging its general propositions. It must be, in the celebrated words of Böhm-Bawerk, "the last, or the last but one, chapter of a written or unwritten system of Social Economics and the ripe fruit of the knowledge of all economic processes and their functional connections." It must be noted, however, that in order to harmonize with the general body of economic theory, the theory of crises and cycles must be able to explain in a really convincing manner why the very strong forces always working for equilibrium are recurrently counteracted so that the whole system of balancing factors breaks up. Not all theories so far advanced have proved able to do this, for they point to disturbing factors which, in the light of general economic theory should be easily digestible by the economic system. It is well to remember this point in the subsequent sections.

Something more must be said in order to describe more exactly the real nature of the theory of crises and cycles. Mention has already been made in § 4 of the fact that the scientific analysis of economic fluctuations began with the phenomenon of crises and only at a comparatively late date was it realized that the theory of crises must be incorporated into the more general theory of cycles, Juglar being the outstanding pioneer in spreading this new conception. It must not be thought, of course, that the earlier writers up to the last quarter of the nineteenth century were ignorant of the phenomenon of cyclical fluctuations; it was only that their scientific curiosity was predominantly directed towards the more dramatic phases of the crisis and the depression. The obvious reason for this narrowness of viewpoint lies in the fact that the boom phase of the cycle, characterized as it is by
full employment of the factors of production and by an altogether healthy aspect of economic life, gives the outward appearance of perfect economic equilibrium—except for the last stage of hectic speculation which aroused enough suspicion even among the earlier writers. Hence it was generally thought that this phase was just that phase which corresponds to Equilibrium Economics, without there being anything peculiar about it demanding a special explanation, and again from a practical point of view there seemed nothing pathological about the boom phase to give rise to concern and uneasiness. The only trouble was that it did not last; it did not only just come to an end but was usually followed by the worst kind of economic disequilibrium. This had to be explained, but it was only by a slow process that the origins of the crisis and of the depression were traced to the preceding boom and thus the real pathological character of the latter discovered. In all this, the attitude of the earlier writers corresponds closely to the attitude of the general public in these matters: the boom is generally taken as something normal and enjoyable with nothing the matter with it, and when the crisis breaks out the causes are sought in all directions save for the one direction in which they should be sought, i.e., in the unhealthy and abnormal conditions created by the boom. The regular temporal sequence of boom and crisis (or depression) experienced during one century of capitalistic development has, of course, done much to shake this attitude and to suggest that the temporal sequence implies a causal one.

There remains one final question. Is it really true that the phenomenon of crises and cycles is a general one like the phenomenon of price or interest, or is every crisis and every cycle just an "historical" event more or less unique in its kind, with a kaleidoscopic change of constellations? If the latter should be the case, then a special theory of crises and cycles has evidently no real raison d'être since nothing useful could be said on crises and cycles in general; every crisis and every other phase of the cycle would create a new concrete situation which would have to be analysed with the tools of general economic theory. This is, in fact, a view held by several writers. The present writer, however, is not prepared to accept it. Though he would concede that many cycle theories have the defect of making too sweeping generalizations, it seems that the radical view referred to overlooks the fact that all crises and cycles of our economic system can, if their ever-changing accessory traits are eliminated, be reduced to a uniform

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8 The best treatment may be found in the aforementioned book by F. Lutz of which the argument in question is the main theme.
patter of typical constellations of data. The common denominator of all crises and cycles is to be found in the typical reaction of the mechanism of our economic system to certain disturbing factors by which the economic equilibrium is totally upset. This typical reaction is such a regular occurrence that it calls for a special explanation, which it is the task of the theory of crises and cycles to give. We may conclude, then, that this last and perhaps most serious attack on the legitimacy and necessity of the theory of crises and cycles can also not be said to have been really successful.

§ 10. The General Sources of Disturbance.

The real nature of our present economic order is characterized on the one hand by an extremely great differentiation of the productive processes (the division of labour), and on the other by the lack of any central, conscious planning authority to guide this vast complicated machinery. It is a blend of the finest differentiation and almost complete anarchy, and is based upon a boundless wealth of voluntary decisions, and upon freedom in production and consumption and in the lending and borrowing of credit. Economic theory shows by what inherent laws these millions and billions of individual decisions and economic acts are so welded together that this anarchist type of economy, which is capitalism, does not lead to a state of chaos, but actually makes capitalism capable of very high achievements, causing the achievements of the economic systems of the past to seem insignificant, and also assuring to the economic system of our day a position superior to that of any collective system of the future. That a social system of such extreme differentiation and complexity is likely to possess a very unstable equilibrium and to be subject to manifold disturbances is at once obvious. The miracle is not that it functions amid continuous disturbances and oscillations, but that it functions at all, and with such comparatively good results. That is the great miracle which has again and again fired the curiosity of men in modern times and has given rise to the science of economics.

The only way to understand the phenomena of economic fluctuations and disturbances, crises and unemployment, is to realize at the very outset that our present social order is an economic system based upon division of labour carried to its extreme limits. In any study of crises and cycles, it must be realized from the first that in such a vastly complicated, knife-edged economic organization as that of to-day held together by the bond of voluntary decisions, frictionless co-operation cannot be expected. It is inevitable that the individual parts of the process will fit
in with each other sometimes better and sometimes worse, and it is at least conceivable that the disturbances and frictions may become so great that the whole machinery will at times come to a complete standstill—with the paradoxical effect that millions of people who are able and willing to work must sit with idle hands, because they can find no work, although the distress of the masses during this very period of crisis cries out for an increase in production. If things are going badly in a country of self-supporting peasants like China, for instance, because over-population leaves too little land for each individual, the obvious thing is for the peasant to work more. He would not understand the phenomenon of unemployment and would think it a good joke if he were told that there are countries where work has become a boon for which men beg as for bread, and that those who do extra work in their spare time are hated by their fellows as "double wage-earners." He would consider this a grotesque state of affairs, and we should be obliged to agree with him. But we should have to reply that the periodic recurrence of this grotesque state of affairs is the price which we must pay for the enormously higher productivity of an economic system based on the logical carrying out of the principle of the division of labour. The susceptibility of the economic process to disturbances of equilibrium grows with the degree of the division of labour, but so does the productivity of the economic system as a whole. If we wish to avoid all disturbances of equilibrium, we must return to Robinson and his miserable standard of living; and if we do not wish to do that, we must be prepared to accept the greater instability of the economic system. That is the dilemma in which we find ourselves.

But the choice is no longer ours, since the increase in productivity due to the increasing division of labour, and the production technique made possible thereby, have led to a tremendous growth of population throughout the world, so that we cannot diminish the present degree of the division of labour without endangering the existence of countless millions of people and with it the existence of our social order—a very hard and sober fact which puts an end to all the dreams of economic romanticists and autarkists, but should also put a necessary damper on the usual optimistic appraisal of the growth of population and the equally common pessimistic view of the present decline in that growth.9 In other words, the pronounced instability, combined with the top-heaviness and complexity, of our economic

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system, based as it is upon a high degree of division of labour, are
the high price which we must pay for an increased productivity,
which has resulted partly in greater prosperity and partly in a
tremendous increase in population; and as far as this latter result
is concerned, we are no longer masters of our decisions but prisoners
of our fate. This must be kept in mind in passing judgment on
the growth of population in the past, as well as the decline of
population in the present and the future. If the present world
economic crisis is perhaps already a sign that the more and more
stilted industrialism based on the division of labour has reached
its limit, the falling tendency of the birth-rate of the present
day and of the future certainly deserves special consideration in this
connexion. If the growth of population in the past was a factor
making for expansion and instability, the decline of population in
the future will be a factor making for stability.\(^1\)

The instability of our present economic system, due to the
division of labour, is now being rendered still greater by the
fact that with the increasing division of labour the technique
of production has changed in such a way that the production of
consumption goods is becoming more and more indirect, and follows
the roundabout way of the previous production of producers' goods
(machines and the products necessary for the construction of these
machines, transport, building, &c.). The modern process of pro-
duction is therefore not only based on the division of labour,
but is an indirect process following circuitous and therefore time-
absorbing routes. If the division of labour as such demands that
the producers should estimate each other's demand for goods
correctly, in order to avoid disturbances of equilibrium, the special
production technique connected with this system of division of
labour leads to the further necessity of correctly estimating also
the demand for intermediate products, and the volume of the
intermediate products must be kept in the proper ratio to that
of the final products, and this despite the difficulties involved in
the time-absorbing character of our production process. It is

\(^1\) This view is opposed to the widespread belief that the slackening rate of
population growth is a factor of growing instability, a belief which has already been
dealt with in chap. i. It must be added, however, that this question constitutes
a rather intricate problem in which there are many points with which we have to
reckon. Thus it has been shown in chap. i that the slackening rate of population
growth may bring a number of industries—especially agriculture—into grave diffi-
culties. Another question is the political effect of the slowing-down of population
growth which may also have economic consequences. In this respect, the slacken-
ing rate of population growth works in two directions. On the one hand, by reduc-
ing the pressure of population, it diminishes the strength of one of the most
active forces behind modern imperialism. On the other hand, if the growth of
population slows down faster in one country than in another, this may produce a
feeling of insecurity in the first country, and thus poison the atmosphere of inter-
national politics.
THE CAUSES OF CRISSES AND CYCLES.

easy to see that we have here a storm centre of the first rank. That it is indeed the principal disturbing factor, round which every adequate theory of crises and cycles must be built, will be shown later.

