

A SURVEY OF  
ECONOMIC  
DEVELOPMENT

WITH SPECIAL REFERENCE  
TO GREAT BRITAIN

BY  
J. F. REES

PRINCIPAL OF THE UNIVERSITY COLLEGE OF SOUTH WALES  
AND MONMOUTHSHIRE

AUTHOR OF  
"A SOCIAL AND INDUSTRIAL HISTORY OF ENGLAND, 1815-1918"  
"A SHORT FISCAL AND FINANCIAL HISTORY OF ENGLAND, 1815-1918"  
ETC.



LONDON  
SIR ISAAC PITMAN & SONS, LTD.

1933

**SIR ISAAC PITMAN & SONS, LTD.**  
**PARKER STREET, KINGSWAY, LONDON, W.C.2**  
**THE PITMAN PRESS, BATH**  
**THE RIALTO, COLLINS STREET, MELBOURNE**

**ASSOCIATED COMPANIES**

**PITMAN PUBLISHING CORPORATION**  
**2 WEST 45TH STREET, NEW YORK**

**SIR ISAAC PITMAN & SONS (CANADA), LTD.**  
**(INCORPORATING THE COMMERCIAL TEXT BOOK COMPANY)**  
**381-383 CHURCH STREET, TORONTO**

**PRINTED IN GREAT BRITAIN**  
**AT THE PITMAN PRESS, BATH**

## PREFACE

THIS book is perhaps best described as a "companion" to Economic History. It is a revision and extension of the section I contributed at the invitation of my old college friend, Mr. J. H. Jones, Professor of Economics in the University of Leeds, to *Pitman's Economics Educator*, of which he was editor. In fact, if he had not been insistent, I doubt whether I should have had the courage to attempt to survey so extensive a field. As a teacher of the subject it is true that I travelled over the ground in lectures for sixteen years, twelve in the University of Edinburgh, and four in the University of Birmingham. Each time some new features caught my eye. Almost insensibly I dropped references to matters which seemed to me of slight significance, while I expanded some points and introduced others. This process might be continued indefinitely; it will, indeed, be gathered from my observations on the nature of History that I consider it ought to be continued indefinitely. In this book my notes of the journey are for the moment stereotyped. I can only hope that teachers and students will find them helpful and suggestive as an introduction to a subject, the importance of which is every year gaining fuller recognition. In the appendix on books, I have adopted a method of treatment which is intended to be more informative than the usual bibliographical lists.

J. F. REES

CATHAYS PARK,  
CARDIFF.  
July, 1933.



# CONTENTS

PREFACE . . . . .	PAGE V
-------------------	-----------

## PART I

### INTRODUCTORY

SECTION

1. THE APPROACH TO HISTORY . . . . .	I
2. SIMPLE COMMUNITIES . . . . .	8
3. THE MEDITERRANEAN CIVILIZATION . . . . .	15
4. THE ORIGINS OF BRITISH HISTORY (i) . . . . .	22
5. THE ORIGINS OF BRITISH HISTORY (ii) . . . . .	29

## PART II

### THE MIDDLE AGES

6. THE FEUDAL STRUCTURE . . . . .	36
7. THE MANOR . . . . .	43
8. THE TOWN . . . . .	50
9. MARKETS AND FAIRS . . . . .	56
10. THE ORGANIZATION OF COMMERCE . . . . .	61
11. INDUSTRIAL DEVELOPMENT . . . . .	67

## PART III

### THE AGE OF TRANSITION

12. MARITIME DISCOVERY . . . . .	73
13. THE REVOLUTION IN PRICES . . . . .	80
14. AGRICULTURE . . . . .	87
15. INDUSTRY . . . . .	94
16. PATENTS OF MONOPOLY . . . . .	101
17. TRADE WITH EUROPE . . . . .	108
18. TRADE WITH THE EAST . . . . .	115
19. TRADE WITH THE WEST . . . . .	121

SECTION	PAGE
20. RIVALRY WITH THE DUTCH . . . . .	128
21. CREDIT AND BANKING . . . . .	135

## PART IV THE INDUSTRIAL AGE

### THE FIRST PHASE

22. COMMERCIAL BASIS . . . . .	141
23. THE WOOLLEN AND WORSTED INDUSTRIES . . . . .	148
24. THE COTTON INDUSTRY . . . . .	154
25. THE IRON INDUSTRY . . . . .	161
26. THE STEAM ENGINE . . . . .	167
27. MEANS OF TRANSPORT . . . . .	173
28. AGRICULTURE . . . . .	179

### THE SECOND PHASE

29. THE INDUSTRIAL LEADERSHIP OF GREAT BRITAIN	185
30. THE ECONOMIC EFFECTS OF WAR . . . . .	192
31. UNREST AND REFORM . . . . .	199
32. ECONOMIC POLICY . . . . .	207
33. RAILWAYS . . . . .	215
34. THE PROGRESS OF INDUSTRY . . . . .	222
35. THE POSITION OF AGRICULTURE . . . . .	230

### THE THIRD PHASE

36. THE EXPANSION OF INDUSTRIALISM . . . . .	239
37. THE REVOLUTION IN TRANSPORT . . . . .	248
38. THE AGE OF STEEL . . . . .	257
39. INDUSTRIAL INSTABILITY . . . . .	266
40. THE CATASTROPHE OF WAR . . . . .	277
41. THE PROJECT OF RECONSTRUCTION . . . . .	287
42. WORLD ECONOMIC DEPRESSION . . . . .	296
A GUIDE TO FURTHER READING . . . . .	306
INDEX . . . . .	317

# A SURVEY OF ECONOMIC DEVELOPMENT

## PART I INTRODUCTORY

### SECTION 1

#### THE APPROACH TO HISTORY

“Anxiety for the future time disposeth men to inquire into the causes of things; because the knowledge of them maketh men the better able to order the present to their best advantage.”—  
THOMAS HOBBS; *Leviathan* (1651).

To understand the world in which we live it is necessary to have some idea of how human society came to be what we now find it. Without this knowledge we cannot attach any meaning to such things as the present distribution of population, the economic activities of different countries, and the institutions which bind communities together, for all these are the results of the interplay of forces over long periods of time. Whether we approve of existing conditions (and, therefore, wish to justify them), or whether we find them intolerable (and, therefore, wish to change them), we shall achieve little by way of defence or attack unless we know something of history.

What is history? It is sometimes taken to mean what has happened in the past in so far as it is known, for only a fraction of what has happened can be discovered, because records are lacking, or are imperfect, or are difficult to interpret. History, however, is not merely a collection of details; it is also the arrangement of the facts in order to offer some kind of exposition of their

meaning. So, on the threshold of the study of history we must ask ourselves on what principles do we collect, sift, and combine facts. Is it possible to say *why* things have fallen out as they have? Or, is it only possible at the best to describe *how* they have happened? If we know *why*, we have a clue to the meaning of history. But if we can only say *how*, we can dispute about the underlying meaning (if any) and devote our main energies to attempting to gain some inkling of the operation of the laws of cause and effect. Possibly, we shall be able to establish some general principles which help us to understand the present; but such principles will always be subject to modification with fuller knowledge. Sir Isaac Newton is said to have adduced from the fact that an apple falls to the ground the generalization that all bodies in Nature attract all other bodies—a generalization wide enough to offer a provisional explanation of what happens in the physical universe, and how the stars in their courses follow some order. But the principle does not explain *why* the universe should be so controlled.

Some have thought that the course of history can be explained in terms of an original creation, sustaining providence, and ultimate purpose of a Divine Being. The whole process (which is wider than human history) has been conceived as directed by some power outside ourselves, a power which, in the more optimistic creeds, is thought to be making for righteousness; that there is "a far-off divine event to which the whole creation moves." This view was accepted alike by the medieval churchman and the seventeenth-century puritan. The great Catholic apologist, Bossuet, wrote history, according to Voltaire, with the intention of insinuating that everything has been done in the world for the Jewish nation; that when God gave the empire of Asia to the Babylonians, it was to punish the Jews; when God set up Cyrus on the



throne, it was to avenge them ; when God sent the Romans, it was again to chastise them. And Bossuet has had his unconscious disciples in Protestant pulpits down to our own time. The Christian Church, indeed, accepted dispensations as part of her tradition. But it became increasingly difficult to read the Creator's purpose in the world's happenings, for the human interpreters spoke with opposing voices. We have only to compare the eighteenth-century controversy aroused by the great earthquake of 1755 at Lisbon with our attitude to such occurrences to realize how far we have moved. Belief in Divine Providence remains as an act of faith, but we agree that it is not susceptible to scientific demonstration.

Others have held that man is the creature of his environment, necessarily obeying the laws which are inherent in material things. He has the illusion of free will ; but as a matter of fact he is purely an organism operated upon by outside forces. There is no more purpose in the life of mankind than in that of the animal creation or the physical universe—all obey laws because it is inconceivable that they should do otherwise. What are these material forces? They are sometimes comprehended in the terms "nature" or "climate." Montesquieu, in the eighteenth century, suggested that the intellectual and moral life of man can be explained as the consequence of material conditions. But if physical forces were all-powerful, we should by this time have been able to infer more precisely how they work, so as not only to explain the past, but also to foretell the future. Physical environment is, of course, potent. What geographers call the subduing of Nature does in certain circumstances exact constant toil and, consequently, sets its mark on the character and outlook of people. All human life, indeed, is conditioned by its environment, but it also reacts on its environment ; in some cases the reaction is slight, the environment being

so restricted, but in other cases the reaction is so considerable that we are apt to lose sight of the control exercised by the environment. It is easy to trace control in primitive societies; it is not so obvious in the complex and settled communities of the temperate zone. Climate, then, is a condition of all human development; but it cannot be seriously contended that it is the determining cause of what we are and what we do.

History cannot be explained objectively—there is no knowable force, divine, cosmic, physical, or what you will, which can be proved to be the prime cause of what we call history. With our imperfect knowledge we can only offer subjective explanations, and these have no final authority. We can exert ourselves to discover as precisely as possible what actually happened in the past, and we can attempt so to relate facts that they give us a more or less satisfactory clue to the sequence of cause and effect. The explanation offered by an historian is merely his opinion, based on an examination of evidence, and always relative to his right to have an opinion at all. He may have paid so little attention to problems of government, or to questions of religion, or to industrial issues, in his own day, that he does not bring to the interpretation of such phenomena in the past a mind sufficiently alert and informed to enable him to understand what is involved. All historical interpretation must depend in some degree on the personal factor. The individual himself will be influenced by the outlook of his own time. So there can be no definitive account of history. In the sciences proper, personal predilections can have no place; no amount of presumption in favour of the Ptolemaic system will avail to bolster it up against the Copernican, and no personal partiality for a particular theory concerning atoms will justify one in holding it after facts have been discovered that make it untenable. Not so in history. No facts are

ever likely to be found which will compel historians to agree that Charles I was right and his opponents wrong. That and many other issues are bound to be matters of contention as long as men continue to take any interest in them.

If follows that history will always be required to be rewritten. Enormous advances have been made with respect to accuracy in regard to facts and in the method of evaluating authorities. The chances of making serious blunders, if the historian takes good care, are much fewer than they used to be. But in the interpretation of facts, differences of opinion still exist and must always do so. History, therefore, can be employed to prove a thesis without necessarily doing violence to facts themselves. It is indeed difficult, if not impossible, to write history without a purpose if one tries to make it coherent. The author may suppose that he is merely approaching it from what in his time seems a reasonable angle. In the nineteenth century the consciousness of nationality was so strong that it coloured all presentations of history. One would find it hard to say in particular instances whether the historian was writing with the intention of fostering nationality or under the influence of the dominant assumptions of his time, for living issues react on our interpretation of history. Under their influence we become aware of things which did not attract the attention of an earlier generation. If what interests us most are industrial problems we re-explore history, seeking for economic causes and effects. These factors now loom so large that we may adopt an economic interpretation of history. This is what happened to Karl Marx. He became vividly aware of the economic factor. For him it was a canon of interpretation. His position on this question is often misunderstood. Marx did not believe that man is the mere creature of his environment. Men, according to

him, make their own history, but not under self-chosen conditions; the conditions are always given and transmitted. This is a conclusion which it would be difficult to refute.

Wherein was Marx original? The geographers had long recognized that external conditions are given, and that they necessarily exercise a control over the activities of men. Marx carried this a step farther. He inquired what effects the activities of men in society—for the life of isolated man is not relevant to our problem—would have on the structure of that society. All human groups exist in the first instance as means of solving the question of bare subsistence. The economic factor is fundamental. But since society is organic and evolves, changes are constantly occurring within it. What are the causes and consequences of these changes? Marx found the primary causes to be economic—changes in methods of production—and, therefore, the results to be modifications of class relationships. The changes in relations are class struggles—the “haves” are faced by the “have-nots.” The resultant friction is the key to history. “In changing the modes of production,” Marx declared, “mankind changes all its social relations. The hand mill creates a society with the feudal lord; the steam mill a society with the industrial capitalist. The same men who establish social relations in conformity with their material production also create principles, ideas, and categories in conformity with their social relations. . . . All such ideas and categories are, therefore, historical and transitory products.” The prevailing notions regarding morality, religion, and art at a particular time are governed by the economic factor. There is a “culture,” bourgeois or proletarian. This is the peculiar contribution of Marx to historical interpretation. It would be foolish to deny that it is an important contribution. Writers of all

schools of thought have been influenced by it. The case of Marx has here been adduced to show that in our industrial age attention has been particularly directed to the economic factor in history. We cannot help looking at history through these spectacles. But we may not have such a clear vision of what happened in the past as Marx imagined he had.

## SECTION 2

### SIMPLE COMMUNITIES

"Place, Work, Folk—there is much more in this formula, say rather this chord of life, than is yet commonly recognized in most of our economic and social teaching."—PATRICK GEDDES.

SINCE all human societies must rest on an economic basis, geographical factors necessarily play an important part. The environment always prescribes the conditions under which men can get their living; and in conforming to, or to some degree in transforming, their environment, men have to co-operate with one another in ways which determine the form the community will take. Differences in environment, in fact, explain the diversity of human types better than any other hypothesis. In simple societies the interplay of "Place—Work—Folk" is obvious enough. Given an environment so restricted that there is practically no choice as to means of livelihood, we get a society which must adjust itself to "Nature." The most elementary forms of human society are found where life is supported without settlement on, or cultivation of, the soil. To live man has to wander, and, consequently, he makes no permanent impression on his surroundings. As illustrations, a number of cases may be taken. Consider that great reservoir of the human race, the vast grasslands of Central Asia. The climate is characterized by a period of snow followed by a short damp season suitable for the natural growth of grass. Other vegetation has no opportunity for developing. Whatever economy is established must rest on the basis of grass. The conditions are so strict that man must accept them; he is powerless to modify them. So he depends on the grass-eating animals for his food, clothing, and shelter. He solved the problem

by forming an alliance with the horse. This enabled him to round up and domesticate the cow. A simple community came into being, and its manner of life was strictly controlled. It had to move with the cattle as the grass was eaten. There was no appropriation of land, for when it was grazed it had no value. There was no accumulation of belongings beyond bare necessities and ornaments for the person, because they would be burdensome to people who were constantly moving. There were no specialized trades, because each adult male had to be able to turn his hand to any task. The group was an extended family, recognizing the bond of kinship, and paying allegiance to the head or patriarch. It had to be large enough to tend to its cattle, and yet not so large that the area of its temporary settlements was overstocked. When it reached a certain size it tended to split up. "And Lot also, which went with Abram, had flocks, and herds, and tents. And the land was not able to bear them, that they might dwell together; for their substance was great, so that they could not dwell together. And there was a strife between the herdmen of Abram's cattle and the herdmen of Lot's cattle. . . . And Abram said unto Lot, Let there be no strife, I pray thee, between me and thee. . . . Is not the whole land before thee? Separate thyself, I pray thee, from me. If thou wilt take the left hand, then I will go to the right; or, if thou depart to the right hand, then I will go to the left."<sup>1</sup> On the steppe the nomad adopted the pastoral life because he had the horse to help him. It was otherwise on the American prairie, where the horse was unknown until he was introduced by Europeans; so the Indians were hunters of buffaloes. Instead of the large patriarchal group there was the hunting clan, in which the energetic young men had the advantage over their elders. The

clan was unstable and did not provide a basis for a permanent social organization.

The people of the grasslands—whether they are in the pastoral or hunting stage—must be counted fortunate as compared with those who have to contend against the extremes of cold and heat. That human life should successfully withstand the rigours of the northern winter is remarkable, for here circumstances impose the severest of conditions. The climate limits the food supply, both vegetable and animal. The reindeer may be domesticated, but to supply its frugal diet it is necessary to keep moving. The parts played by horse and cow on the steppe have to be taken by the reindeer, which is not particularly efficient in either role. While the horse can endure a considerable range of temperature, and has again and again brought the nomads into contact with settled communities, the reindeer cannot penetrate the forest belt. So the people are virtually confined to the north. While they are nomads, they cannot be purely pastoral nomads. To secure sufficient food it is necessary to resort to hunting and fishing. These activities tend to break up human society into small groups, each of which endeavours to supply its own needs. All their energies are directed to solving the problem of bare subsistence. Still, their fate may be considered happy compared with that of the peoples of the tropical forest. In the basins of the Amazon and Orinoco there is a vast extent of forest broken only by rivers. The area is subject to torrential rains at definite periods of the year. Excessive rainfall promotes the luxuriance of forest growth, but it is fatal to grass. In the primeval forest the animal life is mostly hostile to man. If he is to live, he must be a hunter on a small scale, lurking in the thicket and pouncing upon such animals or birds as he can eat. Foresight is not demanded; for food for each day must be obtained on



the day. In that temperature he cannot make accumulations. The search for food is therefore a constant pre-occupation. He often suffers hunger and sometimes practises cannibalism. All movements are difficult and dangerous, but permanent settlement is out of the question. He has no means of transport except the primitive canoe and picking his way through the undergrowth. In these circumstances human society is almost completely disintegrated. "Amid this pomp and splendour of Nature," wrote H. T. Buckle,<sup>1</sup> "no place is left for Man. He is reduced to insignificance by the majesty with which he is surrounded. The forces that oppose him are so formidable that he has never been able to make head against them, never able to rally against the accumulated pressure . . . the physical causes are so active, and do their work on a scale of such unrivalled magnitude, that it has hitherto been found impossible to escape from the effects of their united action. . . . It is thus that the energies of Nature have hampered the spirit of Man. Nowhere else is there so painful a contrast between the grandeur of the external world and the littleness of the internal. And the mind, cowed by this unequal struggle, has not only been unable to advance, but without foreign aid it would undoubtedly have receded."

All the human types so far mentioned have at the best been waging a rather unequal fight. The people of the steppe have been the most fortunate, for, through their reliance on the horse, they have been able to establish a permanent community on a patriarchal basis. But even they are subject to the imperious commands of Nature. They are doomed to wander, as are all people who live on the spontaneous products of the soil and the yield of the chase. Given the environment, progress is impossible, for these peoples must always remain what

<sup>1</sup> *History of Civilization* (1857 edition), vol. i, pp. 95-96.

they have become, since they were caught in the web of circumstance. The essential distinction between these simple societies and the more complicated societies which have developed under more favourable conditions is that the one is nomad and the other settled. To settle it is necessary to be able to cultivate the soil. External conditions no longer completely dominate the life of man. He learns to modify them by his exertions and to provide for the future through his foresight. He becomes less dependent on Nature but more dependent on his fellows. The social organization which arises is much more a matter of human will and design, for it rests on the relations between men who perform different functions in an increasingly complex society. Variety of employment offers opportunity for various aptitudes; there is no longer a level uniformity, but grades, classes, and trades.