In so far as a socialist state maintains the present-day scale of the division of labour and the production technique described—and it will have no other choice, unless it immediately exterminates a considerable part of the population—it, too, must inevitably fall a victim to the disturbances which arise from the complexity of the economic system. It is therefore quite wrong to assume that a socialist régime would be able to bring about a state of affairs from which crises and disturbances were absent. Moreover, there is reason enough to assume that the bureaucratic, centralized organization of the socialist state, with its inevitable abolition of the pricing mechanism of the free market, would lose the indispensable measuring-rod of direction and economic calculation, and would finally provoke such violent disturbances that the further continuance of this system would prove altogether impossible. The reader should therefore be warned against drawing conclusions from a comparison of the present state of the Russian economy, which has only had a few years in which to test its staying power, with the present state of the capitalistic world, which has shown, over a period of more than a hundred years, not only that it is capable of continued existence, but that it is able to create prosperity, in spite of all its crises. That a socialist system may succeed in building electricity works and things of like nature in gigantic style causes us as little astonishment as the successful building of the Cheops pyramid. In both cases the only astonishing thing is the tremendous social pressure and the great capacity for restricting consumption, which make such investments possible, and the politico-social system which withstands such pressure.

Russia is to-day experiencing a boom which, like the boom in a capitalistic country, is characterized by the forcing upwards of investment activity, and the prudent observer will wait and see what the final end of the Russian investment orgy will be. Russia cannot avoid the necessity of finding a new equilibrium of the national economy at the end of the investment period (which can be lengthened until the unhappy population are in a state of complete misery); and exactly as in the case of a capitalistic boom, this new equilibrium is all the harder to find, the steeper has been the rise of the investment curve. It will soon dawn upon us that the verdict of many people on the present Russian "prosperity" is as short-sighted and lacking in historical per-
spective as their verdict on the American "prosperity" of a few years ago, and that they fail to foresee the possible end, although the lack of foresight and perspective in this case is still more inexcusable, (1) because the American lesson lies behind us, (2) because the weak places in the Russian investment boom are still more obvious, and (3) because its violence can be plainly read in the simultaneous impoverishment of the Russian people while a capitalist boom usually leads to a rise of consumption. It does not show any very deep understanding of economics to assume that something is to be gained by replacing the ensemble of individual decisions, guided by self-interest, which is characteristic of capitalism, by the control of government authority. The contrary is true.

It is a striking fact that, in contrast to this view, popular opinion in many countries to-day takes it for granted that a Socialist Economy (which is, technically speaking, equivalent to a totally Planned Economy) has, whatever its other shortcomings may be, at least the advantage of being a cycle-proof economy. It seems that this opinion rests mainly on a kind of short circuit of reasoning. There is, of course, no denying the fact that, theoretically, an economic system is conceivable in which the typical disturbing factors of our present economic system are eliminated by a suitable management of the whole economic process in its every detail. To admit this is one thing, but it is quite another thing to jump to the conclusion that the magic word "Planning" suffices to open the door to this—in many respects rather dubious—paradise, promising to make the world safe for stability. It is not sufficiently recognized that "Planning" is only just a word vaguely indicating the general principle of Socialist Economy, and it is a safe bet that the overwhelming majority of our planners have probably no inkling of the gigantic problems which lie behind this word. In fact, Collectivist Economic Planning presents so many and such crushing difficulties that there is very little prospect of its coming anywhere near the productivity of our present economic system (even in its present deplorable state) and of its guaranteeing an harmonious balance of the economic body. The socialist economic system will in all probability lead both to diminished productivity and to a greater lack of economic balance, and these two effects are closely interrelated.

As it is, the economic disharmony which promises to

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2 The best book on these questions, accessible to the English reader, is now Collectivist Economic Planning (ed. by Professor von Hayek), 2 vols., London, 1935. Of special interest therein is the treatment, given by Professor Brutzkus, of the problems and the experiences of Soviet Russia.
THE CAUSES OF CRISES AND CYCLES.

become a chronic ailment of the Socialist Economy will show this marked difference from the temporary disharmony of the Capitalistic Economy, that it will not become manifest at the place of its origin but will be shifted from the economic apparatus on to the shoulders of the consumers. In other words, the original tumour will breed, as it were, metastases in the more distant parts of the economic body. There will be no more bankrupt firms, and, given a certain inventive faculty for disposing somehow of embarrassing masses of human beings, there will not even be unemployed as we know them to-day. But that, of course, does not mean that we have got rid of the innate economic disharmonies. What it means is rather that we shall have destroyed both the machinery registering the place of their origin and those forces which, under our present economic system, work automatically to do away with them. The economic machinery continues to "function" in a way, but the population, besides being deprived of elementary personal liberties, will have to bear the consequences of the economic disharmonies by being worse off than before. "Crisis" in the Socialist State of perfect Planning will be characterized, then, by the fact that people will suffer by them as consumers rather than as producers while the economic apparatus will show, at best, the outward appearance of being in some sort of order. But the latter, as already indicated above, is not an advantage but a great disadvantage as compared with capitalism. Hence the result we are most likely to get will be as follows: The socialist system of Total Planning will probably succeed, in a very short time, in turning the present paradoxical "poverty amidst plenty" into the more respectable "poverty amidst shortage"; but as the innate economic disharmonies will be a lasting feature of this system, the poverty is bound to become just as chronic as the corresponding disharmonies. What we get in exchange, then, for capitalism with all its shortcomings is poverty and disharmonies being greater than ever before and becoming chronic into the bargain—and this without the economic, political, and personal liberties for which even the poorest unemployed in the capitalistic countries will regretfully yearn when it is too late. It is perhaps pertinent to add that the colour of the political flag under which the system of Total Planning is launched makes, of course, absolutely no difference.³

It is hardly possible to over-emphasize the fact that every

³ The problem of the Dynamics of the Socialist Economy will be resumed later on from a more theoretical point of view. Unfortunately, it has not, up to the present, been adequately dealt with in economic literature. Some remarks, running somewhat parallel to the argument presented here, may be found in Professor Aftalion's book *Les Crises Périodiques de Surproduction*, vol. 2, pp. 405-411.
economic system, no matter how organized, which is based on a very high degree of division of labour and on a technique of production as complicated as the present one, is bound to be exposed to all sorts of dynamic disturbances. On the other hand, however, it would not be defensible to deny that the regulating principle of the capitalistic economy—the fundamental freedom of individual decisions and economic acts, which is bound up with the private ownership of the means of production and with competition—leads on its side to specific disturbances, which could perhaps be avoided by a modification of this regulating principle. It is indisputable that competition can lead producers astray into economic conduct which is guided more by the behaviour of the competitors than by considerations of the general economic interest. In this way the boom, like the depression, can easily assume an exaggerated form, and so to-day a considerable weakness of our individualistic competitive system is observable in the fact that no single entrepreneur believes that he dare take on new investments (a fact which explains the duration and acuteness of the present depression) as long as investments do not show a general tendency to rise.

In addition to the division of labour, the pronounced and growing importance of the production of producers’ goods, and the special regulating principle of our economic system, there is the fact that our economy rests upon the use of money and credit, a further very serious source of trouble. Although it is an indispensable simplifying method to represent the complicated economic process of to-day as a procedure in which money is only an auxiliary and ultimately goods are exchanged for goods, it would be false to ascribe a merely passive rôle to money in economic life. On the contrary, changes in the volume of money (or of credit) and in the velocity of circulation of money can call forth changes and disturbances in the economic process, which are so important that one group of economic theorists (the adherents of the so-called monetary theory of the cycle) see the ultimate cause of economic fluctuations in happenings within the money and credit sphere.

Furthermore, it is important to note that freedom in the application of money income is indissolubly bound up with the regulating principle of our economic order. This freedom means, on the one hand, freedom of the individual to determine how much of his income he shall spend and how much he shall save, and in what way he shall save, and, on the other hand, it means his freedom to choose the goods on which he shall spend his money. As the economic equilibrium can only be maintained if the component
THE CAUSES OF CRISSES AND CYCLES.

parts of production correspond to the application of the individual incomes (while this application can be more quickly changed than the corresponding components of production), it is obvious that this freedom to consume and to save is a further source of disturbance of the first order.

Finally, our economic system is, like every other, exposed to the disturbances which force their way into the economic process from without, either through nature or through politics. Particularly important in this connexion are the fluctuations of harvests, by reference to which attempts have been made to explain crises and cyclical fluctuations. But none of the representatives of this climatological theory of the cycle has succeeded in fully proving his contention. 4 The same is true of population changes, which doubtless represent a dynamic factor of great importance, but are not sufficient to explain crises and cycles. 5

§ 11. OVER-PRODUCTION.

The paradoxical nature of the crisis is characterized by the fact that production is curtailed in every direction, and there is no work anywhere, while so far as the economic position of millions of people is concerned, we could really be doing nothing better than getting every ounce of product out of men and machinery. Curtailment of production follows curtailment, dismissals of workers follow dismissals; machines and rationalization have made production easier all along the line during the previous boom, and have rendered human labour superfluous. In vain do we look round for new and profitable possibilities of production, which might reabsorb the unemployed. What is easier, then, than to assume that the cause of the crisis is general over-production, developed in the preceding boom—in other words, that the total production has outstripped the total consumption, and that the crisis must therefore be overcome by a reduction of production (curtailment of work, suppression of rationalization, and restriction of output). As a matter of fact, this is the most popular

4 The first representative of this theory seems to have been the astronomer Herschel (Philosophical Transactions of the Royal Society of London, 1801). It was he who gave Jevons the idea for his theory which connected up the periodicity of sunspots with the fluctuations of harvests and with the trade cycle (Investigations in Currency and Finance, London, 1884). To the same school belong: H. Dietzel, article "Ernten" in the Handwörterbuch der Staatswissenschaften, 3rd ed., and H. Moore, Generating Economic Cycles, New York, 1923. The most has been made of this argument recently by John H. Kirk, in his very interesting book, Agriculture and the Trade Cycle, Their Mutual Relations, with special reference to the Period 1926-1931, London, 1931. See also § 2 above.

5 Attempts have been made in this direction by L. Pohle (Bevölkerungsverbreugung, Kapitalbildung und periodische Wirtschaftskrisen, Göttingen, 1902), and by M. B. Hexter (Social Consequences of Business Cycles, Boston and New York, 1925).
CRISSES AND CYCLES.

crisis theory at all times of crisis, and to it there corresponds the contraction of production which the producers, in the difficult position in which the crisis places them, undertake, or are forced by the government to undertake, all along the line. At such times men’s thoughts and actions are dominated by a "fear to produce."

It is an indisputable fact that a general slump, which does not permit of the scale of production reached in the boom being maintained, sets in during the crisis, and it is equally indisputable that this general slump is the result of the total demand suddenly falling behind the total supply. But let us make sure what this means and what it does not mean. Under no circumstances can it mean that the cause of the general slump is to be sought in the fact that production has outstripped consumption and that too many of all goods at once are being produced. Closer consideration shows that there is no logic in such a view, for in relation to what can too many goods be said to be produced? Surely not in relation to wants, i.e., to the willingness-to-consume, for that would completely upset the idea of all economy as an activity concerned with the overcoming of the eternal scarcity of goods, and cannot be seriously considered. The standard of living among the masses, measured by what is considered as necessary to-day among the upper strata of society, is still at such a miserably low level that a hundred times the production hitherto attained would scarcely suffice to bring the well-being of the masses up to the level of the upper classes. Until that is done there is not the slightest sense in disputing that all productive forces at our disposal must be employed in the fight against the scarcity of goods. We are not really at a loss to know what to do with our productive forces as long as we do not live in Lubberland.

Taking all in all, therefore, we cannot have too many workers, but only too few; we cannot have too many machines or too much rationalization, but only too little. But are the millions of unemployed not a shattering proof of the fact that we have too many workers? The best answer to this question is not long theoretical arguments but the following simile. The struggle against

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the scarcity of goods which we are condemned to wage for all time, and always with inadequate forces, can be compared to the struggle of the German army against the superior numbers of their opponents during the World War. Every soldier was used in that struggle, and the Germans would have been glad if they had had at their disposal more millions of men, or of tanks to replace soldiers, such as their enemies had. Nevertheless it happened, owing to difficulties of organization which could scarcely be avoided in such a huge and complicated structure as the German army, that from time to time isolated troops were kept out of action, while at other places on the front they were sorely needed. Thus a scarcity of soldiers in general was here accompanied by a superfluity of soldiers at certain isolated places. No one in possession of his senses would have concluded from this that these soldiers who were temporarily kept out of action should have been sent home as superfluous or that the “work” of the army could have been “spread” by lengthening the men’s leave or replacing guns by halberds and pikes. The juxtaposition of too little in general and too much in particular was in this case so obvious that it could not escape even the densest observer. And yet most people find it extraordinarily difficult to believe that in the economic system it is fundamentally the same. This is because money and the division of labour, which characterize the particular method used by our economic system in its fight against the scarcity of goods, have drawn a thick veil over the connexion between the two, the piercing of which requires a special mental effort and, above all, the courage to reduce things to their simplest terms.

An economic crisis (that of to-day like those of the past) can therefore not be interpreted as a general over-production of all goods at once, a surpassing of the possibilities of consumption by the possibilities of production, but only as a lack of proportion between the different lines of production, in short, as a functional disturbance within the highly complicated modern exchange economy. The disparity between the goods at our disposal and our unsatisfied wants is more obvious than ever, but the wheels of the machine which delivers the goods do not fit together properly at times of crisis.

According to the logic of the over-production myth, the total volume of production in question is a more or less fixed quantity, to be shared by the people, with the result that each watches jealously to see that the others do not receive too large portions. A further result is that in international exchange the individual States strive by tariffs or other hindrances to imports, to preserve as large a portion as possible of the limited volume
of production for their own national economy. But how is this production quantum to be determined? Apparently by the fact that there is a fixed limit to the purchasing power needed to buy the products. But the incomes with which the goods produced are bought come ultimately from the production itself, and the total sum of the incomes is also determined by the total sum of the production. If we follow out these relationships to their logical conclusion, we find that production is not determined by consumption, but consumption by production. That is to say, there is no limit to profitable production as a whole (i.e., apart from the question of the correct composition of the total production), since the saturation point of human wants is immeasurably far off, but there is, unfortunately, a limit to consumption, which is determined by the utmost we can produce with our limited forces and means. Anything else is absurd: the fear of production is absurd, as is the view that we must constantly be prepared to "spread" the volume of production; and equally absurd is the campaign against all efforts to increase productivity.

The over-production myth often takes the form also of connecting up the level of unemployment with the excess of the number of workers over the total amount of profitable production, and thus of interpreting unemployment as a symptom of over-population. But this idea that the number of unemployed expresses the degree of over-population of a country is equivalent to the erroneous conception that the total sum of the production to be undertaken is a given fixed quantity, which, beyond a definite number of the population, is not sufficient to occupy everyone. This conception is contradicted not only by all the theoretical arguments which have already been levelled against it, but also by the fact that the world crisis of to-day is afflicting rich and poor, thickly populated and thinly populated countries, with equal force. Unemployment in France—which, in the first phase of the world crisis, many believed to be safe from the scourge of unemployment as a country not suffering from over-population—also later reached considerable proportions corresponding to the degree to which France was affected by the world crisis. Finally, if we were to decrease the population of Germany by deporting twenty million people, taking care to leave unchanged the relative numbers of workers in the various branches of economic activity, we should not be one step nearer solving the problem of German unemployment, but we should find new confirmation of our thesis that it is a question of the qualitative factor, of the functioning of the apparatus, and not of the quantitative factor or the size of the economic apparatus.
That all these considerations are old-established propositions of political economy is shown by the following passage from Ricardo's *Principles of Political Economy and Taxation* (Chapter XXI)—

Productions are always bought by productions, or by services; money is only the medium by which the exchange is effected. Too much of a particular commodity may be produced, of which there may be such a glut in the market as not to repay the capital expended; but this cannot be the case with respect to all commodities; the demand for corn is limited by the mouths which are to eat it, for shoes and coats by the persons who are to wear them; but though a community or a part of a community may have as much corn, and as many hats and shoes as it is able, or may wish to consume, the same cannot be said of every commodity produced by nature or by art. Some would consume more wine if they had the ability to procure it. Others, having enough of wine, would wish to increase the quantity or to improve the quality of their furniture. Others might wish to ornament the grounds or to enlarge their houses. The wish to do all or some of these is implanted in every man's breast; nothing is required but the means, and nothing can afford the means but an increase of production. If I had goods and necessaries at my disposal, I should not be long in want of workmen who would put me in possession of some of the objects most useful or most desirable to me.

An indirect disproof of the over-production myth may be given as follows. If it were correct and not merely a myth, we should have to conclude that, during the depression production all along the line must be pushed back to the level of consumption, that is to say, to the market opportunities. And it is just this conclusion that is drawn by every single entrepreneur faced by a glutted market when, in the case that a fall in costs does not take place to the necessary extent, he tries to reach a new equilibrium at a lower level by diminishing his production or by suspending his business altogether. Nobody can reproach him for this since he is compelled to do it by the circumstances. But if everybody acts similarly and has to do so out of individual economic necessity, does this remedy the malady as a whole? Undoubtedly not, so long as the diminution of production in one place does not make room for an extension of production in another. The "fear to produce" may be well founded in the individual case, but, in so far as everybody gives way to it, the effect is senseless because it runs directly counter to the purpose. What in fact happens is that the curtailment of production leads to the further destruction of purchasing power simply by virtue of the interdependence of production and the creation of purchasing power, an interdependence which we must continually stress. So long as no new production starts up, the economic system is caught,
via the universal practice of curtailing production, in a cumulative
decline in which the original disequilibrium between supply and
demand is progressively enhanced on an ever lower level. Conse-
quently general over-production cannot be the cause of the
depression since a diminution of production does not only not over-
come it but even makes it worse.

It should be beyond all doubt that a general over-production
relative to the desire and the capacity to consume is inconceivable.
When we consider that purchasing power is created afresh with
production, it follows furthermore that it is equally impossible to
produce too many of all kinds of goods at once in relation to purchas-
ing power. It is inconceivable that all producers can have produced
an excess and that they cannot mutually exchange the surpluses
provided that they have adjusted their production correctly to the
corresponding demand. Let us assume an isolated economy consist-
ing of two producers, of whom one (A) produces only bread and the
other (B) only shoes. The equilibrium of the system depends on
whether A and B estimate correctly each other's demand for bread
and shoes respectively. If A, for example, miscalculates in this
connexion, then a part of the bread he produces will be unmarket-
able. The total supply in this miniature economic system exceeds
by so much the total demand. Over-production is undoubtedly
present, but not in the sense that too much of all imaginable
goods has been produced—B in our example would gladly have
accepted a roast chicken—but because not the right kind of
goods has been produced. But if this is the case, the equilibrium
of the economic system can be seriously disturbed and a general
 glutting of the market occur. The essence of all these considera-
tions is this: A depression is a time of a general glutting of the
market, which can be described as the exceeding of total demand
by total supply and expresses itself in a general price fall. But
this glutting of the market is caused not by a general over-
production (of all conceivable goods) but by a disproportionality
disruptive of the equilibrium of the economic system in the com-
position of total production, in other words a partial over-pro-
duction, which by reason of the mutual interdependence of all
producers finally leads to a glutting of markets, that is, to a
lagging of total demand behind total supply extending to all
branches of the economy.