It is some eight or ten thousand years since one branch of the human race discovered the possibility and advantage of settlement. Geography determined the scenes of man's earliest successes. Egypt is the creation of the Nile. Without it the tract would be desert. But the great river, flooding with such remarkable regularity because of the thawing of the snows on the distant mountains of Abyssinia, deposited rich alluvial soil in which it was possible to grow cereals in great quantities. The corn of Egypt could maintain a large population, provided advantage was taken of the annual inundation. So men settled, arranged their fields, and developed an irrigation system. A great civilization was evolved. They learnt to work in stone, and erected massive buildings. Their skill in pottery and metal-working is still admired. A settled government, with control of the whole area, was established, and the ruling classes enjoyed a life of great luxury. No doubt public order and increasing wealth

were associated with a condition of slavery for the mass of the people, so difficult is it for society to exploit the advantages of a favoured region without placing an undue burden on the actual cultivators of the soil and other manual workers. Similar circumstances provided the basis for the successive empires which sprang up in the valleys of the Tigris and Euphrates. Here, again, the rivers brought down alluvial soil, which, when properly treated, was remarkably fertile. Settlement led to the development of the crafts and the promotion of commerce, for Mesopotamia was better placed than Egypt for external trade. The "way of the desert" was a means of communication long before the sea became one. It was comparatively easy to transport burdens across the desert on camels and reach the heart of the centres of population. It was possible also to journey in large companies, which could defend themselves against any attack. At first the perils of the sea had to be faced by a few in primitive boats, one of which might lose sight of those accompanying it, and be thrown up on a hostile shore. By desert routes, therefore, the valleys of the Nile and of the Tigris and Euphrates were brought into contact. These routes in due course developed sea extensions which played a great part in the growth of Mediterranean civilization. The commercial greatness of Venice to the end of the Middle Ages was based on trade which came by these ancient routes from the east.

From these illustrations we can gather some conception of the part played by environment in the growth of human societies. "Place—Work—Folk" is a formula which provides a means of interpreting the significance of any group. *Place* gives the environment, *Work* indicates what men can make of the environment, and *Folk* reveals how the environment has fashioned its inhabitants. Consider the contrast in outlook between pastoral nomads and

settled agriculturists. The former have inspired terror in the hearts of the latter when they have made sudden incursions upon them under leaders who have welded the groups into a temporary unity. Attila and his Huns shook the foundations of the Roman Empire in the fifth century, and for a moment in the thirteenth century medieval Europe seemed to be faced with as great a peril. It is significant, too, that nomad conquerors have proved themselves incapable of assimilating the culture of the settled peoples. Where they have established themselves it has been as a ruling caste exercising despotic control. Joseph was enunciating a wider principle than he realized when he told his brethren that "every shepherd is an abomination unto the Egyptians."<sup>1</sup>

<sup>1</sup> Genesis xlv. 34.

## SECTION 3

### THE MEDITERRANEAN CIVILIZATION

“From these considerations it is clear that the city-state is a product of Nature; that man is by nature a social animal; and that the man who belongs to no community, if this be due to Nature and not to accident, is either deficient, or is a super-man.”—ARISTOTLE: *Politics*.

THE shores of the Mediterranean Sea witnessed the development of the successive civilizations which have moulded the thought and defined the outlook of the West. Here the external conditions offered favourable opportunities for the settlement of, and the intercourse between, organized groups. There was a considerable degree of unity, because, when once men had mastered the navigation of the great inland sea, they had an easy means of intercommunication. The river valleys of the seaboard were similar in general character, and colonists who left one place for another were able to reproduce communities on the model of their old homes. The natural products of the Mediterranean region are alike, and immigrants found that the soil was suitable for the extension of the cultivation of flax, vines, olives, etc. The environment of the typical settlement may be resolved into three elements: (a) the valley, in which agriculture could be established; (b) the port, which could be made the basis of commerce; and (c) the hills of the hinterland, where pastoral life was maintained. The settlements mingled these three ingredients in different proportions. The valley life of these Mediterranean people probably represents traditions brought by settlers from the eastern banks of the Black Sea, where communities had early discovered the possibility of cultivating the soil. So they were acquainted with a variety of trees,

fruits, and cereals. Naturally, they would establish settled villages which would by degrees become fortified cities, for the culture of the soil demands concentration, and to defend its yield from marauding hill peoples defence is necessary. So city life became the chief characteristic of Mediterranean civilization; it came to be conceived as the environment in which man reached his true stature. Instead of the family grouping of pastoral peoples or the temporary alliance of hunters, there emerged an organization, public and permanent, within which the individual had fuller opportunity for realizing his capabilities. The older sanctions of force or custom gave place to the idea of law; a growing sense of public justice ensured to each full member of the community freedom to follow any lawful enterprise. Phoenicians, Greeks, and Romans were all city dwellers. Their history is one of the confederation and rivalry of city-states. To their intense city life is due the development of architecture, art, literature, philosophical speculation, and legal conceptions.

The Phoenicians were predominantly traders. On the coast of Syria they founded the old-world ports of Tyre and Sidon, where they were in touch with the empires of the Nile and of the Tigris and Euphrates valleys. They were active in opening up trade routes by sea, and establishing centres where they bought and sold goods. They ventured to the shores of the Western Mediterranean, and even to the mysterious ocean beyond,<sup>1</sup> bartering articles which appealed to the natives for the metals and other raw materials they required. Of their settlements in the West the most famous was Carthage, which after the fall of Tyre (572 B.C.) became their chief city. They traded in weapons wrought in copper and bronze and in ornaments of gold and silver; they knew the arts of spinning, weaving, and dyeing. But the strength of the Phoenician

<sup>1</sup> See page 23.

cities—commercial prosperity—was also their weakness. They neglected the agricultural basis. With settlements far from one another and regarded primarily as markets, the Phoenicians could not solve the problem of stability. How to avoid revolution was a question which occupied the attention of the political thinkers of the Greek city-states. They knew from example that over-concentration on commerce was dangerous. Plato suggested that intercourse by sea was inimical to good government, and Aristotle was of opinion that the ideal situation for a city-state was one in which it could take advantage of a port without being completely identified with it. The presumption was in favour of a more or less self-sufficing state. This could only be attained by giving particular attention to agriculture.

Everything points to the fact that the early settlers in Greece had passed from the pastoral to the agricultural stage. At the dawn of history there are revealed communities cultivating the soil, and with a knowledge of crops which they must have brought with them from elsewhere. On this agricultural basis they built up a variety of crafts—those of the textile worker, the potter, and the metal-smith—and gradually the separate communities, divided from one another by the intervening hills, began to establish relations by sea. The villages had become urban centres before the beginning of historical record. They were ordered groups, dependent on the arts of peace in a world where violence was still rampant. The men of the hills were mainly engaged in cattle-rearing and had not forsaken their nomad habits. They were quite prepared to make raids on the valleys when occasion offered. An aggressive military character prevailed among them. In the Greek city-states, when our knowledge of them becomes fuller, there can be detected the intermingling of types. Sparta was an armed camp in which a

ruling minority maintained control over a large subject population. In Athens commerce had naturally developed, for Attica was a peninsula with easy access to Asia Minor by sea. Its citizens enjoyed greater liberty, but its government was less stable than that of Sparta.

The interesting question is what kind of economic relations existed between the different elements in these settled communities. Land was obviously limited in extent and appropriated for special cultivation. Was it held in common? Clearly it was not. There was a large proportion of landless men who in some condition of slavery or serfdom did the agricultural work for a small number of rich landed proprietors. Whether the agricultural workers were conquered peoples, or had been reduced to dependence by the burden of taxation or debt, the fact remains that settled cultivation of the land involved a hardening of social relations and the definite emergence of classes. Discontent sometimes threatened the stability of the city-state, and relief was sought either in emigration or in revolution in favour of the oppressed. In the crafts, and even in commerce itself, the same distinction between the full citizen and those who had fewer privileges was maintained. There was a tendency to relegate labour and trade to slaves and freedmen. The intelligence of the Greeks was not applied to mechanical invention, and, apart from the development of the use of money, they played very little part in the elaboration of commercial methods. Apparently, when the city-states were at the zenith of their power, there was a considerable amount of trade, but it did not notably react on industry. It is possible to exaggerate the consequences of the institution of slavery; but there is no doubt that its existence created an atmosphere unfavourable to the growth of the ideas which we regard as essential for the full economic development of a community. What the Greek city-state



made of its environment, then, depended on a number of factors, of which the most important was the conflict of different types. Successive waves of invaders imposed their will by conquest on the people they found in possession. It was not a question of a homogeneous people trying to find a solution to the problem of settlement in a region not hitherto appropriated.

In Rome, also, there was a blending of types. Situated in a more or less characteristic Mediterranean valley, the site of Rome invited settlers from Etruria on the north side of the Tiber, and from Latium in the south, as well as from the sea. The legends of Ancient Rome all point to a mingling of Etruscans, Latins, and Sabines. How they differed from one another is largely a matter of conjecture. That they became settled agriculturists may be inferred from the site itself and the stories that were later told of the early days. Romulus is said to have traced the walls with a plough, and agriculture was long held in peculiar esteem. The geographical situation was not suitable for the growth of commerce. It was by military power that Rome established its control step by step over Italy, Greece, and, ultimately, the whole Mediterranean seaboard. The extension of the Roman Empire facilitated the spread of the ideas which had their origin, as far as we know, in the city-states. A certain uniformity was thus given to Western Europe which it has never entirely lost. The weakness of this imposing structure was economic. Rome itself in the days of its splendour based its prosperity on the tribute which it exacted from its provinces. It never distinguished between plunder and commerce. For a great city—and at the beginning of the Christian era it probably had a population of three-quarters of a million—it was singularly unproductive. From our point of view, it had no firm foundation. Industry remained in the hands of small craftsmen, and

mechanical invention made no progress. The wealthy accumulated capital, but there was no proper credit organization by means of which it could find a variety of outlets. Capital was usually applied to agriculture, mines, and forests. It was often invested in foreign trade, but practically not at all in industry.

Generally speaking, therefore, the Roman Empire did not achieve economic integration. Most trade was local. The articles which entered into wider commerce were luxuries demanded by the rich. Supplies of corn were obtained as tribute, that is, without sending other goods in exchange for it. The crafts were often practised by the unfree, or by foreigners, and practically always on a small scale. But the extractive industries—metal-mining, quarrying, and particularly the cultivation of certain crops—did lead to capitalist enterprise. In the two centuries before the Christian era the growth of great slave plantations (*latifundia*) attracted much attention. The plantations often extended to thousands of acres. They offered opportunities for the investment of capital and were generally owned by those who had acquired riches in the exploitation of the provinces. How far this movement involved the decay of smallholding is not clear. That the conditions of employment were often most oppressive is demonstrated by the revolts of the slaves, the best known of which is that of Spartacus in 73-71 B.C. The facts that public land could be easily acquired and that the wars made slaves abundant probably account for the establishment of the great slave plantations. In the long run the system was found unsatisfactory. Large estates survived, but they were let out to free tenants. Columella, who wrote a treatise on agriculture about the middle of the first century of our era, recognized that slave labour was costly because it was wasteful. In the cultivation of cereals it had been

particularly unsuccessful. But freedom had not won a final victory. As the Empire entered into its decline the free tenants fell into a condition of serfdom. They were bound to the soil, and the burdens of their payments increased. The causes of this reduction in status were manifold. Men surrendered their freedom to those who would relieve them from the burden of taxes or would protect them in times of growing disorder. They would engage to make payments in kind, i.e. agricultural produce, or to work for their protectors for so many days a week. So the Mediterranean civilization which had achieved so much failed to secure permanent personal freedom for the masses.

## SECTION 4

### THE ORIGINS OF BRITISH HISTORY (i)

"More things went to the making of England than were imported in the keels of the English invaders of Britain."—FREDERIC SEEBOHM: *The English Village Community* (1883).

THE first thousand years of the Christian era witnessed the establishment and overthrow of the Roman Empire and the confused endeavours of its conquerors to arrive at a new stability. In the end they achieved the civilization which is known as medieval. Its economic background can be sketched in some detail. But the preceding "Dark Ages," which stretch from the fifth to the tenth centuries, are in no respect more obscure than they are in the economic. It is only possible to say in the broadest outline what happened in the period. Facts can be adduced which would lead one to conclude that all that the long Roman peace had secured for Western Europe was lost. Scraps of literary evidence, however, must not be taken too seriously. Nothing is easier than to exaggerate the degree of destruction involved in the invasions and settlements of the barbarians. That much was destroyed is clear enough; but it is equally clear that everything was not destroyed. What mankind had attained under the Roman Empire in agriculture, industry, and commerce—as well as in other spheres—depended for its preservation on the maintenance of law and order. When the successive blows dealt by the barbarians had the cumulative effect of overthrowing the great imperial administrative system, means of communication were neglected, great cities were strangled, much land went out of cultivation, and primitive barter took the place of money. There was probably a considerable decline in population.

The problem of tracing what happened in Western Europe in general, and in this country in particular, is fraught with great difficulties. The Dark Ages are the bridge between the ancient and medieval. What was carried across the bridge, and by what means? To answer these questions we want to know what the Roman Empire made of what it found and how far its work was destroyed or modified by the barbarian invaders. To take our own country. The pre-history—the remote days when men of the Old and New Stone Ages lived—gave place to history proper about the middle of the fourth century before Christ.<sup>1</sup> We then catch a glimpse of inhabitants who were at least partially settled. The merchants of the Greek colony of Massilia (Marseilles) had heard rumours that the Phoenicians obtained tin from islands in the northern ocean. They fitted out an expedition and placed it in charge of an astronomer named Pytheas. He discovered this island, and his comments on what he saw, repeated by later geographers, constitute the first literary reference. Much corn, he reported, was grown in the south, but owing to the inclement weather, threshing had to be done in barns. In the south wheat was common; in the north, inhabitants had to be content with oats. A drink was prepared from grain fermented with honey. This is a picture of settled communities, growing corn both as a bread and drink crop and able to defeat the vagaries of the weather by threshing indoors. It had also been discovered that the northern climate was not favourable for the ripening of wheat. Geography had decided that Englishmen should differ from Scotsmen centuries before invaders carried those names to the island! The later and more detailed account written by Julius Caesar, who visited Britain in two

<sup>1</sup> For man and his environment in prehistoric times reference should be made to Cyril Fox: *The Personality of Britain* (1932).

successive years (55 and 54 B.C.), confirms the impression given by his predecessor. He found it easy to provision his armies by cutting corn or demanding that the natives should supply it. The inhabitants of the south-east seemed to him to differ very little from the Gauls, with whom he was familiar on the Continent. His impression was that the country was well peopled and abounded in cattle. Those who lived inland, he tells us, did not sow corn, but subsisted on flesh and milk. But here he was repeating what had been told him, and archaeological evidence goes to show that he was misinformed. The metals iron and tin were mined, and articles of bronze and iron were fashioned by native smiths long before the arrival of the Romans. Caesar speaks of the use of money. This was no doubt chiefly employed in the trade with the mainland of Europe. Between Caesar's two campaigns and the beginning of the Roman conquest and settlement (A.D. 43) there is a period of nearly a century in which trade was developing. Strabo gives us a list of imports and exports—the first in our history. The Britons, according to him, sent out gold, silver, iron, skins, slaves, hunting dogs, corn, and cattle in return for ivory, bracelets, necklaces, amber, glass vessels, and 'such small merchandise. The duties paid in Gaul on this trade were so profitable to the Romans that he suggested it was better policy to accept them than to exact tribute by force.

It is clear, therefore, that the Romans found in this island a people who carried on settled agriculture, knew something of the working of metals, employed money, and had surpluses which they could export for luxury goods. They belonged to different branches of the Celtic family, and were themselves invaders who had established control over the older inhabitants. As far as we know, the Celts were a pastoral people who had migrated from Eastern Europe to Gaul by successive stages. There are definite

historical allusions to them as they passed along the line of the Danube. In their movement they had to modify their manner of life. They found grassland less extensive, particularly when they reached the great forest region of Bavaria. Insensibly, pastoral pursuits yielded to agriculture. In Gaul they certainly raised corn in large quantities. The changes in the manner of life reacted on the organization of the groups. We gather from Roman writers that the largest unit was the "nation" or "tribe," i.e. a group recognizing common kinship in the widest sense. It was divided into smaller sections according to the accidents of land settlement. At the base was the economic unit, the village, which co-operated in the cultivation of the land. Apparently, at first, land was not appropriated by individuals, or, when it was, not permanently, but for the season. It is possible to find certain common elements in later Celtic communities which go to confirm this account. First, the force of kinship as a unifying factor is very marked. In Wales a district was occupied by a tribe (*enedl*<sup>1</sup>); Ireland was divided into tribal units (*tuath*), and the clan system survived in the Highlands of Scotland until the eighteenth century. Within the district, cultivation was carried on by groups of blood relations. In Wales such a group (*gwely*) held together to the fourth degree of relationship. It had a central great hall (*neuadd*) and scattered smaller dwellings (*tyddyn*). Membership of a *gwely* conferred equal rights on all adult males of the same generation, and, consequently, land was periodically divisible according to the fluctuation in the number of claimants. This divisibility survived in Ireland until the beginning of the seventeenth century, and was considered by contemporary English writers to tell against agricultural

<sup>1</sup> All words, Celtic and Latin, are given in the singular form in brackets.

improvement.<sup>1</sup> In the second place, it is fairly clear that early Celtic society was predominantly pastoral. Wealth was counted in flocks and herds. The cultivation of the soil was extensive, that is, a definite area was not reserved for constant use. When it was exhausted it was abandoned in favour of new arable. The method of cultivation was co-operative, which is the probable explanation of the fact that the field was divided into strips. According to the Welsh laws, the first strip was given to the ploughman, the second to the one who provided the ploughshare, the third to the one who provided the exterior sod ox, the fourth to the one who provided the exterior sward ox, the fifth to the driver, and so on until all contributors had a share. This would mean the strips any individual had would be scattered. Each strip was divided from the next by leaving a margin of turf unploughed, and drainage was secured by heaping up the ploughed strip in a convex ridge. "Runrig," as this method of cultivation was called, revealed great powers of survival in the poorer districts of the north and west.<sup>2</sup> In the third place, the free tribesmen did not comprise the whole of the Celtic population. There were unfree classes. In Wales we find slaves (*caeth*), the absolute property of their masters, having neither kindred nor head-price (*galanas*) if slain. There were also serfs (*taeog*) and broken men (*aillt*), who were bound to the soil, and had to make payment in kind to their lord. The serfs may represent the remnants of a conquered population, and the broken class men of Celtic blood who had fallen in the social scale through crime, debt, or misfortune. Similarly, the Irish laws speak of a class (*fuidhir*) outside the kin system.