This elementary consideration must form the starting point
for any adequate theory of cycles and crises. It is the task
of this theory to show how a disproportionality destructive
of equilibrium comes about. The rejection of the over-pro-
duction theory does in no way imply that the crisis is unobjectionable. It simply dismisses an impossible explanation. To those who are hit by the depression it may be quite indifferent whether we call it "general over-production" or "general glutting of the market"; it loses none of its gravity thereby. Neither should it be imagined that the partial over-production (disproportionality), which leads eventually to the general glutting of the market, still manifests itself in the crisis in such a way that those who produce too much find their counterpart in those who produce too little. The disproportionality develops in the upward swing of the cycle, but in the depression it is in vain to look round for branches of production where too little is being produced. The foregoing analysis will have made it clear why this is so: the disruption of the equilibrium in the economic system has disturbed the process of exchange all along the line, a disturbance in which the whole of production is involved. The requisite additional production has become a mere latent possibility which only comes to light with the restoration of equilibrium.

All these conclusions are of the utmost practical importance because without them we are absolutely unable to find our way through a mass of complexities. To the alarming question as to what shall ever become of the millions of unemployed and of the unused plant of rationalized producing units when all markets are glutted and every occupation and branch of production is overcrowded, the answer can only be: The market for the products of these at present unused reserves of productive resources will present itself when those who are at present pushed out of the productive process have, by their reabsorption, again become buyers, and that will be the case when the equilibrium of the system has been restored. The unused reserves of productive resources correspond in the same measure to unused reserves of purchasing power—this is the lesson that we have learned from the refutation of the over-production theory.

The restoration of equilibrium creates purchasing power. No discerning person will surely believe that the level of production at which we are now working constitutes the magnitude to which we are condemned in the long run, that the paradox of the parallel existence of highly productive but idle plant and millions of unemployed men willing to work and at the same time hungry for goods will remain permanent, and that the millions which we have spent on the modernization and rationalization of our productive equipment were wasted. In every depression the typical popular feeling is that the depressed state of the
economic system has come to stay for all time, just as in the boom it is typical of popular feeling to forget that on the fat years lean ones follow.

But calm consideration should convince even the most resigned pessimists that our permanent economic fate should not be confounded with the passing poverty in which the crisis, to the extent of the decline of production, has plunged us, and that once the "fear to produce" has been overcome by the reattainment of equilibrium it will turn out that we are much richer than we believe to-day when we are deprived of the production of the unemployed and of the idle equipment.

Furthermore, the recognition of the untenability of the overproduction theory does us the inestimable service of guarding us, in times of crisis, against measures which are next to useless even in the most favourable case, and which usually only protract and aggravate the malady, since they hinder the reattainment of equilibrium. All those measures, much discussed in all countries, such as spreading the work, labour service, relief work, the campaign against "double earnings," and the raising of the school leaving age, must be judged from this angle. All these measures are of a purely symptomatic nature, which may make the effects of the crisis more bearable but may harbour the danger of delaying the recovery from the depression. Their true nature can be realized if we return to the military analogy developed above and recall that it may seem absolutely necessary to "occupy" the soldiers who are temporarily out of action by pots-and-pans inspections and other means specially devised for this purpose, so as to protect them from demoralization. But it has also to be remembered that nobody in the war was struck by the idea that because we were somewhat at a loss to know what to do with a section of our men we should make this "occupation" an end in itself and a permanent institution. On the contrary, everything was done to avoid disturbances in the military organization and to get the troops that were held up back into the fighting lines. Here, just as in the economic sphere, the counsel of reason is the restoration of equilibrium.

We have by now already acquired the first essentials for a critical examination of rationalization, the aversion to which to-day overshoots the mark just as much as did its uncritical exaltation a few years ago. It is easily forgotten that even if the word is new the thing itself is not. It is as old as the history of mankind. Men have always striven to raise the productivity of their labour by means of tools, machinery, and the most efficient organization, because they have never been satisfied with the extent to which they have been supplied with goods. It was in this sense that we declared above that we cannot have too much but
THE CAUSES OF CRISES AND CYCLES.

always only too little rationalization. This proposition does, however, not exclude, of course, the possibility that the direction, extent, and tempo of rationalization may have been wrongly chosen so as to lead to a disruption of the proportionality in the structure of production. The effect of this in its social application is that the labour displaced in the first instance by the rationalization remains unemployed for a long time. Undoubtedly effects ensue from the rationalization which lead eventually to a reabsorption into the productive process of those rendered unemployed (increased employment in the machine-making industries, cheapening of the products resulting in an increased demand either for these or for other products to which the purchasing power set free by the price reduction, or under a monopolistic price policy the increased purchasing power of the entrepreneur, is applied). But this process of compensation requires time and this all the more the more inelastic the economic system has become through wage rigidities or through the inelasticity of the credit system.\footnote{Among the large number of publications dealing with this question mention should be made of: Alvin H. Hansen, "Institutional Frictions and Technological Unemployment," Quarterly Journal of Economics, August 1931 (reprinted in his book Economic Stabilization in an Unbalanced World, New York, 1932.) For a different point of view, see Emil Lederer, Technischer Fortschritt und Arbeitslosigkeit, Tübingen, 1931, and A. Kahler, "The Problem of Verifying the Theory of Technological Unemployment," Social Research, November 1935.}

So it is that the present ossification of our economic system by all kinds of rigidities has rendered the process of absorbing displaced workers much more difficult. But this ossification is just that development with which most critics of the powers of adaptation of capitalism are heartily in agreement.

§ 12. UNDER-CONSUMPTION.

The discussion of the possibility of a general over-production brought us to the conclusion that we must substitute for the untenable proposition of a general over-production the concept of disproportionality, a concept to which we shall often have to revert. The further question now arises whether the crisis can perhaps be explained by the fact that in the course of the upward swing of the cycle a deficiency of consumers' purchasing power is somehow introduced, rendering one part of the production unsaleable at prices covering costs. This question has repeatedly been given an affirmative answer especially by the socialists who contend that the unequal distribution of income to the disadvantage of the masses—an, as they believe, inherent failing characteristic of capitalism—is responsible for the deficiency of purchasing power which brings in its train over and over again a breakdown of production (as, for example, Rodbertus, and in a certain sense also Marx and his disciples). While the socialistic type of Under-consumption Theory can be traced back to writers of the first half of the nineteenth century, there has sprung up during the
last decades another variety based on alleged defects of the monetary mechanism of our economic system. Though both types have much in common, it seems preferable to keep them separate, and we shall call the first type the Distributional Under-consumption Theory and the second the Monetary Under-consumption Theory. The latter will be discussed separately at the end of this section.

So far as under-consumption theories assume the possibility of a general over-production, they do not merit any further discussion here. Moreover, their popular form, which starts from the assumption that the entrepreneur pays the labourers too low wages and brings about thereby a deficiency in the total demand, needs no lengthy disproof. For it is obviously forgotten that to the minus in the purchasing power on the side of the worker there corresponds a plus in the purchasing power on the side of the entrepreneur so that nothing is changed in the total amount of purchasing power. On the same reasoning, a drastic raising of wages in the upward swing of the cycle without an increase of the quantity of money and credit, would likewise only take place at the expense of the non-wage incomes and could therefore not prevent the breakdown. It is another question whether it hastens or retards it.

This same argument proves also the falsity of the widespread purchasing-power theory of wages and national welfare. This theory demands that the purchasing power of the masses should be raised in order to ensure sufficient buying power on the market for the continuous increase in national output made possible by mass-production and machinery and, conversely, that increased purchasing power should provide beforehand the prerequisite for the increase of production, so that the concentration and increase of general demand may increase the general welfare. If we pump purchasing power into the hands of the masses without treading the path to inflation, there must occur a diminution in the incomes of entrepreneurs, so it is only the composition of demand and not its total amount that is changed. As in the over-production case, the question arises here also whether the composition of demand as determined by the distribution of income and its changes, is not an important factor for the explanation of disturbances of economic equilibrium. This is indeed a question worthy of discussion and is the one point which gives scientific rank to the modern varieties of the under-consumption theory.2 That the

socialists particularly should have seized on it in order to demonstrate the inherent defectiveness of the capitalist economy is all the more understandable inasmuch as here was presented the unique possibility of combining the criticism of the capitalistic organization of production with a still more vehement criticism of the capitalistic organization of distribution. The under-consumption theory is equally fitted to lend support both to a pessimistic prediction of the power of duration of capitalism (as with both Marx and Rosa Luxemburg) and to the recommendation of a change in the distribution of income in favour of the working classes. It is for this reason popular and ineradicable. So much the more seriously should its justification be tested.

Something must be said in passing about the development of the Marxian under-consumption theory by the Neo-Marxists (Rosa Luxemburg, F. Sternberg, &c.). Karl Marx had assumed that, owing to the inherent disharmonies of capitalism (progressive concentration and accumulation of capital by the capitalists and progressive destitution of the proletarian masses), economic crises would become more and more severe in character, leading in the end to the final collapse of capitalism. To the great discomfort of the Marxian theorists, however, the development actually taking place up to the Great War went absolutely contrary to this prophecy, crises and depressions not growing but markedly declining in severity. In order to save the central point of Marxism, i.e., the idea of the self-destruction of capitalism, in the face of this altogether distressing development, Marxists had to discover circumstances to account for the postponement of the day of reckoning. For this purpose, the phenomenon of modern imperialism came in very handy. All one had to do was to assert that the life of moribund capitalism had been prolonged by imperialism easing the pressure of over-accumulation by opening up new markets in the non-capitalistic countries overseas. But this could not go on for ever. The supply of those countries would soon become exhausted, and with decreasing opportunities for expansion, the scramble for colonies, protectorates, and "zones of influence" would involve the capitalistic countries in political conflicts until the capitalistic world would blow up in the smoke of a world war. In this way quite a number of birds were killed with one stone: the philosophy of the doom of capitalism was resurrected, modern imperialism was stigmatized as the inevitable result of capitalism, and, as a final by-product, an explanation for alternating booms and depression was found in the ebb and flow of imperialistic expansion. This whole argument may sound rather captivating, but when we look at it more closely it reveals itself as a rather vulgar kind of faulty reasoning; for, supposing that a problem of capitalistic accumulation really exists, it is not conceivable that imperialistic expansion into the undeveloped regions of the globe can ease the pressure of over-accumulation. To realize this, one has only to examine how the capitalistic countries dispose of their "surplus production" by exporting to undeveloped countries. We have then to contemplate the following possibilities:

1. The additional export may be paid for immediately in cash so that the exporting country comes into possession of more gold or foreign
CEISES AND CYCLES.

exchange. These may be used: (a) For augmenting the volume of currency, i.e., other things being equal, for inflation. Besides the fact that this—via the production and exportation of goods and the fight for foreign markets—is a rather cumbersome and roundabout way to start inflation, it is difficult to see how the problem of over-accumulation can be solved in this way. On the contrary, inflation is, as we shall see later, sure to lead to a real and not merely imaginary over-accumulation, so that imperialism would be apt to intensify over-accumulation rather than to ease it. (b) To pay for additional imports, with the sole result that home goods are now replaced by foreign goods, without the problem of surplus production being brought any nearer to solution.

2. The additional export may be made on credit. So long as nothing is paid for interest or amortization, the exporting country has, indeed, got rid of the surplus production, but in no other sense than as if it had given it away or destroyed it. If this is the end of the matter, it becomes again legitimate to ask whether such a dangerous and roundabout way, with its political entanglements, is necessary in order to get rid of embarrassing goods without anything to show for it. But as soon as payments are being made for interest and amortization, this case differs in no way from the first case where the additional exports were paid for immediately. It has to be remarked, moreover, that if additional exports on credit (foreign investments) really offer a way out of the plight of over-accumulation, there is no reason why the same should not be done, and with less trouble, inside the country.3

We may conclude then, that imperialism offers no solution of the problem of over-accumulation, whatever this may mean. If we should accept for the moment the crude view that increasing productivity leads capitalism into serious trouble, we should expect that imperialism would be apt to accentuate the problem of glutted markets rather than to alleviate it since the intensification of world economy consequent on imperialistic expansion works clearly in the direction of enhancing general economic activity. This conclusion, incidentally, throws some sidelong on the question as to whether the problem of over-accumulation is a real one. For it is a strong presumption against the existence of this problem that up to the Great War capitalism developed on a gigantic scale and without any dramatic disturbances, while the parallel imperialistic policy of the Great Powers was no real remedy for the disease of over-accumulation. So long as no other factors can be pointed out in explanation of the healthy aspect of capitalism before the war, it must be assumed that the disease of over-accumulation—at least as a chronic disease of capitalism—is imaginary rather than real.

Let us take as the central idea of that form of the distributional form of the under-consumption theory which is capable of scientific

3 This remark has some bearing on the present situation. For there are to-day many who, while opposing the idea of an internal expansion of credit, believe in fighting against the depression by using the idle plant at home for the economic development of backward countries, without seeing the identity of the two cases. So far as the real nature of the economic process is concerned, it makes really no difference whether the unused capacity of the cement industry is used for slum-clearance at home or for building a water-dam in Tibet, though the one scheme may be preferable to the other for a number of other reasons. It may happen, however, that the water-dam project in Tibet might attract entrepreneurial initiative at a time when equally attractive objects for investment at home are wanting. This is the only small vestige of truth in the theory of Economic Imperialism.
discussion, the idea that the share of the workers' income in the total national income is too small and the share of the entrepreneur's income too large to secure equilibrium in the economic system. Then the objection immediately presents itself that the crisis is preceded not by a slack time but by a boom in which the income of the worker rises along with the total income. In the same vein it must be objected that, contrary to what the under-consumption theory would lead us to expect, it is the consumers' goods industries which are usually the least and the last affected by the depression, as has been witnessed also during the present depression. This is really fatal to the idea that it is the appearance of a deficiency of consumers' purchasing power which is the factor bringing the boom to an end.

The under-consumption theory could only satisfy these objections if it were able to show that a dislocation of the income stream causes the upward swing of the cycle as well as bringing about its break-up. Only then would it be an acceptable theory of cycles and crises. Such a demonstration can, however, hardly be carried out on the basis of the under-consumption theory. Even if it were shown that the occurrence during the boom of a worsening of the income distribution to the disadvantage of the masses leads to a forcing upwards of capital accumulation (oversaving), supplied mainly out of the incomes of entrepreneurs, which finally disrupts the economic equilibrium, the question still remains unanswered how the boom is started. The conclusion consequently is, that the under-consumption theory neither grasps nor explains the real problem of economic fluctuations. Nevertheless, we must acknowledge that it has served to contribute to the explanation of the mechanism of the boom. For it cannot be denied that, in the course of the boom, there occurs a dislocation in the structure of prices, incomes, and costs which by reason of the lag of important cost elements behind the rise in selling prices of goods, raises the average profits of entrepreneurs, and so enhances cumulatively the original tendencies to increased activity. Chief among these cost elements, apart from interest, are wages. In so far as this over-expansion in the boom—which represents an over-expansion of real capital—contains within itself the germ of the later breakdown, the dislocation of the price and income streams occurring in the boom is an important link in the explanation of the boom and the crisis. In other words, if the ups and downs of trade cycles are to be explained by an increase of investment—that is, real capital accumulation at the expense of consumption—taking place by fits and starts and therefore associated with shocks, then
we must welcome every indication of a circumstance which helps to explain this periodic concentration and acceleration of capital accumulation, and the modern under-consumption theorists supply us with such an indication. There exists in fact a close connexion between the fundamental ideas of the under-consumption theory and the over-capitalization doctrine presently to be described, even though this connexion may be found difficult to acknowledge in face of the unscientific formulation of the popular variety of the under-consumption theory.

The inertness of contractual incomes, which explains the lag during the boom, leads in the depression to the reverse, so that these incomes, and especially wages, tend to follow the fall in commodity prices only very hesitatingly resulting thus in a fall in the average level of business profits. The same factor which intensifies the boom and the crisis, intensifies the depression likewise, but as a rule no mention is made of this by the more tendentious formulations of the under-consumption theory.

It might easily be concluded from our concession to the fundamental ideas of the distributional under-consumption theory that it would be a good trade-cycle policy to push wages up as early and as vigorously as possible in the boom period as a means of avoiding an over-expansion. This conclusion is, however, unjustified since we interpret the change occurring in the distribution of income in the boom not as a cause but only as an intensifying factor accompanying the boom. A forcing up of wages can, therefore, hardly be the appropriate means of combating cyclical fluctuations. The danger is rather that in view of the extraordinary complex nature of the cycle, a forcing up of wages contains within itself a new element of tension expressing itself in an augmentation of unemployment. It is sufficient to point out that a forcing up of wages during the boom gives a dangerous incentive to the over-extension of rationalization, as was undoubtedly the case in Germany in recent years. This in part explains also the extraordinary phenomenon that during the last boom in Germany, unemployment stubbornly remained at a high level. Finally, it is to be borne in mind that to a policy of wage-raising in the boom there must correspond a policy of wage-lowering in equal measure in the depression and that the lowering of wages is all the more difficult the more vigorously they have been raised previously. The essential truth in the distributional under-consumption theory does on no account give any clear-cut criterion of a trade-cycle policy for wages.

To complete this section, some special remarks seem necessary about that variety of under-consumption theories which I termed Monetary Under-consumption Theories. As this term indicates, the deficiency of consumers' demand, which is the gist of every under-consumption theory, is here sought not primarily in the unequal distribution characteristic of capitalism but in the monetary machinery of capitalism. Both types of under-consumption
theory work with the idea of a continuous deficiency of consumers' demand brought about by a defect inherent in the capitalistic mechanism, but while the distributional school stresses the unequal distribution of incomes as the fatal defect, the monetary school emphasizes the defective flow of purchasing power. Accordingly, the remedy prescribed by the first school is a more equal distribution (if possible within the bounds of capitalism), while the remedy prescribed by the second school is—to put it bluntly—inflation. The atmosphere of the first school is provided by socialists or mildly anti-capitalistic reformers, while that of the second school is dominated by monetary schemers without any marked anti-capitalistic ardour.

As an extreme example of the monetary school, most familiar to English readers, we may cite the theories of Major C. H. Douglas—as formulated especially in his books *Economic Democracy* and *The Monopoly of Credit*. In the opinion of this author, the economic machinery as constructed to-day produces a deficiency of purchasing power arising from the fact that only a part of the cost incurred in the production of commodities goes to the consumers as income, so that current income is not able to buy current output at cost prices unless the gap is filled up by an additional issue of money. As has been shown by various writers, to which the reader may be referred, this view reflects a serious misconception of the economic process in general. No "deficiency" of purchasing power can occur as long as the economic system is in a state of equilibrium, but Major Douglas and the numerous other writers advancing similar views fail to show, in more than a vague manner, how equilibrium can be destroyed.