<sup>1</sup> This view is strongly expressed, for instance, by Sir John Davies in *A Discovery of the True Causes why Ireland was Never Entirely Subdued . . .* (1612).

<sup>2</sup> See the article on *Ridge-cultivation in Scotland*, by A. Birnie, in the *Scottish Historical Review*, Vol. xxiv (April, 1927).



The Roman Empire undertook the invasion and reduction of Britain because it was realized that there was an intimate relation between the insular Celts and those of the mainland. The conquest was virtually completed between A.D. 43 and 85, when the area of permanent occupation had been subdued and garrisoned. It was the south-eastern plain that was "Romanized" in the subsequent three centuries. The most advanced civilian settlements were York (*Eburacum*) in the north and Wroxeter (*Viroconium*) and Caerwent (*Venta Silurum*) in the west. In the country beyond these outposts only military influence was felt, and that but occasionally. Consequently, the results of the Roman occupation are to be sought in the south-east, and there in the districts which were well populated. In the Midlands, for instance, the population was sparse and the country remained heavily wooded. The economic consequences of the Roman occupation were not uniform over Western Europe; Britain was much less "Romanized" than was Gaul. So it is dangerous to argue from analogies. The Romans in Britain, as elsewhere, founded cities. These were the real centres of their influence. Colchester (*Camulodunum*) was established soon after the conquest; Lincoln (*Lindum*) belongs to about A.D. 80, Gloucester (*Glevum*) to about A.D. 98, and York (*Eburacum*) to the end of the second century. Each of these cities enjoyed the privileges of being a "colonia." *Londinium* is mentioned by Tacitus (A.D. 55-116) as a town, which, though not honoured with the title of a "colonia," was very celebrated for the number of its merchants and the abundance of its resources. He also tells us that Agricola encouraged the Britons to live in towns and to adopt the amenities of civilization; to build temples, market places, and stone houses on the Roman models. The towns were connected by an excellent system of roads, which served to facilitate

communication and so to foster trade. Of these material advantages of the Roman occupation—towns and roads—evidence survives. We can safely assume that they exercised a powerful influence. But we do not know how far the Romans modified the existing system of land tenure and cultivation. Elsewhere in the Empire there was a tendency for estates in which the owner employed semi-servile labour to develop. Such an estate was called a "villa" and the labourer was a "colonus," owing labour services and payments in kind. It cannot be demonstrated that such estates did in fact exist in Roman Britain. Still less can it be proved that any Roman model superseded the pre-existing Celtic system. Consequently, we are not sure whether, even within the sphere of Roman influence, the kin-groups of the natives gave place to lordship represented by the "villa." It is probable that when the hold of the Empire on its outlying provinces was relaxed native elements reasserted themselves, for they may have been only slightly modified by Roman example. It must not be supposed that the Britons consciously resisted "Romanization," but rather that Roman influence was diluted as a result of nearly four centuries of contact. The Britons, who resisted the barbarian invaders—Angles and Saxons—regarded themselves as the guardians of Roman civilization against the assaults of those from outside the pale.

## SECTION 5

### THE ORIGINS OF BRITISH HISTORY (ii)

“The splendid days of Augustus and Trajan were eclipsed by a cloud of ignorance; and the Barbarian subverted the laws and palaces of Rome. But the scythe, the invention or emblem of Saturn, still continued to mow the harvests of Italy.”—EDWARD GIBBON: *The Decline and Fall of the Roman Empire*.

To divide history into epochs may be necessary for purposes of study, but the method has its pitfalls. It is so easy to assume that contemporaries were conscious of the march of events, when, as a matter of fact, only the lapse of time could make its meaning plain. It used to be the practice to mark the end of the Roman occupation of Britain by saying that the legions were withdrawn in A.D. 410. Thereafter it was supposed that an effete British population fell an easy prey to the barbarian invaders. But the crossing of legions to the Continent to meet some pressing crisis there was no novelty. It had happened before. Time alone could reveal the fact that the Empire in its helplessness would be unable to send legions to take their place. By the beginning of the fifth century the Roman Empire was, indeed, a mere shadow of its former greatness. Its decline had been a slow process, due as much to weaknesses in the original structure as to shocks from outside. The so-called withdrawal from Britain was but one incident in the collapse of a great administrative system. The whole of Western Europe was involved in that disaster. It is a mistake, therefore, to treat the history of Britain in the subsequent centuries as in some way unique. Everywhere barbarian invaders overthrew existing institutions, and then strove painfully to rebuild society with some knowledge of what it had been like before their arrival. But for a couple of

centuries they seemed to threaten the destruction of civilization.

The task of political and economic reconstruction was undertaken by Christianized kings, who learnt from the Church—the repository of the Roman tradition—that peace could be secured in their petty kingdoms if the tribal principle gave place to the territorial. In other words, the idea of the State again began to win acceptance. It found its most ambitious expression in the attempt of Charles the Great to restore the Empire of the West (A.D. 800). But the same movement is illustrated by the work of the house of Capet in France and of Egbert in England. The kings tried to secure the safety of the roads, to establish market-centres, to provide currencies, and, above all, to ensure peace within their territories. By one means or another they and their leading men—nobles by birth or by service—acquired large estates, which they improved by reclamation and more efficient cultivation. The work of agricultural development was particularly promoted by the communities of monks. On them grants of land were lavished in an age when such gifts were considered to be peculiarly meritorious. The duty of labour was imposed on the monks by their vows. It is little wonder, therefore, that they proved to be pioneers. The great lay landowners followed their example. Under these influences there was gradual improvement, and agriculture entered upon the phase which may be called broadly “manorial.” The tendency was for large estates owned by a lord, ecclesiastical or lay, to develop at the expense of the smaller holdings. For where the lower orders had a collective share in tribal lands they lost it, and where they held in private ownership they were often forced by circumstances to surrender their rights. Over Western Europe as a whole the emergence from anarchy was associated with

the aggrandizement of the upper classes. The mass of the people fell into a position of dependence or serfdom. They were bound to the soil, and had to make payments in labour or in kind for the land they cultivated.

How did this come about? There are two possible ways of approaching this question. It may be said that the remarkable uniformity in the structure of Western Europe at the beginning of the Middle Ages must be explained by the general operation of certain economic forces. The price of establishing such order as existed, and of effecting such improvements in agriculture as the "Dark Ages" witnessed, had been the reduction of the great majority to serfdom, for serfdom did provide the basis for an ordered society. It created stereotyped class divisions in which the functions of each class were defined; there were those who performed military services (*bellatores*), those who performed spiritual services (*oratores*), and those who performed labour services (*laboratores*)—a division familiar enough in medieval thought. To secure these services, payment had to be made to induce men to render them. Payment in money was out of the question. So the military leader was paid in land, as were also the ecclesiastics. But land is useless without labour. The actual cultivators, therefore, were guaranteed in their holdings, provided they gave part of their time to work on the lord's land. If they had originally been slaves this would be an improvement in status, but if they had enjoyed collective or private ownership they were degraded in the social scale. This explanation is plausible. But it will not satisfy everybody.

A second way of approach is to attempt to trace the steps by which the society which we find in the eleventh century actually evolved from that of the fifth century. Instead of speaking of the general operation of economic forces, can we say precisely what happened, and when?

Unfortunately, we cannot. The subject has been much discussed with reference to this country. The story of the barbarian invasions can only be constructed tentatively from later sources, which are scanty and difficult to interpret. We do not know what happened between 450 and 600. But it is very tempting to speculate. In the second part of the nineteenth century our history was approached with a strong Teutonic bias. To Professor E. A. Freeman, for instance, the coming of the Angles and Saxons meant a clean sweep of Roman tyranny and of Celtic political incapacity. It led to the establishment of self-governing institutions by vigorous bodies of freemen. In recent years there has been a reaction against this point of view. Historians are now less inclined to claim for Angles and Saxons virtues which have never been ascribed to Vandals, Goths, Franks, and Lombards. It is clear that the invaders were long and bitterly opposed by the Romano-Celtic population. In the course of time some *modus vivendi* must have been effected. Did it involve the continuity of economic institutions?

This question does not admit of a simple answer. We do not know what conditions prevailed in Roman Britain at the beginning of the fifth century. If it could be shown that the "villa" was universal, we would have a definite point of departure, i.e. that of an estate with dependent labour. Since the "villa" was based on the same principles as the eleventh century "manor," there would seem to be essential continuity throughout the period. But it cannot be demonstrated that the "villa" was the typical unit in Roman Britain. There is a strong probability that the Celtic unit of cultivation based on kinship survived. It may well have strongly reasserted itself at the end of the Roman period. So it is not certain what the invaders found. Nor is it clear what notions they brought with them. Descriptions of the German

tribes which the Romans knew along the line of the Rhine can hardly be applied to the Angles and Saxons who came from the low-lying lands between the Weser and the Elbe. Archaeological evidence shows that the maritime Teutonic peoples of the fifth century were acquainted with the cultivation of the ordinary cereals and possessed a variety of agricultural implements. Probably they were organized in kin-groups. During the years of invasion and settlement, this bond would be loosened. The successful leader may have asserted an ascendancy from the outset. It has been contended that there is a "strong presumption, if not actual certainty, that the Saxon 'ham' and 'tun' was the estate of a lord, and not a free village community."<sup>1</sup> According to this view, the chieftains naturally assumed the position of the former lords of "villae"—for Seebohm postulated the existence of the "villa"—and their followers, together with the conquered peoples, became dependent on them. This would mean that English history begins with serfdom. If so, there is no reduction in status to explain.

If we suppose that the free village community existed among the settlers, we have to fall back on the argument already used: that economic forces eliminated this freedom in the course of the "Dark Ages." That there were unfree classes in the early days of the English kingdoms can be proved from fragmentary codes of laws. The so-called "Laws of Ethelbert," which belong to the seventh century, include references to "laets" and "theows," who were, apparently, freedmen and slaves. But these may have been members of the conquered people. Later in the same century Wilfred, according to Bede, found that there were two hundred and fifty male and female slaves on the estates with which the monastery at Selsey had been endowed. In the eighth and ninth centuries evidence

<sup>1</sup> F. Seebohm: *The English Village Community* (1883), page 175.

accumulates to show the complexity of social classes. The distinctions were founded on blood, rank, and service; but they all tended to be expressed in terms of land tenure. There is a document of the end of the tenth century which describes in much detail the classes of persons which may be expected to be found on an estate of that time. At the head is the *thegn*, or lord, who holds of the king on condition of military service, the maintenance of local strongholds, and the keeping of the bridges in repair. Locally, indeed, he is the person on whom the king relies for the preservation of the peace. Below him come the *geneats*, who perform such honourable services as riding, carrying loads, and bringing "strange wayfarers to the tun." They are obviously freemen. The *gebur*, however, has sometimes to work two days a week throughout the year "at such work as is bidden." He has to make payments in money and in kind at prescribed seasons. Stock is provided for him, and "when death befalls him his lord shall take back the things which he leaves." His holding is a "yardland." Clearly, his status is a dependent one. There are *cotters* also, who normally have five acres and have to work one day a week for the lord.

This unique document is important because it illustrates the complexity of rural society in England before the Norman Conquest. It shows that the "feudal system," although still too amorphous to be strictly a system, was taking form. As an indication of the consequences of the forces in operation during the Old English period it is more valuable than evidence taken from Norman times. Can we define these forces a little more clearly? It has been suggested that the pressure of taxation—the *danegeld*, a land tax first imposed in 991 to buy off the Northmen—was so heavy that small freeholders had to make arrangements with the large landowners to pay it for them.



They thus entered into a position of dependence. Bad harvests or the damage done by the attacks of the Northmen may have operated in the same direction. The smallholder would need assistance; all he had to pledge to secure it was his future labour. On the other hand, circumstances enhanced the importance of the local lords. The kings, owing to the lack of administrative machinery, had to delegate functions to them. They raised and commanded the military levies. They erected courts in which they tried a variety of offences and took the profits of justice. In the disturbances caused by the incursions of the Northmen, therefore, the freemen found themselves unable to hold their own, and the kings were obliged to allow the power of the local landowners to develop. In these ways, it is contended, a certain uniformity was imposed on society.

## PART II

# THE MIDDLE AGES

### SECTION 6

#### THE FEUDAL STRUCTURE

“Without these cannot a city be inhabited: and they shall not dwell where they will, nor go up and down: they shall not be sought for in publick counsel, nor sit high in the congregation: they shall not sit on the judges' seat . . . they cannot declare justice and judgment. . . . But they will maintain the state of the world. . . .”—Ecclesiasticus xxxviii. 32-4.

WHATEVER opinion we adopt concerning the nature of the forces which worked themselves out between the fifth and the tenth centuries we have to recognize the fact that they imposed a remarkable degree of uniformity on the institutions of Western Europe. This uniformity we call comprehensively “the feudal system.” It was a blend of three closely related arrangements. First, there was the principle of securing and rewarding services—particularly those of military leadership—by means of grants in land. Second, there was the practice of obtaining personal protection by choosing a lord. Third, there was the tendency for the king to commit the discharge of administrative and judicial duties to local magnates.<sup>1</sup> So the country was divided into great lordships. Within these the lord was to all intents and purposes a petty king (*subregulus*). Both his relation to the king and to his inferiors could be defined in terms of land tenure. He was himself a “tenant” who had to fulfil certain obligations; and in one way or another all those who held land within his sphere of influence came to owe

<sup>1</sup> In many cases the magnates usurped such functions, but the result was the same.

him services. It followed that the private possession of land or the cultivation of it by self-contained groups could hardly survive. As the local administrator of justice the lord could force attendance at his courts on those who in other respects remained freemen. In fact, freedom became a rare thing, if by freedom is meant the right to the enjoyment of property without any limitations except those imposed by the State. In Northern and Central Germany, where feudalism was not so strong, communities did survive which were subject only to royal jurisdiction, and had their own courts over which a representative of the king presided. But in France and England the "fief" held by a lord became the rule.

It is significant that when William the Conqueror undertook a survey of his kingdom in 1086 it was tacitly assumed that the country was divided into holdings held directly or indirectly of the Crown. It was also assumed that the population could be divided into five categories—freemen, socmen, villeins, cottars, and slaves. Probably these assumptions did violence to the facts, but the results of the inquiry were incorporated in Domesday Book. Henceforth this official record provided a picture of a kingdom divided into fiefs held immediately of the king by tenants-in-chief, or mediately by sub-tenants to whom the tenants-in-chief had granted part of their estates. The rural classes were also supposed to fall within the five categories. The pressure of government would be exerted to convert this picture into a reality, and the ingenuity of lawyers would be exercised to define the precise meaning of what it represented. But medieval governments could not work miracles and medieval lawyers were often content with fictions; so while the authority of Domesday Book was powerful, we must not suppose that it removed all anomalies. Still, the tendency of its influence is clear. It defined what had formerly been vague. Any free

village which may have survived tended to be identified with the unfree manor, and the uncertainties of personal status in the Old English period were no longer tolerated.

Feudal society was one in which "natural economy" was dominant, that is, payment in money for services was exceptional. Hence the importance of stating the relations between classes in terms of land tenure. The whole kingdom was an estate. The king held part of it in his own hands—the royal demesne—and from it he derived an income which enabled him to meet household expenses and part of the public charges of government, for no distinction was drawn between the two. The rest of the land was granted out to tenants-in-chief on condition that they performed defined public services. For instance, the Norman kings developed a system of knight-service by which the tenant-in-chief was under the obligation to provide in the event of war so many knights for forty days at his own expense. Instead of taxing their subjects to secure a fund by means of which an army could be raised and trained, the kings burdened their grants of land with the obligation. The principle ran through the whole of the feudal structure. Tenants-in-chief provided for the discharge of their services by making grants of land to sub-tenants on condition that they would come forward when the king called for military service. Similarly, within the manor, which was the unit of cultivation, the lord held part of the land in his own hands—the demesne—and he provided for the cultivation of it by requiring his tenants to work on it so many days a week in return for the holdings they had outside the demesne. This was the essential character of villeinage. We gather from Domesday Book that nearly three-quarters of the population were small cultivators—villeins and cottars—who held their land on such conditions. Regarded from a modern point of view, the lord paid wages for work on

his demesne by giving the labourer a smallholding; or, alternatively, the labourer paid the rent of his holding by means of labour services on the demesne.

This was a contract, it might be supposed, which did not involve an unfree status for the villein. There was a mutual advantage in the arrangement. Until it was possible to pay wages and rent in money, some such agreement was necessary. But, as a matter of fact, the relation between lord and villein was one in which the latter had no legal right against the former. He was by no means a slave in the sense that he was rightless; his bondage was relative, for as against all the world except his lord he was free. But he could not assert any right against the lord in the king's courts. It does not necessarily follow that he was ill-treated. The force of custom was strong in the Middle Ages, and most lords probably felt themselves bound by it. But that the opportunity of oppression existed cannot be denied. The efforts of the lawyers to define the tests of villeinage go to show that there were frequent attempts to escape from its grip. It was difficult to arrive at an infallible test which would satisfy the courts. An attempt was sometimes made to distinguish between the services which were honourable and those which were sordid or servile. If a tenant owed sordid services then he was a villein in status. If he had to pay "merchet" on the marriage of his daughter, or "chevage" if he wished to live outside the manor, or was subject to "tallage" at the will of his lord, or could not sell his oxen without his lord's permission, or was liable to serve as "reeve"—then he was a villein. The really decisive tests were whether the tenant was bound to the land or whether he was unable to plead in the courts against his lord. But these presented difficulties. If a villein escaped and the lord sought a writ (*de nativo habendo*) to recover him, it was obviously

unsatisfactory for the court to accept the lord's plea that the villein was bound to the soil as a proof that he was so bound. Nor, when a tenant asserted that he was free, could the court dismiss the plea by ruling that he was unfree because he could not plead. Again, if a tenant accused his lord of evicting him arbitrarily, the court could hardly accept the plea that he was a villein because the fact of his arbitrary eviction proved it. These difficulties spurred the lawyers to find some objective test of villeinage which would be independent of the particular issue in a specific case. But they never found one. As time passed, the royal courts adopted a presumption in favour of freedom, and thereby contributed to the decay of villeinage as an institution.

The real character of villeinage was economic. No legal theory was likely to make the villein's lot quite intolerable as long as his labour was essential for the cultivation of the demesne. When his labour was no longer necessary, there was little interest in the question whether his status was free or unfree. So eventually villeinage disappeared. It broke down when the feudal structure of the State fell into decay. In other words, it gave way before a "money economy." After the middle of the fourteenth century "commutation"—the conversion of services into money payments—became increasingly common. The growth of towns, which had attended the development of trade and industry, had created a new atmosphere inimical to feudal institutions. In some cases the extant records make it possible to trace the process. There is a steady diminution each generation in the number of villein families residing on the manor. Some have withdrawn, and at first pay "chevage," while others have escaped that charge.<sup>1</sup> Some secured manumission

<sup>1</sup> The changes in the manor of Fornsett are analysed by F. G. Davenport: "The Decay of Villeinage in East Anglia" (*Transactions of the Royal Historical Society*, New Series, xiv).

by purchase, some as a condition precedent to being ordained, and some by living a year and a day in a chartered town unclaimed by their lord. Gradually the area over which they spread extended and they are found greater distances from their original home. With the changes in society, villeinage was shed like a worn-out garment. In England the movement was attended with little violence, for the so-called Peasants' Revolt (1381) sprang from many causes and it was not confined to the peasantry. It exhibited, however, the strength of the demand to be free of all restrictive obligations in return for a rent of fourpence an acre.