Apart from these more radical heretics, most theories of this monetary school of under-consumption amount more or less patently to the contention, already mentioned in our treatment of the distributional school, that there is a tendency inherent in our economic system towards over-saving. In contrast to the distributional school, the monetary school presents this view in terms not of maldistribution of income but of monetary maladjustment, so that the remedy offered is also a monetary one, i.e., inflation. It is the process of saving which puzzles these writers. They do

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5 An outstanding example is to be found in the numerous books of Messrs. Foster & Catchings (*Profits*, 1925; *Business without a Buyer*, 1927; *The Dilemma of Thrift*, 1928, and others).
not deny that saving is necessary for adding to the productive wealth of society, but since saving means essentially non-consumption, thus creating a deficiency of consumers' demand, it is believed that it tends to defeat its own final purpose, i.e., the better satisfaction of consumers' wants, and thus to provoke depression—unless the monetary mechanism is so constructed as to take care of this "dilemma of thrift" by providing additional purchasing power. There are many defects in this argument, as has been abundantly shown by a number of critics. For instance, it is commonly overlooked that new productive investments, made possible by saving, reduce the unit cost of production so that, to this extent, the prices of consumers' goods can fall without involving producers in serious difficulties. The gravest defect of most of these theories, however, seems to be the confusion of a static with a dynamic point of view. In other words they fail clearly to distinguish between the effects of saving per se and the effects of an increase in the rate of saving. As regards the effects of saving per se, i.e., a uniform or even gradually increasing rate of saving, it must be vigorously denied that it can disrupt economic equilibrium. In this "static" sense there certainly exists no problem of over-saving with reference to a maximum which cannot be exceeded without destroying economic equilibrium. On the other hand, it cannot be denied, however, that a sudden and marked increase of the rate of saving presents a real problem. We shall deal with this in §14, but it must be said at once that the inflation cure, in which the reasoning of the monetary under-consumption theory invariably culminates, is bound to provoke just that sudden increase in the rate of saving which constitutes a real problem of over-saving. What is meant by this final shot at the under-consumptionists will also be made clear later on.

Summing up the contents of this section, we may conclude that there is a certain truth in the general trend of the under-consumption theory which may make some contribution to a final solution of the problem. This element of truth, however, is buried beneath a heap of very dubious arguments. How unsatisfactory the under-consumption theory is in providing a real solution of the problem might be inferred from the fact that neither of the remedies prescribed—the distributional nor the monetary remedy—promises to be efficacious, and they may be positively pernicious.

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§ 13. PSYCHOLOGICAL FACTORS.

In an economic system which is based on the free decisions and economic conduct of millions of individuals the fluctuations of mind underlying these decisions must be of decisive importance for the equilibrium of the economic system, and the question arises whether the phenomena of economic oscillations do not depend in the last analysis on such fluctuations in mass feelings and opinions. An affirmative answer to this question is given by the theory of the trade cycle of the psychological school. There is much that this theory can count in its favour, especially the important circumstance that the upward swing of the cycle is characterized by a feeling of general optimism and the downward swing by one of general pessimism, and that the one is carried just as far in the upward direction as the other is in the downward direction. In every cycle the experience repeats itself with wearisome regularity, that in the boom people seem to trust to the eternal duration of prosperity, while in the depression they are seized with a dismal melancholy bordering almost on a feeling that the end of the world is approaching. They speak of the "end of capitalism" and forget that up till now every depression has none the less come to an end. It is a case of a mass mental epidemic which only very few are able to withstand, while the vast majority are carried away by the power of suggestion of popular feeling. This is what is in the main at the back of speculative extravagances on the stock markets in which people eventually lose touch with every real foundation of fact. In describing this frenzy, Lavington has compared people to boys who tread on a surface of ice on which there are already many people skating and are given courage by the very fact that there are already so many others on the ice, although the danger that the ice may break increases with the increasing number of the skaters. If a speculative price movement sets in on a market, it tends to be accentuated in a vicious circle and driven to excess. This is as true of the upward movement as of the downward one, so that the French saying: "La hausse amène la hausse" can be equally well applied to the "baisse." If, for example, the public, frightened off and disheartened by security losses in the crisis, has turned away from the security market, then the desertion

of the stock exchange is likely to intensify the lack of disposition towards investing savings in securities. This in turn presses on the whole economic situation and thereby strengthens the real grounds for the depressed state of security prices.

The psychological factor is particularly important in connexion with fluctuations in investment activity which in fact constitute the essence of the cyclical movement. In accordance with the very nature of transactions directed towards the uncertain future, they are dependent in special measure on subjective estimates, that is, estimates highly liable to error, and on the average level of confidence. The snowball-like growth or decline is strengthened all the more by the fact that the increase in investment by one entrepreneur induces investment by another entrepreneur not merely because he is affected by the more optimistic mood, but also because more orders now fall to his lot. For the depression the opposite is true. As a rule the force of competition leaves no choice to the entrepreneur but to swim with the stream. He dare not be the first to restrict his business undertakings in anticipation of an over-production and over-speculation: he always calculates that another will take the lead in this direction with the result that nobody does so. This is only human and it would be surprising to find it otherwise.

People take part in the ups and downs of popular feeling not only as entrepreneurs but also as savers and consumers. In the boom they confidently put their savings in the illiquid form of securities and mortgages while in the depression they hold them mistrustfully on demand deposit at the banks, or even, if the mistrust has reached its peak and spreads even to the capacity for payment of the banks themselves, withdraw them and keep them in the form of cash (possibly even in gold as has recently been the case in France). As consumers, they are prepared in the boom to convert their money rapidly into goods, while in the depression they buy only very hesitatingly in the expectation of a further fall in price. The conduct of both saver and consumer has the effect, via its influence on the liquidity of the banks and via changes in the velocity of circulation of money, of intensifying both the boom and the depression.

Lastly, it is of special significance that the bankers themselves are also subject to the psychological ebb and flow. So it is that in the boom, infected by the general ardent optimism, they loosen the reins of their credit policy, sift less strictly the demands for credit, look less fastidiously at collateral, overestimate the productivity of the credits they grant and are satisfied with less
liquidity. In the depression the memory of the sins of the boom, and the “frozen credits” with which they atone for these sins, cause the banks to fix the most extreme requirements for their liquidity and to subordinate to this all other considerations.

It is true of all these psychological factors that they could not reach such large proportions if the uncertainty about economic data, the defectiveness of economic information (which is again closely bound up with competitive considerations), and the uncertainty of the future did not give wide scope for mere presumptions and vague predictions highly coloured by sentiment, and for errors of all kinds. But, even for facts that are to a certain extent definite, the saying of a Greek philosopher is true that it is not the facts that determine human action but the opinions about the facts.

Nevertheless the reference to psychological factors cannot give a satisfactory explanation of cycles and crises. A theory which imputes the change from boom to depression to mere fluctuations of feeling and to mistakes, prejudices itself by its very simplicity when we consider the complicated nature of economic fluctuations. It fails in fact to give satisfactory answers to many vital questions. How, for example, does this rhythmical oscillation from optimism to pessimism, from activeness to lethargy, come about? Is it conceivable that mere mass feelings and mass mistakes cause real changes in the spheres of goods and money such as characterize the movements of the trade cycle? Is it imaginable that these mass psychological phenomena would last so long if there did not lie at the root of them real events from which they took their origin and which are continually giving them new force? Why does the psychological rhythm not repeat itself from month to month instead of spreading over years?

A satisfactory theory of cycles and crises cannot be content with merely describing the admittedly exceedingly important psychological events which are to be observed during the movement of the cycle, any more than fluctuations in the value of money can be adequately explained by referring to the factor of confidence without showing at the same time how this factor relates to the final determinants of the value of money—the quantity of money, the velocity of circulation of money, and the volume of goods. In the same way, price theory cannot be content with the mere statement that the ultimate forces behind price formation are the feelings, calculations, moods, and decisions of human beings; its task is rather to show the basic rules according to which these forces work. It is the same with the theory of cycles
and crises. It must always take into account that it is the judgments and decisions of human beings that move the economic process and it has to have regard to all anomalies, errors, and mass mental epidemics to which human beings may be subject, to describe their origin and to analyse their repercussions. But it cannot stop here. Its real task consists in showing how these psychological events connect up as a whole with the real facts of economic life, what disturbances there may arise in this manner in the structure of production, in the income structure, in the banking system, and in the structure of costs and prices. This is not to deny that psychological factors can in certain circumstances play a very active and independent rôle, as in overcoming the pit of the depression, or in magnifying the forces of expansion, or, lastly, in entangling the economic system in the net of a progressive depression. The last case is exemplified particularly forcefully by the present situation all over the world.

We see now more clearly than ever before that our economic system—like any other, including the Russian—rests, in the last analysis, on certain psychological reserves without which it ceases to work, in spite of its glorious technique and organization. Formerly, this requisite appeared so obvious that people did not think it necessary even to mention it, for they hardly contemplated a state of affairs in which it did not exist. It would almost seem as though the fact had been forgotten that the psychological—especially the moral—forces behind any economic system are the centre upon which everything else hinges, and that the most elaborate technical apparatus is of comparatively little significance if the electric current of these forces has been switched off. In fact, the gigantic apparatus of our economic system is absolutely dependent on an invisible network of psychological forces and relations between the individuals, between the individuals and the community, and between the individuals and their material environment. It cannot exist without confidence—in other individuals, in the State and its legal order, and in the future in general—without some possibilities of and inducements for making preparations for a more distant date than the immediate present, without a link between the present and the future, nor even without some ideology—or, indeed, a creed in the most general sense. Nor can it exist without an atmosphere of peace, liberty, and reason. Our economic system has multiplied the economic productivity of the world by mobilizing all moral and intellectual forces on an unprecedented scale and this is the real secret of its enormous success. But, on the other hand, it is also dependent on the existence of a minimum of these forces, otherwise it is bound to decay. That
is the lesson which the present depression is teaching us. Hence, we cannot help feeling deep sympathy with the general trend of ideas of the psychological school.

§ 14. SAVINGS AND INVESTMENT.

As we have already had occasion to remark, people who are not well acquainted with economic theory are always easily inclined to exaggerate the dissensions between schools and theories and, amidst the conflict of opinions, to overlook established truths. In the sphere of trade-cycle theory no less than any other there appears at first sight to exist a hopeless muddle of opinions. This leads to the false conclusion that in this question, which has to-day become a question of vital economic, political, and cultural importance, science fails to give guidance or explanation. This conclusion, while it offers a convenient excuse for avoiding a serious study of difficult trade-cycle theory, is hasty and superficial. A closer examination reveals that from out of the conflict of the various theories of the trade cycle a common core of knowledge has gradually been built up in the course of the last decades. To this belongs especially the fundamental recognition that the real causes of the crisis must be sought not in the economic conditions of the moment of the crisis but in the mechanism of the preceding boom, and the further recognition that the mechanism of the boom culminates in an increase of capital investment financed by an expansion of credit which, via a chain of reciprocal reactions, eventually sets the whole economic system in motion. The study of the cycle leaves no doubt whatever that the swing from boom to depression is primarily a change in the volume of investment and of the production of capital goods while the production of consumers' goods tends to be subject to smaller fluctuations. The rising curve of investment during the boom has its counterpart in the falling curve of the depression, and the more steeply inclined upwards is the first the more sharply does the second tend to slope downwards.