It has been suggested that the towns did not fit easily into the feudal structure. At first little more than extended villages under the control of a lord, they, step by step, won separate recognition. The greater towns were on royal demesne and enjoyed many privileges under the terms of their charters. They could elect their own officials, establish their own courts, and supervise their own markets. Other towns, held by tenants-in-chief, whether ecclesiastical foundations or secular lords, were also anxious to secure charters. As occasion arose they sued for such privileges, and the lord was often willing to accept a present sum of money and forgo some of his perquisites for the future. Ecclesiastical foundations, however, were chary about making such bargains, because, as perpetual corporations, they valued a regular income more than the realization of their capital. Until the Reformation many ecclesiastical boroughs found that their overlords kept a firm hold on them. But as towns grew in wealth they were less susceptible to control. They had to be allowed to manage their own affairs. Throughout Western Europe the townsmen were impatient of feudal privilege. At first the merchants and then the craftsmen formed associations of their own to assert their

rights. In the Low Countries and Northern Italy they challenged their feudal lords to open battle and in the end overthrew them. But there the full effect of the commercial renaissance of the Middle Ages was felt. In England the towns were less powerful, and the central authority came to exercise greater control. So their assertion of their rights was more restrained, though not less effective. The trade which they fostered must have supplied the means of undermining the natural economy on which the feudal structure rested. But this is one of the major revolutions of which contemporaries were hardly aware; it is, therefore, very difficult to trace.



## SECTION 7

### THE MANOR

“The manor is an estate surrounded by tenures. It is a combination of ruling and dependent, working and military classes. It is a unit of local government.”—PAUL VINOGRADOFF, *The Growth of the Manor* (1905).

PROBABLY nine out of every ten persons lived on the land in the Middle Ages. Consequently, to understand economic conditions, it is necessary to pay particular attention to rural organization. In Western Europe generally this took the form of the manor, which was the estate of a lord, or a self-contained part of the estate, for a lord might have several manors in different parts of the country. Since the lord was careful to preserve records of his interests, we have a wealth of documents which throw much light on the manor as it existed in England from the thirteenth century. Extents or surveys give details of the arable, meadow, pasture, wood, fishponds, mills, etc., and of the classes of tenants and their obligations in the form of money rents, services, and payments in kind. Inventories taken on special occasions describe the buildings, equipment, and stock. Account-rolls indicate the payments in money or in kind received by the lord's officials, and the disbursements they made on his account. From the court-rolls we get a picture of everyday life, of the sons succeeding their fathers in the holdings, of the sins of omission and commission to which the villagers were prone, and of the general enforcement of customary rules. Our knowledge of the manor is, therefore, fairly complete on the administrative side. It is much less so on the agricultural. There is, indeed, a danger of confusing the administrative with the agricultural, and of thinking that the breakdown of the

former accompanied a change in the latter. But the decay of the manor did not necessarily mean that there was an alteration in the methods of cultivation. They often survived for centuries.

Each manor was, from the economic point of view, a unit of production. Unlike a unit in a modern industry, it was primarily organized to supply its own needs. Normally, it was identical with the village, and consequently it had social and administrative aspects as well as economic. Its method of working had its roots in the past and was strongly governed by custom. It was a community. Generally, a sharp distinction was drawn between the lord's demesne and the land outside the demesne. The demesne was that part of the land which the lord kept for his own use. It was not necessarily compact; some of it might be intermingled with the land held by the tenants. A considerable proportion of the land outside the demesne was held in villeinage, the occupiers of it having to render labour services according to the custom of the manor. By means of these services the lord had his demesne cultivated. To ensure that the tenants discharged their obligations he employed a bailiff, who supervised the agricultural work in his interests. If he had a number of manors he had a steward who made periodical visitations to see that rents and services were paid and custom was duly observed. Our earliest treatise on agriculture—that of Walter of Henley, which was written in the thirteenth century—seems to have been intended to instruct the lord how to safeguard himself against fraud on the part of his tenants and servants. The customary court, presided over by the lord's officer, also played an important part in discipline. The petty officials—hayward, swineherd, shepherd—were appointed there, and they were fined if they did not perform their duties properly.

The lay-out of the manor is best indicated by taking the holding of a typical villager or villein. He generally had a "yardland" or "virgate" of customary land. It was thirty acres of arable. These were scattered widely in the great open fields of the village. The open fields were "open" in the sense that they were not enclosed, except temporarily when the crops were growing. Then it was necessary to protect them from the sheep and cattle by means of fences. Each great field was subdivided into sections, variously called "shots," "lands," "furlongs," etc., which consisted of a number of acre strips lying side by side and separated from one another by a "balk" of unploughed turf. The acre strips were usually twenty-two yards wide and ten times that in length; in other words, they were a furrow long (furlong). Why the strips of a particular villein were scattered over the arable fields is a question to which no completely satisfactory answer can be given. It probably represents an older arrangement which was stereotyped by the formation of the manor. Thirty acre strips provided the villein with the yield of twenty acres a year (for one-third was fallow) of such crops as wheat or rye, barley or oats. To cultivate these strips and maintain his family he had to have other resources. These were supplied by the rights of common. The chief of these was common of pasture, which enabled him to maintain his plough-ox, a cow or two, and some sheep. Common of estover gave him the right to place pigs in the woods and to cut fuel and timber for his use. These and other common rights were "stinted," i.e. their use was limited by custom, and those who attempted to exceed the number of beasts they might put on the common would find themselves answerable in the court. To sum up, a villein had a bundle of rights together forming a holding on which he could make a living for his family, but his

rights were inextricably bound up with those of his fellows.

It has been mentioned that one-third of the villein's strips would be fallow in any particular year. This is to assume the three-field system, which was, as a matter of fact, general in the English Midlands. The arable was divided into three great fields (or a multiple of three), and each field passed through a regular cycle of wheat, barley, and fallow in the course of three years. So in any given year there would be one field bearing wheat, one bearing barley, and one fallow. The crops mentioned are taken for the sake of simplicity. There was more variety. But the general principle was that in the fallow year the field was ploughed twice to rid it of weeds and to promote its fertility, and then a winter crop (wheat or rye) was sown. In the next year it bore a spring crop (barley, oats, beans), and after harvest was allowed to remain fallow in order to recuperate. Then the same process began again. It will be seen that this method of cultivation was a solution of the problem of maintaining permanent fields of arable. In earlier times, or in more primitive conditions, the arable was constantly moved as the land became exhausted. In our own days the necessity for the fallow year has been eliminated by adopting a rotation of crops (roots, grasses, and cereals) with heavy manuring. In the Middle Ages roots and artificial grasses were unknown, and only the most primitive methods of manuring were possible. When the harvest was in, the great fields were thrown open to the stock of the village to get what they could, and, incidentally, to manure the ground. Similarly, the meadow was enclosed for natural hay in the spring and after it had been cut was thrown open to the cattle. By these means the resources of the permanent pasture were slightly augmented. Grazing on the arable (*Michaelmas grass*) and

on the meadow (*Lammas grass*) constituted common of shack and was shared like other rights of common.

The stock of the village consisted of draught oxen, other cattle, sheep, and pigs. The usual plough was drawn by eight oxen. This was one reason why the scattering of the strips survived, for ploughing had to be a co-operative effort, since the individual could not fit out a plough for himself. There were cows for milking, though they do not seem to have been numerous. The difficulty was to carry them through the winter owing to the shortage of winter feed. Much cattle was killed off and salted in November for this reason. The conditions hardly made improvement of stock possible, and the breeds remained, throughout the Middle Ages and long after, poor from the modern point of view. Sheep were numerous, but were valued for their wool and not for their flesh. With the growing demand for wool flocks increased, and some attention was paid to the quality of the fleeces. There is constant reference to the pigs which the village swineherd took to the woods where they fed on beechmast and acorns. They were certainly an important addition to the resources of the villein.

The cultivated area which clustered round the village was merely the nucleus of the manor. There was much unimproved waste beyond. As population increased this was taken in (*assarts*), and the symmetry of the organization tended to break down. The lord made grants to freeholders on condition of the payment of rent. As time went on, indeed, he became more favourably disposed to receiving rents in lieu of service from his customary tenants. The manor as an administrative unit depended on the maintenance of the relation between the land in villeinage and the cultivation of the lord's demesne. When that connection was broken, the internal economy was completely changed. The acceptance of

money instead of service—commutation—was followed by the leasing of the demesne to a tenant. The lord became a rent receiver with respect to both the demesne and the customary land. There are cases of commutation in England as early as the thirteenth century—and a few isolated examples even earlier—but it did not become a general and settled practice until the second part of the fourteenth century. Step by step obligations were commuted into money payments. The villein had been required to make payments in kind, such as a capon at Christmas, eggs at Easter, and honey in the summer, as long as the lord and his attendants came round to consume the dues or the monastery collected them, but these payments were often the first to be commuted because the lord, or institution, preferred the greater range of choice which money provided. Week-work, the two or three days a week the villien had to work on the demesne, was commuted when the demesne was leased or when the lord, if he resided, saw that he could manage better by hiring labour and paying for it out of the fund yielded by commutation rents. For customary labour is somewhat inflexible as compared with hired labour. As to the villeins, they were glad to have all their time for their own holdings, especially if improvement of the waste made it possible for them to rent more land. The cottars, who had some five or ten acres at most, and the sons of the villeins probably provided a labour supply which the lord or the farmer of the demesne could easily employ. But it must not be supposed that these internal changes immediately reacted on the external appearance of the manor. Land was still cultivated on the open-field system, and tenants continued to enjoy the rights of common in meadow, pasture, and wood. The personal relations were different. The villein was becoming a copyholder, holding strips in the open field and possessing

rights of common in return for payments and under the conditions with regard to inheritance which were set down in the roll of the manorial court. In the fifteenth century copyhold was recognized by the king's courts, but they were obliged to inquire what were the terms of each particular copyhold as defined in the manorial roll. These varied considerably, and the lords were often able to extinguish a copyhold without going beyond their undoubted legal rights. So that the breakdown of the manor did not give the peasantry that hold upon the land which they have secured in other countries by revolutions in modern times.

## SECTION 8

### THE TOWN

"For the growth or decay of towns is due in the first place to routes . . . it is due to routes that they become centres of accumulation and storage of the agricultural or industrial products of a whole district, or, again, centres of distribution for distant and exotic products. Nothing has more influence than the history of routes on the destinies of towns, whether their origin depends on a route, a sanctuary, or a hill fortress.—LUCIEN FEBVRE, *A Geographical Introduction to History*, page 347.

FROM the point of view of economic progress the most significant fact in the history of the Middle Ages is the revival of town life. During the period of the barbarian invasions and settlement urban centres had suffered severely, and the reconstruction of old towns and the building of new ones demanded long and painful effort. The process is often obscure. We cannot reduce to any simple formula the factors which determined where a town was founded and why it grew in importance. Some medieval towns represent survivals from an earlier age. Rome endured much, but was never obliterated by her enemies. New Rome—Constantinople—carried many of the traditions of trade and industry unimpaired through the centuries when Europe was almost reduced to barbarism, and retained so much vitality that she was able to stimulate the development of towns in Italy in the early Middle Ages. Venice was a place of refuge during the troubled days of barbarian inroads into North Italy, and later proved to be well situated for the carrying on of the trade between the Levant and Western Europe. In Britain a case can be made out for the continuity of town life in London, though it must have been reduced to the most primitive elements at times. The revival of towns is usually ascribed in this country to the influence



exercised by the invasions of the Northmen in the ninth and tenth centuries. The Northmen were founders of trading towns, as, for example, round the coast of Ireland and in the East Midlands of England, and the terror inspired by their incursions forced the English to build fortified places, which formed the nuclei of towns.

There has been much fruitless discussion about origins. A town may have sprung from a fortress or a monastery, which would involve a comparatively highly differentiated population, the needs of which would be supplied by a variety of crafts; or it may have resulted from the fact that it was a convenient meeting-place because of its geographical situation where roads converged or where a river could be forded. But no one explanation is enough. A town may have a castle, one or more famous shrines, and be a ford town, as, indeed, is the case with Oxford. Even if the origin be deliberate and apparently artificial, as in a fortress town built to guard a frontier or to hold down a conquered region, the development of the town depended in the long run on whether it attracted trade and therefore population. In other words, the ultimate purpose of a town is trade. With it the town can grow indefinitely; without it the town must inevitably decay. The town authorities fully realized this. Their policy was directed to protecting and fostering their trading interests and to encouraging persons to settle within their walls. Step by step the town became the local market. Manors which had been hitherto practically self-sufficing sent their surpluses for sale in the town and purchased there an increasing variety of commodities for their own use. The town influence spread until it had a more or less definite region which depended on it for the performance of important economic services. It often retained quite marked rural characteristics; in fact, many towns were, in their beginnings, only more elaborate

manors, and they long retained their common lands and fields of arable. As they grew in importance, however, they wished to be quite free of feudal control. They wanted self-government based on fully recognized privileges. The embodiment of such privileges in a charter converted the town into a borough, that is a corporate body was established to which concessions were made. The burgesses were jealous of what they had secured and anxious to extend their rights. The charter usually empowered them to elect their own officials, exempted the townspeople from jurisdictions outside their walls, and granted the right to pay a lump sum (*firma burgi*) to the Exchequer in discharge of all dues to the Crown.

Feudal lords did not usually grant privileges to the towns on their demesne without driving a hard bargain. They often tried to retain rights which would enable them to continue to exact payments from the townsfolk. But as the merchant class grew more wealthy it resented any limitations on its activities. It wanted freedom from dues, guarantees that peace would be maintained, and the rules of trade which it was gradually defining enforced. So there was a general movement in Western Europe towards the formation of merchants' associations in towns. The Middle Ages had a genius for association. Whenever there was a conscious desire to attain an end, which in the circumstances of the time could not be secured by legislation or State action, there was a tendency to form private groups for the purpose. Hence the number and variety of *gilds*. There were gilds for the preservation of the local peace, gilds for the performance of religious duties, gilds for the regulation of buying and selling, and gilds for the safeguarding of the interests of particular crafts. Of these the trading and craft gilds played a very important part in the life of medieval towns. The trading gilds often took the initiative in agitating for privileges for the town.

It is quite usual for a borough charter to contain a clause granting to a gild merchant the rights and obligations such a grant involved. It meant that the members of the gild merchant were empowered to supervise buying and selling within the limits of the town. "Foreigners," that is non-members, were restricted in many directions. They could not sell direct to consumers, they had to pay tolls, and they were excluded from trading in certain commodities, such as corn, wool, and leather. Particular importance was attached to the retail trade, and these rules were mainly designed to exclude any but members of the gild from any share in it. The gildsmen were under the obligation not to attempt to over-reach one another in trade. If one made a good bargain in a transaction with an outsider he was expected to allow fellow members to share in it. The gild sometimes united as a single person to make a common purchase, afterwards dividing the goods among the members as they required them. It also exercised a general supervision over the quality of the goods which its members offered for sale, and punished fraud by excluding the offenders from membership. So powerful did the merchant gilds become that it is sometimes difficult to distinguish them from the governing body in some boroughs. They were, however, organizations under their own elected officers, with their own body of ordinances, and quite distinct in theory from the burgesses; but in practice the merchant gild often included the most important burgesses, and consequently the government of the gild and of the borough was, in fact, in the same hands.

With the growing complexity of the medieval town the merchant gild could not undertake all the economic functions which had to be discharged. So, after the twelfth century, a number of craft gilds came into being in the larger boroughs. These differed from the merchant

gilds in that they were confined to those who practised a definite craft, and the membership of them came, therefore, to be based on the possession of certain manual skill. Unlike the merchant gild, the craft gild was rarely the subject of a direct grant from the king or other feudal superior. The boroughs either set them up or recognized their existence as a means of regulating production. Their ordinances were approved by the borough authority and included rules as to apprenticeship, quality of workmanship, and general fair dealing. At their best the craft gilds effected a balance between the interests of the producer and of the consumer. The producer was assured a fair remuneration, which would enable him to maintain his standard of life, and the consumer was protected against indifferent workmanship and high prices. In England the craft gilds did not come into conflict with the merchant class. On the Continent, however, there were in many towns severe struggles between merchants and craftsmen before the latter won recognition for their associations. It was notably intense in the great towns of the Low Countries, where the merchants wielded considerable power and the central government was too weak to control the democratic movement. The history of the burghs in Scotland resembles that of the Continent. The gildry, which was equivalent to the gild merchant, was an exclusive body. A craftsman had to renounce his craft before he could qualify to become a member of it. The gildry gained almost complete control of burgh government. In Edinburgh the crafts began an agitation to break down this monopoly early in the sixteenth century. There was a sharp conflict arising out of their demands in 1583, and the whole question was referred to arbiters. Their award confined burgh offices, seven in all, to merchants, but admitted eight craftsmen to the council. Since there were ten merchant members, apart from the

officers, this gave the merchants a constant majority of nine.

The causes of this organization of craftsmen in separate guilds must be sought in economic forces. Expansion of trade necessitated a division of labour, so that in the larger towns provision had to be made for the training and regulation of specialized groups. Particular classes of craftsmen tended to live in their well-marked neighbourhoods, where control was fairly simple. There the masters trained the apprentices, who lived with them, and the journeymen, who had completed their training, worked for masters until they were in a position to set up on their own account. Each craft guild had its officials elected periodically and was responsible for the conduct of the members. No one could exercise a craft in the borough unless he was a member of the local guild. The officials were expected to enforce the rules contained in the ordinances of the guild; for instance, there was often a clause which forbade night work. The reason given for this prohibition was that night work was, owing to the defect of light, bad work, and, in some instances, a nuisance to neighbours. It might also be regarded as a form of unfair competition.

The activities within the medieval town had their reactions on society as a whole. These associations with their privileges introduced a ferment of change into medieval society, and as the Middle Ages wore to a close it was becoming clear that a new order had been born. The towns were in touch with one another, and commodities were carried great distances and offered for sale. By various means wealth had been accumulated, and capitalist enterprise was beginning to exercise considerable influence.

## SECTION 9

### MARKETS AND FAIRS

“All merchants shall have safe and secure exit from England, entry into England, and dwelling and movement within England, as well by sea as land, for buying and selling according to ancient and right custom. . . .”—*Magna Charta*, 1215.

WHATEVER may have been the origin of a town, it was soon recognized that it offered advantages as a centre of trade. There is a law of Athelstan of the early part of the tenth century requiring all sales for more than a certain sum to be effected in a town where there should be witnesses. The intention seems to have been to prevent thieves from disposing of stolen goods. Honest dealers also found that it was useful to have evidence of their sales, for it gave them proof of debt if they had to proceed to the recovery of it. Legislation designed to facilitate lawful enterprise was greatly extended during the Middle Ages. The towns profited from it. They were granted the right to hold markets. Under the terms of such a grant a town could set up stalls, booths, or halls, and let them for a rent on market days to inhabitants of the town or of the neighbouring country. They could prescribe the hours and conditions of sale. A public scales could be provided so that buyers and sellers would have an impartial arbiter. Action could be taken against any who were suspected of engrossing, forestalling, or regrating, i.e. of attempting to drive up prices by control of supplies. In these and other ways the market was regulated so as to safeguard what the medievalist considered to be the principles of fair dealing. Markets were normally held once a week. The trade in them was virtually confined to local commodities, usually the ordinary necessities of life, and the area from

which buyers and sellers were drawn was not a wide one.

While the markets promoted the economic integration of the restricted region of which a town was the centre, fairs were the means of fostering national and even international trade. They seem to have originated in religious festivals, and many of them continued to be known by a saint's name and to fall on his day. Fairs were franchises and were created by royal grant in considerable numbers from the twelfth century onwards. The date on which they were to be proclaimed and the period of duration of the special privileges involved were definitely laid down. In the majority of cases they were annual, and limited to one day. But the great fairs lasted for as long as a fortnight or even a month. Merchants could arrange their movements in accordance with the known facts about the fairs. They knew what special commodities would be offered for sale and what could be sold at each fair; for instance, at an English fair they would buy wool, hides, or cloth, and sell wines, drugs, spices, and dyes. So the fairs promoted trade over a wide area, each local fair providing buyers with an opportunity to purchase goods brought from great distances. In Western Europe generally steps were taken to ensure that merchants were encouraged to perform their special functions. When the fair was proclaimed the local restrictions on trade were suspended, the powers of the local authorities being superseded in favour of those of the officials responsible for the conduct of the fair. A special peace was declared, and a court<sup>1</sup> was set up where speedy justice was administered according to the general principles of the Law Merchant which were common to

<sup>1</sup> This was called the court of piepowder. It was presided over by an official of the franchise who was assisted by assessors, themselves merchants attending the fair, aliens as well as natives. The business generally covered pleas which arose from debts, contracts, and trespasses.

Western Europe. For the time the restrictions so characteristic of the Middle Ages were set aside. Trade was not free in the sense that imposts and tolls were not charged, but in the sense that local privileges were temporarily abrogated. This was, no doubt, to the advantage of the merchants as well as to that of large consumers, such as monasteries and great lords, for the most valuable trade at the fairs was wholesale. Much of what was bought then would be retailed during the rest of the year.

It might be supposed that, since the right to hold a fair was a matter of royal grant, it would be possible to discover some policy with respect to the distribution of fairs both geographically and throughout the year. But this cannot be demonstrated. Fairs were often granted without any definite reference to trade routes, but they would not flourish if they attempted to defy the facts of geography. In the course of time there would be a survival of the fittest and the emergence of a cycle; merchants would follow the definite routes, and attend fairs in the order which best suited the exchange of goods. It is said that the great English fair of St. Ives was granted to the Abbey of Ramsey because the discovery of the saint's relics attracted great numbers of pilgrims there at the beginning of the twelfth century. The situation on the Ouse happened, however, to be a convenient one for the sale of hides and wool in exchange for foreign commodities. When a fair was well established it could resist the setting up of another within a certain radius and thereby safeguard its interests. For one reason or another, despite the great number of grants, important fairs were comparatively few. The most famous in Western Europe were those of Champagne and Flanders, and these owed their importance to geographical position. The trade routes from the Mediterranean and Central Europe to the North Sea converged there, and



great caravans of merchants, among whom Italians and Flemings predominated, carried their goods to the fairs. In England the chief fairs were St. Ives, already mentioned, St. Giles at Winchester, important for the French trade, Stourbridge, near Cambridge, and Bartholomew at Smithfield. The fame of the last two long survived the Middle Ages.

The distribution of commodities over a wide area presented new problems. The merchants who organized it had to have command of considerable capital resources. They had to make large purchases, bear the costs of conveyance of goods from one fair to another, and wait for payment. Whatever may have been the origin of their initial capital, there is no doubt that the profits of trade enabled them greatly to augment it. The wealthy merchant performed many of the functions of a banker. He accepted "deposits" by admitting into partnership those who had money to invest or by raising loans on bottomry; he made "advances" on bills of exchange or by allowing long credit. For these services he exacted payment in some form or other. It is true that the Church condemned usury. When outlets for investments became more abundant, however, ways and means were found to escape ecclesiastical censure. It was possible to contend that the lender had lost an opportunity of buying something he wanted while his money was in the hands of the borrower and so to ask for compensation; or it could be represented that the borrower had broken his contract to repay the loan at a fixed date and, therefore, ought to pay damages.<sup>1</sup> These were contingencies actually recognized by the Church and they opened the door for usury, for the lender's loss in one case, or the damage he

<sup>1</sup> These two cases were known to the Canon lawyers as *lucrum cessans* and *damnum emergens* respectively. For a full discussion of the subject see W. J. Ashley: *An Introduction to English Economic History and Theory*, Part I, Chapter III, and Part II, Chapter VI.

had suffered in the other, might be entirely fictitious. There might, indeed, be a collusive understanding between the parties that some such allegation would be made and not contested, and, consequently, the lender would be fairly sure of his "interest." Money-lending soon passed out of the hands of the Jews—whose operations did not come under the review of the Church—into those of the Italians. By the end of the thirteenth century Italian financiers were making large advances to kings, nobles, and even abbots, on security of their future income in the form of taxes or rents. It is said that there were eighty banking houses in Florence alone at that time.

Fairs offered the financiers opportunities for all kinds of business. In Champagne, Flanders, and, to a lesser degree, England, they dealt in such raw material as wool, and in luxuries which had to be conveyed great distances. They undertook the lucrative work of exchange, which the great diversity of coins made necessary. They introduced "fair bills," which eliminated the payment of debts in coin, and arranged for their cancellation one against another by a system of clearance. In the fairs, it has been said, goods and money ceased to be objects of consumption and became capital. A complicated system of speculation was based on them, which made it possible for an increasing volume of trade to be carried on. The fairs enabled the merchants to perfect the methods which they afterwards applied in the general development of foreign trade. They broke down medieval local isolation and prepared the way for the international trade rivalries of the sixteenth century. At first the commodities which entered into distant trade were few—usually luxuries which could bear heavy costs and were not bulky—but step by step other commodities were conveyed considerable distances as the means of transport and of conducting such transactions improved.

## SECTION 10

### THE ORGANIZATION OF COMMERCE

Once did she hold the gorgeous east in fee;  
And was the safeguard of the west. . . .

—WILLIAM WORDSWORTH:  
*On the Extinction of the Venetian Republic.*

CONFINED at first to the town and its region, commerce was gradually extended by growing markets and periodical fairs until it had found its appropriate trade routes. At conveniently situated points on these routes, centres developed which were able to undertake the organization of commerce on a large scale. The history of Venice is particularly significant. At first, as has been mentioned, a place of refuge in the lagoons, she, step by step, secured control of the Adriatic until she was strong enough in the crusading era to challenge the pre-eminence of Constantinople, and gain for herself privileges there and also concessions in the new Latin principalities; for the crusaders had to pay for the maritime assistance of Venice by granting her merchants quarters in such ports as Tyre and Acre. Throughout the Levant, indeed, emporia were established at the points to which the caravans from the East directed their courses, and thus the Venetians obtained supplies of spices, drugs, dyes, carpets, tapestries, etc., which they shipped home to distribute in the West. Thus Venice became the greatest entrepôt of the Middle Ages. Along land routes she had easy access to the valley of the Po on one side and to the basin of the Danube on the other; over the St. Gotthard Pass she reached the cities of the Rhine Valley and the great commercial centre of Bruges. The population of Venice was probably about 200,000 at the end of

the Middle Ages. At her zenith the city was extremely wealthy. She built her own ships, and either traded on her own account or hired them out to her merchants. The State exercised complete control over trade policy. From the fourteenth century, for instance, the Senate began to send cargoes by sea to Flanders, and, incidentally, some of the ships called at English ports.<sup>1</sup> By this means eastern products found their way to English fairs and markets until the decline of Venice in the sixteenth century.

No single town outside the Mediterranean occupied such a commanding position as Venice. There was a tendency, therefore, for commercial towns, as far as political allegiances would allow, to enter into a confederation to promote their interests. The most notable example is that of the union of German and Baltic towns, of which the chief were Hamburg and Lübeck, known as the Hanseatic League. Apparently their first purpose was to protect themselves from piracy, but they soon found that by acting together they could more easily negotiate for privileges with the several States. In the course of the Middle Ages they established centres so far apart as Bergen in Norway, Novgorod in Russia, Bruges in the Low Countries, and London. They thus controlled important trade routes and had groups of merchants settled at points of vantage for the carrying on of trade. They dealt in the products of Northern Europe, such as furs, tar, and salt fish, as well as flax, linen, iron ore, and other metals. From England they exported wool, cloth, and leather. Their method of organization was that each merchant traded separately within the rules of the League, on much the same basis as did the members of a local merchant guild. The privileges were a corporate possession gained by treaty with the municipality or government

<sup>1</sup> The first Venetian galley arrived at Antwerp in 1314.

concerned. So were the "factories," or settlements, where the League had warehouses, residences for the members, and other buildings. They won from the Crown in England concessions with respect to the payment of customs duties, of which the native merchants constantly complained. In London they had a factory called the Steelyard, which was governed by their own officials, the head, or alderman, being the chief representative of the members resident in England. Unlike other aliens, they were free to stay in the country as long as they wished, and they could sell retail as well as wholesale. The attitude of the English merchants towards them proves that the Easterlings—as they were generally called in this country—effectively invaded the markets which local trading interests would have monopolized if possible. But the League was so useful and powerful that the Crown did not wish to break with it.

The beginnings of organization among English merchants are obscure. As far as long-distance trade was concerned, they appear to have played a slight part until towards the end of the Middle Ages. The export of the chief native products, wool, wool-fells, and leather, involved relations with the Crown with regard to the duties charged on these commodities. To facilitate the collection of the taxes, staple ports were fixed through which the goods had to pass. These were sometimes a number of ports at home and sometimes a single port abroad—policy was frequently changing on this question—and there grew up a more or less definite body of merchants engaged in this staple trade. In the fourteenth century they were granted a charter, and henceforth they were a definite company whose officials supervised the privilege conferred upon it as the exporter of wool. The members traded on their own account but were required to observe the regulations of the company. As

long as the trade in the export of wool retained its importance, the Merchants of the Staple—as this first English trading company was called—constituted a great national company which included some of the wealthiest native merchants. Gradually, however, as the woollen industry developed, English merchants became interested in finding markets abroad for cloth. As early as the thirteenth century they won some concessions in the Low Countries, but these were not confined to any particular body of English merchants. In the fourteenth century the wealthy mercers of York had factors in Bruges, Middelburg, and other places abroad, and the London mercers secured a grant of privileges from the Count of Flanders. From some such beginning sprang the famous Fellowship of the Merchant Adventurers of England.

At first they seem to have been the recipients of privileges without actually being a company. But in the course of the fifteenth century the position became more definite. Henry IV gave a charter in 1407 to the English merchants dwelling in Holland, Zeeland, Brabant, and Flanders, but they were not specifically called Merchant Adventurers, nor were they organized as a company. Still they had a “governor beyond the sea” to safeguard their interests, an office which was filled in the latter part of the century by William Caxton, who had been apprenticed to a mercer in London. It is clear, therefore, that the English merchants who were exporting cloth—among whom the mercers were most prominent—were gaining recognition at home and abroad. In the reign of Henry VII their position becomes quite definite. He granted them a charter in 1505 under the terms of which they could elect a governor and twenty-four assistants and draw up regulations to control the trade. Writing a hundred years after this, John Wheeler, the secretary and historian of

the Company, says that it "consisteth of a great number of wealthy and well experimented merchants dwelling in diverse great cities, maritime towns, and other parts of the realm, to wit, in London, York, Norwich, Exeter, Ipswich, Newcastle, Hull, etc. These men of old time linked and bound themselves together in company for the exercise of merchandise and sea-fare, trading in cloth, kersey, etc. . . . by which they brought unto the places where they traded much wealth, benefit, and commodity, and for that cause have obtained many very excellent and singular privileges, rights, jurisdictions, exemptions, and immunities. . . ." It is true that the merchants outside London were apt to claim an independent origin and status, e.g. those of Newcastle, when they found that London interests were threatening to become dominant in the Company. This was perhaps the inevitable result of more definite organization in the early sixteenth century. At the outset these rivalries did not exist. Wheeler states very well the grounds on which concessions were given and thereby illustrates how merchants entered markets which, apart from such grants, would have been closed to them.

Although the activities of merchants had opened up trade routes, it must not be supposed that they were in favour of breaking down all restrictions. They wished to enjoy a monopoly wherever they could secure one. There were two stages. Native merchants resented the appearance of alien merchants in their country and wished to restrict them in every possible way. In England there were outbreaks against Italian merchants, and riots in London in 1456 and 1457 led the Venetian Senate to cut off relations with the citizens, ordering their merchants to withdraw to Winchester as a protest. The Merchant Adventurers had their difficulties in Bruges, and settled in Antwerp, a city which they helped to develop as a

rival to the older centre of trade. In the second stage rival bodies of merchants, endeavouring to secure advantages in another country, came into conflict. The export of cloth by English merchants was strongly resented by the Hanseatic League. A truce was arranged in 1473, by which Edward IV confirmed the privileges of the League in England provided that the English merchants were allowed to trade freely in its territories. The Crown, indeed, was fairly consistent during the Middle Ages in the policy of protecting alien merchants against the hostility of native merchants. Later, national considerations became stronger, and foreign trade was fostered and protected in the supposed interests of the country.



## SECTION 11

### INDUSTRIAL DEVELOPMENT

Within one room being large and long  
There stood two hundred looms full strong :  
Two hundred men the truth is so  
Wrought in these looms all in a row.

—THOMAS DELONY :

*The Pleasant History of John Winchcombe (1597)*

THE activities of merchants reacted on industry. At first they were mainly engaged in the exchange of raw materials which had to be conveyed great distances, such as the spices, drugs, and dyes of the East. But as they opened up trade routes and extended markets there arose demands for manufactured goods which were suitable for international trade. Merchants found that it was profitable to purchase them in one area and sell them in another. So it was to their interest to induce local producers to increase their output. The master craftsman, working with a few journeymen and apprentices, could only supply the needs of the immediate neighbourhood. He did not have the capital to make goods for a distant and more speculative market. The stimulus of international trade, however, gradually broke down the old gild system and substituted an organization which was more flexible. This was notably the case in the cloth industry. Cloth was a commodity which could be conveyed great distances without deterioration. There was a demand for it everywhere. Although it is true that some kind of coarse cloth was made in most places, the possibility of making the better qualities was limited to certain areas. Consequently there was an inherent tendency towards localization. It was also an industry which involved a succession of processes, some of them requiring

a high degree of skill. This made for division of occupations. Quite a simple differentiation, such as that of sorting the wool, carding or combing, spinning, weaving, fulling, dyeing, and finishing, created groups dependent on one another, and therefore calling for some kind of unifying control.

It is not surprising, therefore, that the first industry which produced for a wide market was the cloth industry. In Italy and the Low Countries the growth of commerce was accompanied by important industrial developments. In the twelfth century the merchants of Florence (*Arte di Calimala*), who imported unfinished cloth from Flanders and Northern France, employed large bodies of artisans in working it up and then sold the finished cloth in the Mediterranean markets. Their organization was based on the command of considerable capital and a system of credit. Another powerful corporation (*Arte della Lana*) which bought wool abroad was their rival, and ultimately became dominant in the cloth trade. It gave the wool out to spinners, the yarn to weavers, and the cloth to finishers, thus establishing a great industry in Florence and the surrounding country. It is said that Florence itself had three hundred workshops at the beginning of the fourteenth century, and that they turned out more than a hundred thousand pieces of cloth a year. This enterprise illustrates the tendency of the woollen industry towards capitalist organization in favourable circumstances. The merchants of Florence had, by the extent of their operations, converted the old gild method of production into a domestic system; that is, the craftsmen no longer worked on their own account to supply a local market, but accepted orders given them by the merchants who were both importers of the raw material and exporters of the finished article. The same tendency exhibited itself in the Low Countries. The cities of Flanders and Brabant

became the rivals of the Italians in the thirteenth century. In Bruges, Ghent, and Ypres the merchants engaged in foreign trade and promoted the production of cloth for distant markets by the same principle of giving out work to large bodies of craftsmen. The latter lost immediate contact with their customers; they produced for a wide market, and, while the employment may have been more continuous, they became entirely dependent on the merchant capitalist. Consequently the capital accumulated by merchants in both Italy and Flanders had the same reaction on industry; it reorganized production, causing the craftsman to approximate to a wage-earner.

In the thirteenth century there was no comparison between the English cloth industry and that of either Italy or Flanders. There was some amount of export of cloth; but the chief demand abroad was for English wool. This was already appreciated for its long staple. The idea of promoting the home industry by prohibiting the export of wool was entertained, as, for instance, by the Oxford Parliament of 1258; but this and subsequent attempts to do so seem to have met with little success. Evidence goes to show, indeed, that the cloth industry was decaying in the thirteenth century. The revival is usually associated with the immigration of skilled workers from the Low Countries towards the middle of the fourteenth century. Their influence on the making of certain classes of cloth is undoubted. Edward III issued letters of protection to individual immigrants, the first of which was that given in 1331 to John Kempe of Flanders, a weaver of woollen cloths. Kempe was evidently a man of some substance, for the letter covered his "men, servants, and apprentices." The aliens played an important part in developing the worsted industry in Norwich and the surrounding country, which soon became one of the most prosperous parts of England. The export trade was at first largely

in the hands of aliens, the members of the Hanseatic League in London and the Italian merchants who shipped woollens from Southampton being the most prominent. From obscure beginnings the control of the sale of cloth sent to London fell into the hands of the drapers. All cloth taken had to be exhibited in Blackwell Hall at prescribed times. From the end of the fourteenth century retail sale was the monopoly of the drapers themselves. The wealthier members of the Drapers' Company took part in the export trade, and contributed to the success of the Merchant Adventurers. There is no evidence, however, that they directly promoted the making of cloth. They always remained dealers in it; but since London was the market for the great cloth-producing areas of the western counties and of East Anglia and the Drapers' Company supervised the sales there, they exercised great influence over the industry. In the fifteenth century English cloth had won a definite ascendancy in the European markets. It became worth while actively to organize its production. This function was performed by the clothiers or clothworkers.