It is generally agreed that the real centre and root of the cycle is to be found in this rhythmical expansion and contraction of investment and the separate theories of the trade-cycle diverge from each other only so far as they give a different explanation of this rhythm. An increase of investment means the growth of the economic fabric, an increase and improvement in the productive equipment, and a step forward in economic development. So the swing from boom to depression reflects the fact that economic development does not proceed evenly but in rhythmical jumps whose force shakes for a time the equilibrium of the system so that con-
traction follows on the expansion. In other words, the cycle is to be considered as the typical form in which the growth of the capitalist economy takes place. In this light the crisis and depression appear as growing pains of the economic system from which we cannot escape so long as economic development proceeds by jumps instead of moving in a smooth even rise. The history of cycles and crises teaches us further that the jumpy increases of investment characterizing every boom are usually connected with some definite technical advance. In fact the beginnings of almost every modern technical achievement—the railway, the iron and steel industry, the electrical industry, the chemical industry, and most recently the automobile industry—can be traced back to a boom. It seems as if our economic system reacts to the stimulus of some technical advance with the prompt and complete mobilization of all its inner forces in order to carry it out everywhere in the shortest possible time. But this acceleration and concentration has evidently to be bought at the expense of a disturbance of equilibrium which is slowly overcome in the time of depression. This is a fundamental proposition which must be particularly stressed.

The origins of this proposition can be traced back to the early under-consumptionists (Lauderdale, Malthus, Sismondi and others). It was developed very much further by Marx. The same trend of thought has been followed up by the Russian Tugan-Baranowski who is, not quite correctly, usually regarded as the real founder of this modern over-capitalization theory. His work has been developed further with some substantial modifications by Spiethoff and from there onwards the concept has become common property through the writings of Cassel, Schumpeter, Aftalion, Bouniatian, D. H. Robertson and others.

Schumpeter lays special emphasis on the rôle of technical innovations and of the "active entrepreneurs" who do pioneer work in putting them into effect. He links up with the over-capitalization element both the technical and the psychological element. Liefmann and, most recently, Lederer also attribute an important rôle to technical progress.

If the essence of the cycle is that in the boom there takes place an over-extension of investment which is followed by an inevitable reaction in the depression, it only needs one further step to reach the conclusion that the formation of real capital in

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the economic system can apparently not be speeded up and extended beyond a certain limit without introducing a disturbance corresponding to the degree of "forcing." In this sense, then, there undoubtedly exists an excess of capital formation. Since, however, the formation of real capital (investments) must be balanced by a restriction of consumption, however this may be brought about, the inference is: that the proportion between consumption and real-capital formation cannot be changed at will without causing disturbances. However desirable the accumulation of real capital may be, difficulties and possibly very serious shocks occur if the process of accumulation is forced. Up to this point there is unanimity of opinion among the greater part of trade-cycle theorists. Two further questions now arise in the answering of which opinions differ. The first question is: from where does the money capital come which makes possible the investment activity of the boom? The second is: why does this increased investment activity lead to a more or less violent reaction?

A widespread theory, first represented by Tugan-Baranowski, seeks to answer both questions at once in the following manner. In the depression idle savings are accumulated as a result of the lack of attractive investment opportunities. These idle savings serve to feed the investment activity of the boom, but are at length exhausted, and the boom is then brought to an end for lack of capital. It is then revealed that the investments have been extended beyond the limits allowed by the supply of capital in the community, so that there has to take place a painful process of recession. According to this theory, there corresponds to the change in investment activity, and therewith from boom to depression, a change also from a superabundance to a shortage of capital.

In this theory which, under the designation of the "shortage of capital theory," is the most popular theory among the more intelligent sections of the business world and among journalists, the one point is certainly correct: that the changing proportion between saving and investment—an excess of saving over investment in the depression and an excess of investment over saving in the boom—is a decisive factor. It is also true to a certain extent to say that a storing up of "capital" takes place in the depression corresponding to the extent to which the rate of saving surpasses the rate of investment. This has more than once been disputed and it has been quite mistakenly supposed that all that is saved in the depression is also invested. Even quite apart from the fact that in the depression people are disposed, out of mistrust, to estimate cash more highly, and apart from the rise
in cash reserves (slowing up of the velocity of circulation), a storing up of money capital can take place by way of savings being accumulated as bank deposits instead of being invested in securities. This is equivalent to a sterilization of purchasing power in so far as the banks have to hold liquid reserves against the money deposited with them and are particularly anxious to keep liquid in the depression.

Investments abroad also represent some reserve of power which accumulates in the depression ready for the boom, but only with certain reservations. It has also been supposed that there were stocks of goods corresponding to the stored-up money capital and that these stocks of goods supplied the real bases of the expansion of production in the boom. In fact, however, commodity stocks tend to be particularly low at the end of the depression.

The storing up of money capital during the depression is, then, an undeniable fact which furnishes an important elucidation of the depression. But it would be totally wrong to suppose that these accumulated reserves could contribute substantially towards fostering the heavy investments of the boom years. The conclusion is that the means of financing the boom can only be derived in the main from the boom itself. Its sources are increased savings during the boom period and, above all, additional credits (credit expansion). The inference from this is a further extremely important proposition to which we shall often have occasion to revert in the next paragraphs. In any case it disproves this part of the theory of alternating superabundance and shortage of capital.

We turn now to the contention often denominated as "the ruling theory of the trade cycle" that the cause of the crisis and depression is the shortage of capital setting in at the end of the boom period. Superficially considered, this is correct, but it offers no real explanation, since the shortage of capital is not a new independent element but a result of the whole mechanism of the boom. The shortage of capital is the signal for the breakdown, but it is made inevitable by the over-expansion of investments. If the emphasis is laid on the shortage of capital it gives the impression that a further increase of the supply of capital could avert the turn. But if the increase of investments has taken on pathological dimensions a further increase of capital can only postpone the turn and this only at the expense of a later and all the more severe reaction. The shortage of capital at the end of the boom period is a sign that the credit system has put its last reserves into the firing lines in order to support the wavering front. The
scale of investments at length even outgrows the framework of capital creation artificially extended by the expansion of credit. To use a simile, those who lay the main emphasis on the shortage of capital as the factor turning the boom into depression may be compared to some well-known politicians in Germany after the war, who used to say that the defeat could have been avoided if the people had shown more military strength instead of "stabbing the army in the back" by its defeatist spirit. It would have been excellent, of course, for Germany if, at the end of the war, she could still have had the armies and the spirit of 1914, but this is absolutely beside the point because it was precisely as the result of four years of war that Germany was down and out, and any effort to make possible the impossible would only have delayed the ultimate defeat at a terrible cost. It would be a grave injustice to accuse the German people of a lack of spirit of sacrifice instead of accusing the length of the war and its ever-growing dimensions. We may conclude, then, that the emphasis must be laid not on the supply of capital, but on the demand for capital. The evil is not that too little has been saved but that too much has been invested. The shortage-of-capital theory distorts, therefore, the causal sequence, limits itself to the surface and places the accent in the wrong place.

We answered the first question, as to the origin of the money capital which nourishes the boom, mainly by pointing to the rise in the supply of capital which comes about during the boom via increased savings and, above all, via additional credits. To the second question as to what causes the breakdown of the over-investment, we have yet to give a satisfactory answer. We shall try to give a summary of the most important points to be taken into consideration.

Firstly, it should be clear that the total income of a community is allocated partly to direct consumption and partly to saving, and that the total production is devoted partly to the production of consumers' goods and partly to the production of capital goods. Now it is essential for the equilibrium of the economic system that the composition of production (out of which income is created afresh) should correspond to the manner in which the public spends its income. If the proportions between the production of capital goods and the production of consumers' goods correspond to the proportions in which the public saves and spends its income respectively, then the economic system is in a state of equilibrium. Now, if the savings proportion is in any way suddenly and substantially raised, the equilibrium between the composition of...
production and the allocation of income is disturbed. The usual way in which a sudden increase in the amount of savings of the community takes place is the following: an increase in investment is the primary factor and it is by a roundabout process of the expansion of credit that this induces an increase in the volume of savings of the community leading to complications in our formula which cannot be gone into in more detail here. The increase of investment then goes on rising by its own force, since the expansion of capital investment brings more and more new orders to the capital-goods industries. The scale of investment grows, and so long as the rate at which it grows remains constant, or even increases, the boom has the power to last. Eventually, however, the moment must come when investment is not suddenly broken off certainly, but ceases to grow at the previous rate. We cannot always be building and " rationalizing " further, always constructing new electricity works or railways and installing new machines; especially as the power of the credit system to go on continually financing this investment delirium is finally exhausted. At this point the boom must come to an end since a shrinkage of the capital-goods industries is unavoidable. Whether the breakdown takes the form of a crisis or of a gentle transition to the depression depends on the circumstances. We shall see the process more clearly if we reflect that a boom in, say, poultry or silver-fox farming is also for some time self-maintaining, that is, so long as new farms are continually setting up and exercising a demand for breeding stock. But, finally, the moment comes when the establishment demand for fowls or silver-foxes is satiated. Then it appears that the fowl or silver-fox production is greater than corresponds to the normal requirements for consumption and breeding purposes. This will become apparent immediately the number of farms ceases to grow at the former rate. It is evident that once the fowl cycle is set in motion the breakdown is unavoidable. According to the shortage-of-capital theory, it is possible to postpone it by the stimulus of continually providing capital for the setting up of poultry farms, but it is obvious that this only magnifies the avalanche. Just as we cannot continually pursue fowl production for the sake of producing more fowls, no more can we eternally produce capital goods for the purposes of producing more capital goods. Since after a certain time the latter in their turn produce more capital goods, such an insane economic system can only go on so long as the scale of the production of capital goods is continually expanded. In other words: sooner or later the end must come and it is all the worse the further the scale of investment has been pushed.
This self-inflammatory character of any rise of the rate of investment due to the mechanism of intensification described above ("principle of acceleration") has been stressed by many trade-cycle theorists (Aftalion, Bouniatian, Bickerdike, Carver, Marco Fanno and especially by J. M. Clark\(^1\)). As it is of the greatest importance for a better understanding of the whole process of the business cycle, something more must be said in order to make its meaning quite clear. From the examples given above, it will be easily grasped that any increase in general economic activity will have the tendency to produce a disproportionate expansion in the higher stages of production, the rate of expansion being the greater the higher is the stage of production, i.e., the further it is removed from the sphere of consumption. The opposite is true for any decrease of general economic activity.