The term clothier covered persons of very different social standing. From the fourteenth century there is evidence that men with some capital were employing it to set craftsmen to work on wool which they had grown or bought. Some of them remained quite small dealers; others had considerable resources. Their ranks seem sometimes to have been recruited from the wealthy graziers, who had a large supply of wool and gave it out to local labour to work up through the successive stages until it was unfinished cloth, when they often sold it to the merchants. Sometimes they were recruited from the shearmen or cloth-finishers, who, in order to secure an ample supply of unfinished cloth, established control over all the prior processes. A Statute of 1464, which was

designed against the payment of wages in kind, seems to assume the whole woollen industry had passed into the domestic stage. Certainly the activity of the clothiers had undermined the gild system in the chief centres of the industry, and the craftsmen were dependent on the work given out to them. The distribution and collection of wool to and from the spinners, and of yarn to and from the weavers, were completely organized. Generally, the clothiers did not supply the necessary implements, and the workers remained in their homes. But there are indications that the greater clothiers established workplaces and equipped them with looms. Many of the details which have come down to us about John Winchcombe are no doubt legendary. But it is certain that he was a wealthy clothier, and Winchcombe kersies were well known. We are told that another clothier bought Malmesbury Abbey at the dissolution and filled it with looms. But this incipient "factory" movement did not develop. The clothiers found it more advantageous to continue the domestic or "putting-out" system. This form of organization superseded that of the gild and led to the decay of the woollen towns. For the clothiers would not tolerate the restrictions imposed by the institutions of corporate towns; they preferred to give out work in the countryside, where there were no regulations. Their labour was cheaper and not safeguarded against exploitation.

The cloth industry was exceptional. It was important because it employed more persons than any other industry, and its growth involved the breakdown of the gild system. Other industries maintained their medieval organization longer, but tended to follow the same course when they became suitable for capitalist control. Generally they were in this position when the market for their products extended beyond the bounds of the town. There were also a number of medieval industries which did not

develop the guild organization, for in their nature they could not be supervised within the limits of a town economy. Such were the various forms of mining. Coal miners, when they were not subject to forced labour, were paid wages—usually very low wages and sometimes in kind—by their employers. Iron miners were in a better position, partly because their work involved greater skill and partly because they enjoyed certain prescriptive rights in some districts.<sup>1</sup> Builders had to move from place to place, and were employed by master-builders, who paid them wages.<sup>2</sup> All that can be said of these workers is that there was a tendency for customs to arise in the respective industries which afforded them something of the protection that guilds gave to the artisans of the towns. Still they were mostly wage-earners engaged by those who had command of capital.

<sup>1</sup> E.g. in the Forest of Dean; compare also the customs of the lead mines in the Mendips, described by J. W. GOUGH: *The Mines of Mendip* (1930), Chapter IV.

<sup>2</sup> See the article on "Masons' Wages in Medieval England" in *Economic History: A Supplement of the Economic Journal*, January, 1930.

# PART III

## THE AGE OF TRANSITION

### SECTION 12

#### MARITIME DISCOVERY

"For out of Spaine they have discovered all the Indies and Seas Occidentall, and out of Portingall all the Indies and Seas Orientall; so that by this part of the Orient and Occident, they have compassed the world."—ROBERT THORNE, 1527.

THE advance of the Ottoman Turks in the Eastern Mediterranean during the fifteenth century threatened to cut off Western Europe from the supplies of Oriental goods which had for centuries been obtained by land carriage to the Levant. Constantinople, the great emporium of this trade, fell in 1453, and the Turks followed up their success by overrunning the Balkans. The Italian trading cities had done what they could to support the Christian communities in resisting the invaders; for obviously their commercial supremacy depended on keeping open the old routes. Venice attempted to come to terms with the Turks when she realized the irresistible force of their advance, but the arrangement was temporary, and she was soon involved in a series of wars which undermined her strength. The question arose whether there was a means of access to the Far East by which the countries of Western Europe could secure the commodities they required. Within fifty years of the fall of Constantinople this was answered in a way which was destined to change the whole course of commerce. Inspired by Prince Henry the Navigator, who was confident that India could be reached by sailing round Africa, the Portuguese in successive voyages pressed along

the coast until, in 1486, Bartholomew Diaz actually rounded the Cape of Good Hope. Twelve years later his fellow-countryman, Vasco da Gama, conducted a successful voyage from Lisbon to India, anchoring off Calicut on 20th May, 1498. Portugal had thus staked out her claim to "all the Indies and Seas Orientall." Meanwhile, Christopher Columbus, a Genoese sailor in the service of Castile, acting on the assumption that the world was round, sought India by sailing to the West and discovered the islands of the Antilles in 1492. These he conceived to be "Indies," but subsequent exploration was to prove that the great land mass of the two Americas interposed between Europe and the continent of Asia. Spain, however, clearly had the prior claim to whatever might be found in "all the Indies and Seas Occidental."

The centre of interest in maritime discovery in England was Bristol, where the merchants seem to have fitted out a voyage as early as 1480. Their two ships were driven back by stress of weather in the Atlantic. John Cabot, a Venetian by birth, sailed from the same port in 1494 and touched the mainland of America. He was given a licence by Henry VII in 1496 to take possession in the name of England of any land he might discover and was granted for himself and his sons the monopoly of trading in such territories. The details of the Cabot expeditions of 1497 and 1498 are not fully authenticated, but it is clear that England based on them some kind of claim to land in the North, and later considered that they constituted a beginning of an attempt to discover another route to the East. The idea became current that a way could be found round the Americas at the two extremities. In 1519, Ferdinand Magellan, a Portuguese sailor, demonstrated that there was a strait to the south by sailing through it and on to the Philippines, where he and some of his companions were killed in an encounter with the



natives. One of his ships continued the voyage and returned to Europe round the Cape of Good Hope, thus for the first time circumnavigating the globe. The English devoted their attention to the supposed northern passage. Robert Thorne, a merchant of London, who had lived in Seville, seems to have been the first to advocate this course in an appeal addressed to Henry VIII.<sup>1</sup> He pointed out that the Portuguese and Spaniards had found ways to the East by southern sea routes, though the North had obvious advantages, and that its exploration was an appropriate task for the English. In his opinion it would prove a shorter way to the East and one which would command the approaches to all parts of the world, for, he argued, the ships having passed "the Pole, it is plaine they may decline to what part they list." Besides, the voyages could be undertaken in periods of continuous daylight, which would eliminate the greater part of the risks. English merchants were likely to be influenced by such contentions because they would realize that a northern route was much more promising, so far as the sale of woollens was concerned, than one which passed through the Tropics.

In 1553, Richard Chancellor and Hugh Willoughby sailed from Harwich to attempt to reach the East by a north-east passage. They sailed north of Scandinavia and found their way to the White Sea. Willoughby and his companions perished in Lapland, but Chancellor arrived at Kholmogori (Archangel). The merchants who had financed this expedition petitioned for a charter so that they might organize further voyages. This was granted to them in 1555. They formed themselves into a joint-stock company—the first set up in England for the promotion of foreign trade—and made calls on the

<sup>1</sup> It is printed from Hakluyt's *Principal Navigations* in Tawney and Power; *Tudor Economic Documents*, ii, pages 19-23.

shareholders to provide the capital for new ventures. The original capital of £6,000 had increased to £33,600 by 1563. Although the charter conferred on the company a long title, which contained no reference to a particular area, the company was popularly known as the Muscovy Company. This was because Chancellor had secured concessions from the Czar of Russia, who was ready to welcome the English to Archangel because his country then had no port in the Baltic. Further attempts were made to press on to China, and in 1577 Stephen Burrough penetrated as far as the Strait of Waigatz, where his way was barred by ice. The company, therefore, concentrated attention on the possibilities of trade with Russia. It imported tallow, train-oil, furs, cordage, masts, and wax. These were not the commodities which it had been hoped would be obtained from the north-east passage. So the experiment was made of attempting an overland route from Archangel to India and China. That remarkable Elizabethan traveller, Anthony Jenkinson, undertook this enterprise. He went by way of the Dwina and the Volga as far as the Caspian Sea, and from there he journeyed to Bokhara in Turkestan, where he found great numbers of Indians and Chinese exchanging their goods in that important meeting-place of eastern merchants. The Muscovy Company used this route for some years with comparative success, but it was obviously a long and difficult one and did not afford a final solution of the problem of how eastern goods could be secured. Persistent efforts were made to find a north-west passage. Sir Humphrey Gilbert composed a notable discourse on the subject which was published in 1576. In the same year Martin Frobisher sailed on the first of his three voyages in search of the passage. His efforts aroused much public attention, and high hopes were entertained of the result. But no passage was found. His successors, John

Davis (1585-7), Henry Hudson (1610-11), and William Baffin (1616) were also unsuccessful, but the memory of their gallant endeavours is preserved in the names of the regions they explored.

Meanwhile attempts had been made to resume trade by way of the Mediterranean, for the traditions of the old indirect route to India remained strong. Francis I of France, during his struggle with the Emperor Charles V of Spain, had actually concluded a commercial treaty with the Turks. This was the beginning of the French trading influence in the Levant. The English also tried to gain a footing. In 1553 Anthony Jenkinson secured a grant of privileges from the Sultan for himself and his factors. But for one reason or another the English did little, if any, trade in the Mediterranean between 1550 and 1580. Then active steps were taken to renew it. Edward Osborne, a member of the Clothworkers' Company of London, sent agents overland to seek trading privileges in Turkey. When these had been obtained, Osborne petitioned for letters patent to confer a monopoly of the trade on him and those who were acting with him. This was the origin of the Turkey or Levant Company. Under its auspices the English re-entered the Mediterranean. In 1583 the merchants dispatched agents to explore the possibilities of the overland route to India. The leading members of the expedition were John Newberry, a merchant, and Ralph Fitch, who had, on a former occasion, penetrated as far as the Persian Gulf. They sailed from London in the *Tiger* to Tripoli in Syria.<sup>1</sup> Then they travelled to Baghdad and down to Ormuz on the Persian Gulf, where they were arrested by the Portuguese and sent under guard to Goa, their chief station in India. After a while they contrived to escape

<sup>1</sup> Cf. *Macbeth*, Act I, Scene 3: "Her husband's to Aleppo gone, master o' the *Tiger*."

and made for Agra, where they presented greetings from Queen Elizabeth to Akbar, the Great Mogul. Fitch continued his journey to Burma and Malacca. He returned home in 1591. His account of his travels is the first narrative written by an Englishman with first-hand knowledge of the East. His enterprise stimulated the London merchants to consider the possibilities of direct trade with India,<sup>1</sup> for it had become increasingly clear that the only practicable route was that round the Cape of Good Hope.

The English had already invaded the seas in which the Portuguese and Spaniards claimed exclusive rights owing to prior discovery confirmed by Papal grant. They had undertaken an ill-fated voyage to the Guinea Coast in 1553. The merchants who had financed this venture continued their efforts, and Queen Elizabeth herself invested in the project. Naturally, the Portuguese resented these attempts to establish trading connections with West Africa. The natives, however, welcomed the newcomers and assisted them by giving information about the movements of Portuguese galleys. But in 1562 John Hawkins aroused their opposition by seizing three hundred negroes and transporting them to the West Indies. His intention was to open trade with the Spanish settlements there by offering to supply them with slaves. The sugar planters were prepared to buy from him, but the Spanish government wished to preserve their colonies entirely for themselves. In 1567 Hawkins and Drake were attacked by superior forces at San Juan d'Ulua in Mexico, where they had put in to refit their ships, and suffered heavy losses. Feeling between England and Spain was greatly embittered. Raids were conducted against the Spanish Plate fleet and settlements in the New World. In

<sup>1</sup> He was present at a meeting in September, 1599, when a group of London merchants discussed the project of founding a company to trade with the East.

connection with these exploits Francis Drake circumnavigated the world in his famous voyage of 1577-80. Passing through the Straits of Magellan he found himself in the Pacific, where he was able to make surprise attacks on the Spanish towns up to the Gulf of California. Then he sailed on to the Philippines and the Spice Islands and home round the Cape of Good Hope. His ship carried the spoils of a piece of daring and successful buccaneering—gold, silver, silk, pearls, and precious stones. When Philip II of Spain asserted his claim to the throne of Portugal in 1580 and overthrew all opposition in the following year, the English felt that they were at liberty to treat Portuguese possessions in the same way as the Spanish. The Dutch anticipated them in the East by sending out four ships under the command of Houtman, who had served under the Portuguese. In this and subsequent voyages large quantities of spices were obtained, and the Dutch were in a position to control the European market in them. The Levant merchants in London were moved to action by the high prices which the Dutch charged. A group of them presented a long memorial to the Privy Council in which they stated the case for direct trade with the East. They subscribed a sum of £30,000 and sought recognition as a company. A charter was granted to them as the Governor and Company of Merchants of England trading into the East Indies on 31st December, 1600. Four ships set sail in April, 1601, for the Spice Islands under the command of James Lancaster.<sup>1</sup>

<sup>1</sup> See page 116.

## SECTION 13

### THE REVOLUTION IN PRICES

"But whoso loketh about hym shall fynde that evyn in Spayne, and in the great mart towne of Anwarp, all wares are dearer now by doble, and in most wares by trebyll pryyses, then they were xj or xij yeres past."—WILLIAM CHOLMELEY: *The Request and Suite of a True-Hearted Englishman* (1553).

WITH the increasing use of money in the later Middle Ages particular attention was paid to means of attracting to, and retaining in, the country as large a supply of the precious metals as possible. Laws were passed to encourage the importation of coin and bullion and to prevent exportation. In England, for instance, merchants were required in 1340 to give security that they would bring in 13s. 4d. for every sack of wool they sent abroad. Penalties for carrying the precious metals out of the country were severe, though, of course, it was very difficult to discover the offenders. This policy was based on practical considerations. A store of coin or bullion was obviously desirable in the event of a national emergency, because it could easily be exchanged for other things. Hence the frequent assertion that "treasure" constituted the "sinews of war." With the passing from payments in kind to payments in money, there was also a growing demand for currency as a convenience of trade. Contemporaries often confused these two objectives. They wanted a national accumulation in the nature of a hoard and also an active circulation of money. Both involved attracting and retaining the precious metals, but attraction would have quite a different effect on the level of prices from retention. This fact was overlooked. Great stress was laid on the importance of money as a medium of exchange, while its function as a standard of value

was imperfectly apprehended. Prices were remarkably stable in the Middle Ages. They were largely determined by custom or prescribed by law. The main problem seemed to be one of getting a sufficient currency to make money payments possible. So the changes that occurred were in the currency rather than in prices. In England the weight of the standard coin was steadily reduced. The silver penny weighed 22 grains troy in 1300; it was 18 grains in 1351, 15 grains in 1412, and 12 grains in 1464. The justification for such reductions in weight (with no change in fineness) was that experience proved that full-weighted coins disappeared from circulation. Since coins suffered from ordinary wear and tear, and also from the practice of sweating and clipping, they steadily became lighter. The withdrawing of light coins, accompanied by a general recoinage, was beyond the administrative resources of government. The practical course seemed to be to issue new coins of approximately the same weight as the average of those already in use. There was an increasing demand for money, and relatively small annual additions were made to the total stock of the precious metals by the output of mines. Consequently, the result of the reduction of weight—though this was not the deliberate intention—was that the available supplies of the precious metals were economized. The real appreciation of the value of gold and silver was not exhibited in prices, because smaller coins retained the names of their larger predecessors.

It was natural that the Spaniards should attempt to find in the New World the treasure which they had intended to seek in the East. Their efforts were rewarded by the conquest of Mexico and Peru, which secured for them abundant supplies of the precious metals, particularly of silver. It is estimated that between the discovery of America and 1546 the stock of the precious metals in

Europe was increased by about 50 per cent. Probably the annual production of the European mines had previously been offset by the loss on wear and tear. So a new factor was introduced—a considerable addition to the existing stock. This would not necessarily have an effect on prices. Assuming a previous shortage, and allowing for the growing requirements of trade, the additional supplies might well have been absorbed. But in 1545 the silver deposits of Potosi were accidentally discovered, and the subsequent output of the mines upset the balance of supply and demand. The stock of silver was possibly five times as great at the end as it had been at the beginning of the sixteenth century. When every allowance is made for the use of the metal in the arts and for the drain to the East, a fall in the value of silver in terms of other things was inevitable. Since European countries had a bimetallic standard this meant a fall in the purchasing power of money or, alternatively stated, a rise in prices. The effect would be felt as the new silver was distributed over Western Europe. If Spain could have followed the teaching of the time she would have retained it within her own boundaries. But she could not contrive to do so. She was not commercially self-sufficing and she lacked industrial initiative. Foreigners secured a firm hold of business in the Spanish fairs, and the profits they made stimulated enterprise elsewhere. Apart from this factor, under the rule of the Emperor Charles V and his son, Philip II, Spain was involved in wars, which meant that the hoard would have had to be broken into for the provisioning and payment of armies. In fact, the new treasure could not meet their requirements, and they had to borrow money from the great financial houses, such as that of the Fuggers of Augsburg, on security of the future production of the mines of Mexico and Peru. The silver therefore



passed on its arrival through Spain to the great commercial centres of France, the Low Countries, Germany, and Italy. In some cases it did not arrive; for all countries were, more or less, under the impression that the silver was worth getting for its own sake. The Spanish galleons were intercepted on the high seas by privateers of France, England, and Holland. For these reasons the distribution of the new silver over Western Europe was quickly effected. The consequences were soon felt. In France there was a rise of prices of between 100 and 200 per cent. In 1568 the great French political thinker, Jean Bodin, actually offered an explanation of this phenomenon by enunciating the quantity theory of money.<sup>1</sup>

The position in England was complicated by the debasement of the coinage initiated by Henry VIII in 1543. Hitherto the fineness of English coins had not been tampered with, changes being confined to reductions in weight. The standard fineness of silver was 11 oz. 2 dwt. silver, and 18 dwt. alloy. This was changed to 10 oz. silver and 2 oz. alloy in 1543, to 6 oz. silver and 6 oz. alloy in 1544, and to 4 oz. silver and 8 oz. alloy in 1545. Half-hearted attempts were made in the reigns of Edward VI and Mary to restore the coinage, but nothing effective was done until Elizabeth undertook the great recoinage of 1560. The debasement was certainly accompanied by a rise in prices. This may have been in part due to the fact that the Crown was able to issue an unusual quantity of coins. Possibly a more serious consequence was that the debasement encouraged counterfeiters at home and abroad to put coins into circulation. The attempts of Edward VI and Mary to distinguish between good and base coins made matters worse, for since the holders of base coins were intended to bear the loss when

<sup>1</sup> In his *Réponse aux paradoxes de M. de Malestroit touchant l'enchérissement de toutes les choses et des monnaies.*

they were "cried" down, they would naturally try to pass them on to the best advantage to themselves. Then there was the question of the foreign exchanges. Even if the debased coins had been accepted at home without demur, their value abroad would be revealed in the prices which would have to be paid for imported goods. It is not surprising, therefore, that the author<sup>1</sup> of *A Discourse of the Common Weal of this Realm of England* (written about 1549), who was a well-informed and intelligent observer, should have expressed the opinion that the chief cause of the rise in prices was "the basinge or rather corruptinge of oure coine and treasure, wherebie we haue devised a waie for the straungers not onlie to bie oure gould and silver for brasse, and not onlie to exhauste this Realme of treasure, but also to bie our chiefe commodities in manor for nothings." Whatever the effects of the debasement may have been, the recoinage of Elizabeth, which restored the old standard of fineness, ought to have eliminated them. But, as a matter of fact, prices did not return to the old level. The most plausible explanation of this seems to be that while the debasement, as the author of the *Discourse* suggests, caused gold and silver to go abroad, the recoinage opened up a way for its return. England then began to feel the effects of the influx of silver from the New World. When the *Discourse* was first printed in 1581 by W.S.<sup>2</sup> he interpolated a passage in which he ascribes the rise in prices to "the infinite sums of gold and silver, whych are gathered from the Indies and other countries, and so yearely transported vnto these costes."

Complaints of the rise in prices may be found in the preambles to statutes, in pamphlets, and in sermons,

<sup>1</sup> The authorship is usually ascribed to John Hales, but this is purely conjectural.

<sup>2</sup> Also unknown. W.S. was long supposed to be William Stafford; he was probably William Smith, nephew of Sir Thomas Smith.

and scapegoats were made of landlords, exchangers, usurers, monopolists, and others. A real understanding of the consequences of a change in price level could hardly be expected at the time. The functions of money were not fully apprehended. There were reasons enough—such as the dissolution of the monasteries, wars on the Continent, and heavy taxation—to which men who had strong prejudices could ascribe the causes of distress. A rise in the price level has no social consequences if it is uniform over the whole field of monetary transactions. That would merely mean multiplying all existing prices by the same figure. Some prices, however, are a matter of contract. It is assumed that the real value of money will remain constant, and agreements to pay a certain sum in the future are based on that assumption. In the sixteenth century such agreements applied mostly to the payment of rents on land. With the rise in prices the burden of paying the covenanted rent became progressively lighter. In so far as landlords could not revise their rents they stood to lose. When they had an opportunity to make a new agreement with a tenant they drove a hard bargain, partly to compensate themselves for previous loss, and partly to cover the shrinkage of their income from rents paid by other tenants whose agreements had not terminated. The Primer or Book of Private Prayer of Edward VI (1553) has a special prayer for landlords: "We heartily pray thee, to send thy Holy spirit into the hearts of them that possess the grounds, pastures, and dwelling places of the earth, that they, remembering themselves to be thy tenants, may not rack and stretch out the rents of their houses and lands, nor yet take unreasonable fines and incomes after the manner of covetous wordlings, but so let them out to others, that the inhabitants thereof may be both able to pay the rents, and also honestly to live. . . ." Those who were

living on fixed income from office or on interest from loans—not a large class in the sixteenth century—would have no opportunity of making good their losses. Artisans and labourers receiving wages would find that prices went up more rapidly than wages, and, consequently, would suffer a fall in their standard of life. In 1563, under the terms of the Statute of Artificers (5 Eliz. cap. IV), provision was made for the public assessment of wages according to “the plenty or scarcity of the time.” This imposed on the local magistrates the obligation to adjust wages to what we would call the cost of living. The adjustment was annual and at the discretion of a class which, to say the least, would not be likely to have a presumption in favour of the artisans and labourers in fixing what were legally enforceable *maximum* rates.

## SECTION 14

### AGRICULTURE

Sheepe haue eate vp our medows and our downes,  
Our corne, our wood, whole villages and townes!

—THOMAS BASTARD (1598).

MEDIEVAL farming followed traditional methods; the basis of its organization was that of a community primarily concerned with its own subsistence. Production for a market was exceptional. From the fourteenth century, however, it became more usual for surpluses to be sold in the growing towns, and some centres, such as London in this country, exercised a real influence on an ever-widening area by their demand for supplies. When labour services were commuted the lords often let their demesne lands to farmers, who made what profit they could by selling their produce. Subsistence farming gradually gave place to capitalist enterprise. The process was slow because the movement encountered many obstacles. In a period of change the opposition between social and economic considerations is peculiarly marked in agriculture. Land may be used for different purposes. The simplest form of alternative uses is that between pasture and arable. Friction apart, the area under grass and cereals will vary in accordance with the relative strength of the demand for grazing and arable land. But these two main uses of land require different amounts of labour for a given area. If arable gives place to pasture there is less employment. Where arable cultivation is traditional the consequences are bound to be serious. For the structure of the rural community has been fashioned to the needs of tillage; there is a degree of co-operation between the cultivators which expresses itself in

inter-relationships based on tenure and service.<sup>1</sup> It is obvious, therefore, that any movement in the direction of the conversion of arable to pasture would involve social as well as economic effects. Consequently, there was such a strong presumption against change that it acted as a restriction on individual initiative. Still, when it became more profitable to rear stock than to raise crops, a powerful economic motive came into play. Traditional usage was challenged. Custom was declared to be irksome, and means were sought to evade or destroy it. In the sixteenth century there are indications of the breakdown of medieval methods in most countries of Western Europe. England, however, illustrates the movement most completely. Here a crisis arose which engaged the attention of contemporary writers and called for the intervention of the State.

There was general agreement that the social evils of the day—the eviction of peasants from their holdings, the depopulation of the countryside, the increase in vagabondage, and outbreak of disorders and riots—were to be ascribed to “the decay of tillage.” The cause of the conversion of arable to pasture was the spread of sheep-farming. “Your shepe that were wont to be meke and tame, and so smal eaters, now, as I heare saye, be become so great devowerers and so wylde, that they eate up and swallow downe the very men them selves. They consume, destroye, and devoure whole fieldes, howses, and cities.”<sup>2</sup> This complaint of Sir Thomas More is echoed in pamphlets, sermons, and preambles to Acts of Parliament throughout the sixteenth century.<sup>3</sup> It was the profit to be gained from flocks of sheep that induced

<sup>1</sup> The field system of the medieval manor is an excellent example; see page 44.

<sup>2</sup> More's *Utopia*, Part I (written in 1516).

<sup>3</sup> Cf. Protector Somerset's Proclamation of 1548, which alleged that “houses were decayed, parishes diminished, the force of the realm weakened, and Christian people eaten up and devoured of brute beasts and driven from their houses by sheep and cattle.”

the landlords to resort to grazing on a hitherto unprecedented scale. The labour costs were comparatively low, for a shepherd and his dog could look after a great number of sheep. Since there was a strong demand for wool at home and abroad, the price of wool was well maintained. The growing of cereals, however, required more labour. Prices were not good in comparison with what could be got for wool. Good harvests meant low prices, and if there was a poor harvest export of corn was forbidden in the interests of the home consumers when the price reached a certain point. The author of *A Discourse of the Common Weal of this Realm of England* (1549) declared that the problem was how to make the profits of tillage as high as those of grazing. He suggested that corn should enjoy freedom of export at all ranges of price, or, alternatively, that the export of wool should be restricted when it reached a given figure. Sixteenth-century opinion would not contemplate the freedom of trade involved in the first suggestion. Nor would it of necessity have secured that balance between arable and pasture which was thought desirable. The stabilization of conditions could only be attained, if indeed it could be attained at all, by some form of regulation. The Tudor governments were never slow to intervene by means of legislation. On the ground that "greedy and covetous people" accumulated land to use it in pasture and not in tillage, because of "the great profit that cometh of sheep," it was enacted that after Michaelmas, 1535, no person should have "above the number of 2,000 sheep at one time"; the penalty being a fine of 3s. 4d. for every sheep beyond the number fixed, half the fine to go to the Crown and half to the informer.<sup>1</sup> Thomas Cromwell assured Henry VIII that this was "the most profitable and the most benefycyall thing that ever was done to this the

<sup>1</sup> 25 Hen. VIII, c. 13.

commonwealthe of your realm." Still the complaints of sheep-farming and its consequences continued. The landlords were intolerant of restraint. In a world of rising prices they naturally snatched every opportunity of augmenting their income. Their position was strengthened and their numbers increased by the secularization of Church property which followed the dissolution of the monasteries.

Conversion of arable to pasture practically always necessitated enclosure. Where the three-field system was dominant, as in the English Midlands, the extension of sheep-farming was impossible without interfering with the old method of cultivation. Either the strips in the open field were thrown together to form sheep runs, or the common pasture was overstocked with sheep, and the tenants' rights of common became so limited that they could not maintain their ploughs. Decay of tillage was the result. It seemed, therefore, that one way to avert the evils of sheep-farming was to forbid enclosure. Legislation on this question goes back to 1489, when "laying down to pasture, lands which customably have been used in tilth" was condemned. Subsequent statutes were based on this precedent, and commissioners were appointed from time to time to inquire whether the law had been duly observed. So attention was concentrated on the enclosure movement, and interest has continued to centre round it. It is important, however, to remember that this movement, set definitely in motion in the second part of the fifteenth century, passed through many phases, and cannot be said to have reached its completion until the early nineteenth century. In its broadest sense, enclosure means the steps by which the open fields, with their complexity of intermingled personal claims, gave place to the compact holdings which exist to-day. It is the obliteration of the old village community. It is the redrawing of the



village map on purely individualist lines. It is the abandonment of old methods for new. There was a two-fold enclosure movement going on even in the sixteenth century. While it is no doubt true, as Leland said at the time, that "always the most part of enclosures be for pasturages," the open-field system was suffering modification in the interests of improved cultivation of arable. Contemporary writers on agriculture, such as Fitzherbert and Tusser, fully recognized the wastefulness of the scattering of the strips of cultivators in the open fields. Records of particular manors reveal the fact that tenants were engaged in consolidating their holdings. Since this did not usually involve conversion to pasture, the movement did not incur condemnation. The distress of the rural population in the sixteenth century was due to enclosure, followed by conversion from arable to pasture. Contemporaries were inclined to exaggerate the extent of enclosure. Some parts of the country—the North, the West, and the South-West—were but slightly affected. In the Midlands, particularly in the counties of Northampton, Leicester, Warwick, Oxford, and Buckingham, the movement was most acutely felt. Even here the amount of land enclosed was a small fraction of the whole—less than 9 per cent of the total area—but it was a region of the three-field system, and consequently enclosure meant a maximum of disturbance of existing conditions. The crisis, which seems to have been at its worst towards the end of the second and of the fourth decades of the sixteenth century, should be distinguished from the continuous process of enclosure.

Robert Cecil is reported to have said in the House of Commons, in 1601, that "whosoever doth not maintain the plough destroys this kingdom."<sup>1</sup> That expressed very

<sup>1</sup> Quoted from *D'Ewes Journal* in Bland, Brown, and Tawney: *English Economic History: Select Documents*, page 274.

well the attitude of contemporaries. The decay of tillage meant depopulation, which was another name for unemployment. It presented the government with a problem of great complexity. The evicted families wandered about the countryside, and there was constant danger of disorder. Attempts to prevent the difficulty from arising by limiting the number of sheep, or by forbidding enclosure, were doomed to failure. In one way or another the landlords attained their purpose. Their tenants were largely copyholders,<sup>1</sup> with the nature of their tenure defined by custom of the manor. If they held for a term of years, or for three lives,<sup>2</sup> the opportunity of offering them the option of an onerous lease or eviction would come round in due course. If they had a copyhold of inheritance, in which the heir had the right to succeed the tenant on the payment of a fine, much would depend on whether the fine was fixed or uncertain. When it was uncertain the lord of the manor could demand an excessive fine, and so force the copyholder to surrender his holding. Complaints of this practice were constantly made in the sixteenth century. The tenants who took part in the Pilgrimage of Grace (1536) asked that the *gressum* (fine) should in future be equivalent to two years' rent. One of the demands of the rebels, who rose under the leadership of Robert Ket in Norfolk (1549), was that copyhold land should be charged with "an easy fine." The custom of the arbitrary fine was much more common than that of the fixed fine. In the past it had not been abused. But now that prices were rising and more profitable use of the land was possible, landlords pressed their rights to their own advantage. The result was eviction. The victims retaliated from time to time by pulling down enclosures, by threatening those who

<sup>1</sup> See pages 48-49.

<sup>2</sup> That is, as long as one of three particular persons then living survived.

took leases on new conditions, and by the driving of sheep and the mutilation of cattle. The Tudors had no standing army, and viewed with alarm local disorder which was likely to develop into a serious rising. Ket's Rebellion, for instance, started with the breaking down of enclosures, and rapidly assumed such proportions in the summer of 1549 that it had to be suppressed with the assistance of foreign mercenaries. Step by step the government found means of dealing with the problem of vagrancy. At first the policy was repression. The sturdy beggars—in modern terms the able-bodied destitutes—were whipped and sent back to their native places. This was discovered to be futile. In 1536 a beginning was made in the direction of finding work by placing the obligation on the parish of giving their unemployed paid tasks. But little could be done so long as the parish depended on voluntary contributions. In 1563 the method of compulsory assessment was adopted in cases where persons refused to give; and in 1572 compulsory assessment of all property owners definitely took the place of the voluntary method. The parishes now had a source of revenue, and were required to spend it (*a*) in relieving the aged and impotent; (*b*) in apprenticing poor children; and (*c*) in setting the able-bodied to work. So the agrarian problem of the sixteenth century had led to the elaboration of a complete poor law system.

## SECTION 15

### INDUSTRY

"While men were contented with such things as were made within the market towns next unto them, then were they of our towns and Cities well set awork. Now the poorest young man in a country cannot be contented with a leather girdle, or leather points, gloves, knives, or daggers made nigh home."—*A Discourse of the Common Weal of this Realm of England* (1549).

THE economic forces which were breaking up the traditional methods of agriculture exercised an even greater effect on the towns. During the Middle Ages industry had been regulated by the guilds on a strictly local basis, the unit being the town under the authority of which the ordinances of the guilds had actually been made operative. Changes in the structure of industry were therefore bound to have a considerable influence on town institutions. Attention has already been drawn to the fact that the woollen industry was in the fifteenth century spreading beyond the confines of the towns.<sup>1</sup> This movement had made such progress by the middle of the sixteenth century that there were insistent complaints about the decay of towns. Enterprising merchants found it profitable to challenge the monopoly so long enjoyed by the craft guilds. Competition, which had been practically unknown except at the periodical fairs, threatened to become the normal condition. The vested interests naturally protested. They were able to point to the distress among the craftsmen and to exploit the prejudice against "foreign" goods. The Company of Cappers in Chester declared in 1525 that they were "in grete decaye" because the mercers of the city were selling caps made in London and elsewhere retail. To safeguard

<sup>1</sup> See page 71.

their position the mayor was authorized to forbid the sale of "foreign" caps at or below a certain fixed price; mercers convicted of doing so were to pay a fine of 40s. for each offence, half of which was to go to the stewards of the cappers' company and half to the treasurers of the city.<sup>1</sup> This is a good example of a city corporation intervening to maintain existing conditions. Tudor Governments in this, as in other directions, were ready to follow the lead of the towns. The City of Worcester and the towns of Evesham, Droitwich, Kidderminster, and Bromsgrove complained in 1534 that they were suffering from the competition of the neighbouring "hamelettes, thorpes, and villages" in which the woollen industry was carried on. A statute was passed to prevent anyone in the county of Worcester making or causing to be made any kind of woollen cloth for sale unless he lived within the limits of the towns mentioned.<sup>2</sup>

Attempts to prevent the transition from a town economy, with its virtual monopoly, to a nation economy, in which each locality could concentrate on the activities for which it was best suited, were defeated by the force of circumstances. Legislation in favour of the towns shared the same fate as that which was directed to the maintenance of tillage. But contemporaries did not recognize the inevitability of change. They considered themselves as eminently practical when they passed laws to preserve the *status quo*. A General Act of 1554 to remedy the decay of corporate towns is justified on the grounds that only prosperous towns can pay their accustomed taxes and other charges, and also supply "greate numbers of good able persons . . . mete for the Warres." It was therefore enacted that inhabitants of the countryside were not to offer woollen cloth, linen cloth,

<sup>1</sup> Tawney and Power: *Tudor Economic Documents*, i, page 109.

<sup>2</sup> 25 Hen. VIII, c. 18.

haberdashery, etc., for sale retail in any city, borough, corporate or market town, except at times of open fairs.<sup>1</sup> This was followed in the next year by "An Acte touching Weavers," which was an attempt to safeguard the towns against the "unfair" competition of the country in the making of woollens. No person dwelling outside a city, borough, corporate or market town was to have in his possession more than one loom. An exception was made of a skilled weaver, who might have two looms; but no one was to be recognized in future as coming within this category unless he had served a seven years' apprenticeship to the craft. Such a weaver was not to have more than two apprentices at a time.<sup>2</sup> These limitations, if they could have been enforced, would have deprived workers in the country of the advantages which enabled them to undersell the craftsmen who were under gild regulations in the towns. Whether this legislation was conceived in the interests of the craftsmen themselves, or—as seems more probable—of the clothiers who employed them, it merely represents a phase in industrial development. General national progress in the sixteenth century was bringing town into competition with town and the countryside with the towns. Local markets were, to an increasing degree, invaded by commodities from distant areas which enjoyed some advantage in production. Perhaps this was particularly so in dress; for the growing wealth of the community was notably expressed in this direction. *A Discourse of the Common Weal of this Realm of England* states that "no gentleman can be content to have either cap, coat, doublet, hose, or shirt made in his country (i.e. neighbourhood), but they must have their gear from London; and yet many things thereof are not there made, but beyond the sea, whereby

<sup>1</sup> 1 and 2 Philip and Mary, c. 7.

<sup>2</sup> 2 and 3 Philip and Mary, c. 11.

the artificers of our townes are idle." Five statutes were passed between 1511 and 1570 to attempt to mitigate the evils which arose from the new fashion of wearing felt hats made in London or imported from abroad. The opportunities for merchants were such that a contemporary declares that "London is now in condition that all the people therein are merchunts; so as no man therin can life with bodily weke to gete his mete, but universally stodieth daily how to gete lyvyng oon from another in wey of bying and sellyng, covetous and falsehode ever workyng oon to begile another." Robbed of its moral strictures, this reveals a community aware of, and anxious to exploit, its advantages in an active and extending market.

In such circumstances the gilds were necessarily suffering disintegration. As long as the town economy prevailed, the master craftsman worked by the side of his journeyman and apprentices. When it broke down he was tempted to devote all his attention to the market for his product; and, if he was successful, he became a merchant. So there arose within the gilds a wealthy class who, step by step, arrogated to themselves the position of control, while other craftsmen became increasingly dependent on the work given them to do by this class. Hence, the distinction between the livery and the yeomanry. The gild was dominated by the wealthy, who wore the full livery, while the general body of craftsmen or yeomen were small masters working on commissions under the domestic system. A vivid picture is painted by a contemporary of the consequences of these changes in London. He describes the operations of the haberdashers, a company of merchants dealing in a great variety of small wares: ". . . pore handy craft peple, which that wer wont to kepe shoppes and servaunts, and hadd labour and levyng by making pyns, poynts, girdells,

glovis, and all such other thyngs necessary for comen peple, hadd therof sale and profits daily, unto thirty yere agoo a sorte beganne to occupie to bye and selle alle soche handycraft wares, callid haburdashers . . . that a fourty yere agoo was not four or five shopes in London, wher now every stret is full of theym; which sellith all fantasies and trifell, in distroyeng all handy craft, wherby many riche men is reson upon that distruction of the pore peple. Which . . . pore peple . . . not able to kepe no howsis nor shops, but in allis sittying in a pore chamber, workyng all the weke to sell his ware, on the Saturday brought it to the haburdashers to sell . . . which wold not giff theym so moche wynnynge for theyr wares to fynde theyr mete and drynk, saying, they hadd to nede thereof, ther shopps lay storydd full of byend see." <sup>1</sup> The craftsmen had thus become out-workers whose only hope to sell their goods was to induce the haberdashers to buy them. But the haberdashers were able to secure supplies from the Continent either at a cheaper rate or of a kind which appealed to the whims of their customers. The guild organization offered no protection against developments such as these. It is true that the haberdashers were purely merchants and had no traditional obligations towards the craftsmen who made the articles they sold. It was otherwise with such companies as the Clothworkers' Company of London, which included both merchants and craftsmen. They made some attempt to reconcile the interests of the two classes. The records of the Clothworkers' Company show that they summoned "the whole company of the handycraftsmen" to hear and approve of the regulations the livery proposed to apply to the conduct of the industry. There was also agreement in favour of limiting the number of apprentices to two, a policy which was advocated by the small

<sup>1</sup> G. Unwin: *The Guilds and Companies of London*, page 249.



masters to protect themselves against the competition of larger employers. In other London companies, however, the yeomanry made constant complaints against the livery.