The reasons for this intensified impact on the higher stages of production are twofold: (1) In the absence of excess capacity any increase of the productive equipment of the country necessitates a further increase of the productive equipment in order to produce the initial increase (as in the example of the poultry and silver-fox farms). In order to produce more machinery the machine industry itself has to produce more machines for producing more machines; an enlargement of the cement factories calls forth not only an increased demand for building the additional cement plants, but also an increased demand for enlarging other factories delivering the equipment of the additional cement plants and so forth. (2) Assuming that in all stages of production and distribution a certain fixed percentage of sales is held as stocks, any increase of general economic activity (as measured by the volume of sales or goods produced) will bring forth an increase of orders greater than the initial increase of sales. If the demand for shoes increases, dealers will place orders equivalent to the aggregate of additional sales and additional stocks, and the same thing will be repeated in the higher stages on a progressively rising scale. But this whole machinery of increasing intensification will stop the moment the increase comes to an end. In substance, this process of intensification by the enlargement of stocks of working capital amounts to the same thing as the process of intensification by the enlargement of the productive equipment (fixed capital). In both cases the increased volume of production in the upper stages can be maintained only if the increase of demand in the lower stages goes on at the same rate. It is, therefore, not sufficient that the demand does not decrease absolutely, nor even that it continues to increase if only at a lower rate; for the maintenance of the top-heavy superstructure of production, it is necessary that the ultimate demand should rise at the same rate or, in other words, in geometrical progression.

This proposition is, however, subject to a number of qualifications: (1) If capital equipment is being continuously increased, a secondary demand is thereby created which is not dependent on a continuous and progressive increase of ultimate demand but only on its steady level. This secondary demand is the demand for the replacement of durable means of production which is bound to develop as time goes on and so

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partly to take care of the problem of how the top-heavy superstructure can be permanently maintained. It is conceivable that, under certain circumstances, this factor may serve as a parachute for the blown-up structure of production, the decrease in new construction being compensated to a considerable extent by the increase in replacement demand. But the peculiarities of the business cycle do not make it very likely that this will happen. Apart from the fact that the top-heaviness of the structure of production is usually much too great at the end of the boom to be relieved in this manner, the replacement demand is itself highly elastic and subject to the mass psychology of the different phases of the cycle. As it is, this factor is apt to work in a direction inverse to what is desirable for the purpose of compensation. For it is precisely during the boom period that replacements are speeded up, and it is precisely during the depression that replacements are postponed as long as possible. In both cases, this factor acts to intensify rather than to attenuate the violence of the movements. It is a well-known fact that the intensity of the present depression owes much to the circumstance that the replacement demand has been reduced to the utmost minimum.

(2) Account has to be taken of the possibility that, on the average, stocks may not rise in proportion to the growing volume of sales and of goods produced during the boom, nor decrease in proportion to the decreasing volume during the depression. If that is the case, they will also serve as a compensating element. But it is again very unfortunate that just the opposite is probable, in view of the fact that rising prices (boom period) may induce the carrying of larger stocks and vice versa. Though we cannot be so sure in this case as in the case of replacement demand, it will not be an error to assume that the varying volume of stocks is an intensifying rather than a compensating factor. How both factors can work together, bringing about disastrous results, may be gathered from the fact that in the United States the production of automobiles (a durable consumption good to which the same principles must be applied) decreased from 5,621,715 in 1929 to 1,431,494 in 1932, while the number of registrations declined only from 26,545,281 to 24,136,879. Thus a decline of nearly 75 per cent. in annual production corresponded to a decline of only a little over 9 per cent. in the total number in use.2

(3) A very important qualification must be made with regard to the possible existence of excess capacity and of surplus stocks during the upward-swing of the cycle. As long as the increase of general economic activity can be based on excess capacity and surplus stocks, the mechanism of intensification will not begin to work and so the otherwise unavoidable reaction may be avoided. Now, this is not a mere hypothetical assumption. It is usually the actual situation during the first stage of the upward-swing, though not so much for surplus stocks as for excess capacity. This is one of the main reasons why the upward-swing of the business cycle must be sharply divided into two phases, the first being of a compensatory and balancing character, the second of a self-inflammatory and unbalancing character.

Particular importance is, moreover, to be attached to the circumstance—which D. H. Robertson and Aftalion especially have emphasized—that the expansion of the productive equipment takes time. Before the products of the expanded productive equipment

2 J. M. Clark, Strategic Factors in Business Cycles, op. cit., p. 36.
come on to the market and flood it, several months elapse during which the over-investment may develop to gigantic dimensions unobserved. It is evident that the length of the boom is connected to some extent with the period of time necessary for the construction of the productive plant—the "period of gestation" in Mr. Robertson’s terminology.

Over-investment, conducive of general economic disequilibrium, may develop in any economic system, provided that the volume of "saving" (in the broadest sense of a relative curtailment of current consumption, i.e., "lacking" in Mr. Robertson’s terminology) is allowed to expand, in quantity and in speed, at a rate which is no longer compatible with economic equilibrium. There is no maximum rate of saving as such which must not be exceeded if disequilibrium is to be avoided. In this long-run sense a problem of "over-saving" certainly does not exist. But a problem of "over-saving" does appear if the rate of saving rises so suddenly and in such a degree that it leads to over-investment. The balancing forces of the economic system can take care of a rise of the rate of saving if it does not exceed a certain maximum of speed and quantity; beyond that point the equilibrium will give way. The question then raised is this: how is such a sudden and substantial rise in the rate of saving conceivable in our economic system?

In answering this question, the crucial point is that the normal source for the formation of capital in our economic system, viz., voluntary savings by individuals laying aside a part of their incomes, is unlikely to give rise to a sudden and substantial increase in savings. It has to be observed, however, that once the up-swing of the cycle has been started certain forces are set in motion which stimulate a substantial increase of voluntary savings. Apart from the favourable effect of the increase in the national income on the volume of savings during the up-swing, we have to recall what has been said in § 12 about the change in the social structure of incomes during the up-swing, a change characterized by an expansion of profit incomes and variable

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4 There is a second meaning of "over-saving" relating to the situation during the depression when more is being saved than invested, so that saving leads to the disappearance of purchasing power from circulation and thus to its sterilization. This sort of "over-saving" is the driving force behind the cumulative process of depression about which more will be said in § 16. But its nature is quite different from that of the type of "over-saving" discussed above. Over-saving as discussed above means that too much is being saved compared to the power of the economic system to adapt itself to rising investments, while over-saving in the second sense means that savings exceed investments with deflationary effects.
incomes relatively to fixed incomes. This change is equivalent to a rise of those incomes which are more likely to be saved rather than spent. In addition to this, account has to be taken of the large corporate surpluses (entrepreneurial formation of capital or "self-financing") which are apt to develop during the boom, adding enormously to the aggregate of savings. This source of saving has risen to prime importance during the last decades along with the development of industrial monopolies and large corporations, with the policy of stabilizing dividends, and with certain degenerate tendencies in the financial structure of industry and banking. The importance of this factor is enhanced by two further circumstances: (1) corporate surpluses are usually larger in the industries producing capital goods than in those producing consumption goods so that the tendencies towards over-investment are accordingly reinforced; (2) corporations have a well-known inclination to reinvest their surpluses in their own plants instead of investing them on the general capital market so that the rate of interest has to this extent lost its regulating influence. This tendency, since it leads to over-expansion in special trades (for instance, the copper industry in the United States or the cement industry in Germany after the war) reveals an additional source of trouble. So we see that the entrepreneurial formation of capital (corporate surplus) may become an important means of enlarging the aggregate of savings and contributing to a tendency towards over-investment.

But even this, I think, is not sufficient to raise the rate of saving so suddenly and so substantially as regularly to set in motion the process of over-investment. There are, moreover, other characteristics of the boom which, being of a monetary nature, cannot be explained in this way. I would concede that this factor, like the change in the social structure of incomes, is of great importance for reinforcing the process once set into motion, but not more. I believe that the rise of savings and investment brought about by these two factors will generally be capable of assimilation by our economic system without leading to grave maladjustments in the system as a whole. In order to


6 This theme has been developed more fully by the present author in his little book Die Theorie der Kapitalbildung, Tübingen, 1929. Cf. also R. Weidenhammer, "Causes and Repercussions of the Faulty Investment of Corporate Savings," American Economic Review, March 1933.

7 The most has been made of this argument by Professor Francesco Vito in his interesting paper "Il Risparmio Forzato e la Teoria dei Cicli Economici," Rivista Internazionale di Scienze Sociali, January 1934.