Tudor governments were primarily concerned with the problem of maintaining order. This usually meant the adoption of a conservative policy. Decay of tillage was to be prevented because it involved depopulation of the countryside. The rights of the towns were to be safeguarded because they ensured the regulation of industry. But after the middle of the century it became clear that statutes against enclosures and attempts to protect the towns were only piecemeal endeavours to deal with the question of national stability. A comprehensive scheme was advanced in the Statute of Artificers.<sup>1</sup> It is significant that Parliament here undertook to treat as national questions such problems as the distribution of the working population over different occupations, the regularization of employment, the hours of labour, the rate of wages, and apprenticeship. Every person between the age of 12 and 60 was to "be compelled to be retyened to serve in husbandrye by the yere," unless he was engaged in one of a list of occupations enumerated. This broadly distinguished between agricultural labourers and craftsmen. They were all to be engaged for at least one year and could not leave or be dismissed within that period. At the end of the year a certificate was necessary to leave the district; a person found without such a certificate was to be imprisoned for twenty-one days, and if he could not get a certificate within that time he was "to be whipped and used as a vagabunde." The hours of labour were defined as from 5 a.m. to 8 p.m. with a maximum of 2½ hours for meals, from March to September; and from daybreak to nightfall from September to March. Wages

<sup>1</sup> 5 Eliz., c. 4.

were to be assessed by the local justices of the peace annually. The penalty for paying wages above the rate fixed was ten days' imprisonment and a fine of £5, and for receiving them twenty-one days' imprisonment. The London rule of seven years' apprenticeship was made universal for all crafts. Any master having three apprentices was required to have one journeyman for every additional apprentice he took. This statute was not repealed until the nineteenth century, and from time to time some sections of it were strictly enforced; but it is quite obvious that the Government did not have the machinery to compel obedience to all its requirements. The significance of the statute lies in what it attempted to do rather than in what it achieved. It shows that in the face of the collapse of medieval institutions the Government tried to impose order by means of a national industrial code.

## SECTION 16

### PATENTS OF MONOPOLY

“Forasmuch as such profitable inventions are not at once and at the first brought to their full perfection, we hold it fit in justice and honour to give all encouragement to such our loving subjects as shall employ their travails, industries, and purses to the furthering of the common good, and to reward them to the full with the fruits of their own labours. . . .”—*The Grant of a Monopoly for the Manufacture of Soap* (1623).

THE social legislation of the sixteenth century was largely directed to preventing the new economic forces from breaking up a relatively stable form of society. It has been described as a series of vain attempts by the England of the past to construct barriers against the England of the future. The notion that if economic principles were given free play a new order would spontaneously arise out of the ruin of the old did not occur to contemporaries. In fact, they were not moved by general principles of any kind. Specific abuses seemed to call for definite remedies. Whatever consistency can be found in their attitude to social questions must be traced to instinctive reactions rather than to an intelligent understanding of the problems involved. Historians often ascribe such reactions to a clearly conceived policy and thereby over-simplify the course of events. When legislation was passed to maintain tillage, or to protect some local monopoly, it merely exhibited the strength of the presumption in favour of traditional methods and practices. The threatened changes were to be directly countered. But it soon became obvious that something more positive was necessary. In the Statute of Artificers an attempt was actually made to define a comprehensive national policy. It summed up much previous legislation in a code which was distinctly conservative. Its authors no doubt intended to impose

order in a world which was suffering from bewildering changes. Every clause reveals a deep-rooted faith in regulation. This was the one principle to which governments clung for the subsequent two centuries. The forms which regulation took were again and again assailed. Some of them were abandoned. But the belief that it was necessary to control the economic activities of the community survived. The issues are clearly brought out in the controversy regarding monopolies. In its origin, a patent of monopoly was a special privilege granted by the Crown to a person or body of persons to protect a new invention or a new process against competition for a specified number of years. Such a grant, however, could be made to serve a number of purposes. The opprobrium which came to be attached to the very name of monopoly was due to the fact that, while some of these purposes were quite legitimate, others were abuses of the system.

A patent could be granted to strengthen what was already a virtual monopoly or to safeguard it against potential or actual competition. Grants of this kind would preserve the *status quo*, or at least attempt to do so. They were similar in design to such legislation as that which confirmed the monopoly of the cloth industry in Worcestershire to the towns which had previously enjoyed it.<sup>1</sup> A good example is the grant of incorporation as a guild to the hostmen of Newcastle. This group of burgesses had already acquired control of the coal trade. In 1590 the Lord Mayor of London was complaining that the hostmen had "reduced into their handes all the colemynes" and were so restricting the output "for their priuatt gaine" that prices were enhanced. To ward off the attack, proposals were made to Queen Elizabeth that the position of the hostmen should be recognized in return for a payment of 12d. for every chaldron of coal

<sup>1</sup> See page 95.

shipped from Newcastle. The guild was incorporated in 1602, and henceforth, under the terms of its patent, had legal protection against competition. In this case there was no question of a special invention or process; other producers were quite prepared to export coal from the Tyne, had they been permitted to do so. The privileges of the hostmen were based on a bargain between a powerful group of mine-owners and the Crown. Consumers complained of the prices exacted and of the poor quality of much coal that was put on the market. Still the monopoly survived until the middle of the seventeenth century. It is true that the export of coal from the chief source of production at that time was controlled by this means; but it would be difficult to show that this control was exercised in the public interest. The fact that the hostmen had contrived to get the coal trade into their own hands was taken as giving them a vested interest which ought to be defended. Since the Crown secured a regular revenue which was easy to assess and collect, the arrangement was long attacked in vain by its critics.

This kind of monopoly differed in important respects from one which conferred protection against competition for a time, in order to encourage the introduction of a new invention or process. The object in this case would not be to safeguard an existing interest, but to foster some innovation which was considered to be beneficial to the country. In the second half of the sixteenth century the idea that the nation ought to be as independent as possible of foreign supplies took firm root. The danger of attack by the Catholic Powers of Europe stimulated efforts to find deposits of metals for the making of munitions. Germans with the necessary knowledge of metallurgy were induced to search for copper and other metals. In 1565 Daniel Hochstetter and others, who had been prospecting in Cumberland, reported that there was so much

copper there that it was desirable to get between 300 and 400 miners from the Continent to work it.<sup>1</sup> The Germans were operating under a special licence, which covered eight English counties and the principality of Wales. In 1568 the venture was put on a firmer basis by the incorporation of a joint-stock company, called the Mines Royal, to raise the capital required to exploit the monopoly. There were twenty-four shares, ten held in Germany and fourteen in England. As joint-stock was then organized, the number of shares was limited (though they might be divided into fractions) and an indefinite number of "calls" might be made on the holders of the shares. Incorporation secured the introduction of investors prepared to advance money, provided they were allowed to share in the profits of the monopoly. Hence, the grant of monopoly could be justified on two grounds. The enterprise was initiated under its stimulus, and capital was attracted because the patent of monopoly both promised chances of gain and was some insurance against loss.

The danger was that the Crown would make grants of monopoly with its fiscal interest in view. Elizabeth, towards the end of her reign, gave monopolies in a great variety of commodities to courtiers, in order to reward them for their services, for the monopolies enabled them to place a charge on the public. Essex, for instance, held a monopoly of the sale of sweet wines. The court of James I was crowded with suitors who scrambled for such favours. Naturally, therefore, an outcry arose against monopolies, and the opposition tended to include all monopolies in the same condemnation. The controversy has a two-fold interest. There was the constitutional question of the royal prerogative. Elizabeth insisted that she had the right to make grants without submitting

<sup>1</sup> Tawney and Power: *Tudor Economic Documents*, i, pages 240-41.

them to the review of either the House of Commons or the Courts. When she recognized that the feeling against monopolies was strong, she withdrew some of the more objectionable. The question of the prerogative was thus evaded. Her successor, James I, tried to raise additional revenue by means of monopolies, particularly between the dissolution of the Parliament of 1614 and the assembling of that of 1621. When Parliament met the procedure of impeachment was revived as a means of bringing home the responsibility for making grants to the King's ministers. The Lord Keeper, Francis Bacon, who was held responsible for sealing the patents, was dismissed from office and heavily fined. In the next Parliament an attempt was made to reduce the whole matter of patents of monopoly within the limits of statute law. The Statute of Monopolies (1624) did not finally settle the question. While it laid down the general principle that "all monopolies, commissions, grants, licences . . . granted to persons or bodies for the sole buying, making, working, or using of anything . . . are altogether contrary to the laws of the realm and so are utterly void and of none effect," important exceptions were introduced. Provisions had to be made for grants already made, or in future to be made, to "the first and true inventor" of a new manufacture. Those in existence were limited to twenty-one years, and future grants were to be for fourteen years only.<sup>1</sup> But the wider exceptions were those made in favour of existing rights enjoyed by cities and boroughs, companies and guilds, fellowships and societies; in fact by all the organizations by means of which control was exercised over a great variety of economic activities. During the years in which Charles I attempted to rule without resort to Parliament (1629-40) monopolies were exploited to the full by the simple device of granting them to companies incorporated for the

<sup>1</sup> This clause is the basis of the law with respect to patents.

purpose. For instance, the patent for soap was transferred to a company, called the Soap-makers of Westminster, in 1631. They engaged to produce 5,000 tons a year and to pay the King £4 a ton. Importation of soap was forbidden in the interests of the company, and all infringements of its monopoly were severely punished. Retailers were forbidden by proclamation to buy or sell any soap except that obtained from the company. When Charles I was compelled by circumstances to call a Parliament he withdrew a great number of the patents of monopoly. The Long Parliament then took steps which removed the danger of the Crown using internal monopolies for its own ends.

There is no doubt that the long contest against the abuses of patents of monopoly contributed to form a body of opinion hostile to regulation. An agitation which began as a protest against definite grievances of high prices and poor quality insensibly developed into an assertion of the principle of economic liberty.<sup>1</sup> The expression "free trade" came into constant use to mean the carrying on of trade and industry without artificial restrictions imposed by the Crown. But opinion was not ripe for the abandonment of regulation in general. Particular forms of it were objected to, and out of the controversy other wider conceptions arose. The assumption so often made that State regulation persisted from the Tudor period until it was attacked by Adam Smith is certainly untrue. A series of events had led to the abolition of internal monopolies, and the first step in the direction of freedom of trade had thus been achieved much earlier in England than on the Continent. The significance of this is rather obscured by the survival of the monopolies enjoyed by the companies

<sup>1</sup> Edward Misselden writes in 1622: "The parts of a monopoly are twain. The restraint of the liberty of commerce to some one or few, and the setting of the price at the pleasure of the monopolist to his private benefit and the prejudice of the public."



engaged in foreign trade. These were from time to time the subject of the strongest criticism, but in this sphere the consequences of competition seemed likely to be so disastrous that national policy demanded the maintenance of control.

## SECTION 17

### TRADE WITH EUROPE

"The ordinary means, therefore, to increase our wealth and treasure is by Forraign Trade, wherein wee must ever observe this rule: to sell more to strangers yearly than wee consume of theirs in value . . . because that part of our stock which is not returned to us in wares must necessarily be brought home in treasure."—THOMAS MUN: *England's Treasure by Forraign Trade* (1664).

THE principle of regulation was maintained in the conduct of foreign trade because it was believed that the overseas markets were strictly limited. Competition between English merchants to sell goods abroad would merely mean that the prices would fall. There would be no increase in demand. So the profits, as far as English merchants and producers were concerned, would be less than if the trade was properly controlled. Similarly, if there were many English buyers in the foreign market they would not call forth a greater supply, but would have to pay more for what was available. It seemed in the best interests of the country, therefore, to restrict the numbers of those who were either selling or buying abroad. The assumption on which this reasoning was based—that of the limited market—led naturally to the further conclusion that foreign trade was a contest in which each country sold what it could at a high price and bought what it could at a low price; the country which succeeded in these endeavours gained at the expense of the country that failed to do so. Foreign trade, in other words, was not deemed to be mutually advantageous. The theory which is known as Mercantilism was a development of these ideas. In its simplest form it insisted that the value of exports ought to exceed the value of imports, for the difference would have to be paid in the precious metals. Since

special importance was attached to the accumulation of gold and silver within the country, it followed that trade had to be closely scrutinized. There must be a favourable balance if the wealth of the country was to be promoted. To allow freedom in commercial matters might lead to such disorders that the trade of the country would be imperilled. John Wheeler<sup>1</sup> draws attention to how the English cloth trade at Narva on the Baltic was "utterlie spoiled" by "a number of stragling Merchauntes resorting thether out of this Realm," until Elizabeth included the town in the area to which the monopoly of the Muscovy Company applied. Then due precautions were taken against "the makeinge vile of the principallest commodities of the Realm . . ." Concern, therefore, for the good sale of English commodities and for the preservation of the favourable balance of trade demanded regulation.

This attitude towards foreign trade explains the failure of the critics of the company system to induce the government to adopt the principle of a "free trade." Although there were constant complaints about the abuses of regulated trade, it seemed dangerous to take the step of rescinding the privileges of the companies. No doubt the monopolies of the companies were frequently defied by interlopers; but the weight of the law bore heavily on them when they were caught. It is true that practical considerations reinforced contemporary economic notions in determining the official point of view. The existence of companies enabled the Government the more easily to manipulate trade according to supposed State necessity, and to collect taxes on imports and exports. Through the machinery of the companies, understandings could be negotiated in foreign ports, and land bought where factories could be established as centres for the warehousing of goods and residences of the merchants.

<sup>1</sup> *A Treatise of Commerce* (1601).

Reference has already been made to the Fellowship of the Merchant Adventurers of England.<sup>1</sup> Elizabeth granted them a charter in 1564, under the terms of which they became a corporate body with well-defined rights. Membership, which was confined to Englishmen, could be secured by serving a period of eight years' apprenticeship to a freeman of the Fellowship, or by paying a high entrance fee. Sons of freemen were admitted as of right. The policy of the company was to limit its membership as much as possible, and the entrance fee it charged was a constant ground for complaint. Originally, its exclusive area was defined as Holland, Zeeland, Brabant, and Flanders, and it enjoyed the lucrative privilege of exporting English cloth to what was the best market for it in Europe. In the sixteenth century political disturbances in the Low Countries forced the company to abandon its position at Antwerp and seek a new settlement in Northern Europe. The Charter of 1564 recognized this development by adding to its area "East Friesland, West Friesland, and Hamburg." After some experience in Emden, Stade, and Middelburg, the company finally settled in Hamburg in the seventeenth century, and retained some vestiges of its privileges there until it was forced to surrender them when the city was occupied by the French in 1806. The company's activities in Northern Europe challenged its old rivals, the Hanseatic League. In the resulting contest the League lost in 1580 the concessions which it had long enjoyed in London, and seventeen years later it was expelled from the Steelyard.

The revocation of the privileges of the Hanseatic League in England opened up the possibility of direct English trade in the Baltic. Apparently, English ships had in the past ventured there in spite of the danger of opposition from the League; but the trade had been irregular.

<sup>1</sup> See page 64.

In 1579 Elizabeth incorporated a company to promote it. This Eastland Company was given the monopoly of trade from England to Norway, Sweden, Poland, Pomerania, and Livonia—with certain exceptions in favour of the Merchant Adventurers and the Muscovy Company. It secured a settlement at Elbing with privileges with respect to tolls and the building of warehouses. An area, the trade of which had been in the hands of the Hanseatic League, was thus defined as belonging to the Eastland Company. It was important as the main source of "naval stores," which were essential for English shipping, viz. pitch, tar, masts, hemp, and flax. These were paid for by the export of English cloth. The Eastland Company, however, did not do the volume of business that the Merchant Adventurers did; it was, consequently, not so severely criticized. But the fact that it paid Ipswich clothiers to export cloth from Aldeburgh and Lynn to the Baltic proves that the Eastland Company endeavoured to put restrictions on trade for its own advantage. The Muscovy Company reached the Baltic in peculiar circumstances. It had originally arisen out of the attempt of Chancellor and Willoughby to find a north-east passage.<sup>1</sup> Contact with Russia was then established by way of Archangel; in fact at that moment Russia had no outlet to the Baltic. But when the Russians captured Narva in 1558 the question arose whether the charter of the Muscovy Company could be construed as applying to territory not in possession of Russia when it was granted. Merchants of the east coast ports held that it did not, and immediately sent cargoes to Narva. There was so much alarm at this unregulated trade that, as has been noticed,<sup>2</sup> the rights of the Muscovy Company were authoritatively declared. The result was hardly happy. The company pressed its advantage to such a point that its trade

<sup>1</sup> See pages 75 and 76.

<sup>2</sup> See page 109.

declined and was largely captured by the Dutch. In 1604 it was denounced as "a strong and shameful monopoly."

The economic literature of the seventeenth century is full of the discussion of the merits and demerits of the companies. There was the fundamental question whether trade should be regulated or free. In 1604 this was raised by the Free Trade Bills which were introduced into the House of Commons in that year. The promoters exposed the evils of monopoly, particularly with reference to the Merchant Adventurers and the Muscovy Company, but they did not propose the dissolution of the companies. Their view was that all who wished to enter the companies should be free to do so on the payment of a reasonable fee. Some of the companies were "regulated," that is each member traded on his own capital, observing the rules of the company in the conduct of his business. Generally, the older companies and those that carried on a not too distant trade were organized on this basis, as, for instance, the Merchant Adventurers and the Eastland Company. Others were "joint stock," that is the capital was subscribed by the members and traded on as a whole, distribution of profits being made from time to time in proportion to the extent of an individual's holding. The Muscovy Company and, for some years, the Levant Company were based on this principle. In the discussion of 1604 strong prejudice against this form was exhibited. The companies, however, safely weathered the storm; for the critics, while they could point out abuses, were weak when it came to suggesting remedies. The whole question was referred to the Commissioners of Trade in 1622, a year of severe industrial depression. The sale of cloth abroad had fallen so heavily that there were much unemployment and acute distress in the country. The Commissioners were asked to consider whether there were too few merchants, and whether "if the number of

traders were enlarged, trade itself would be enlarged, which is now said by some to be imprisoned, being for the most part confined to companies and societies of merchants, and others excluded which are not members of those companies . . . whether it be necessary to give way to a more open and free trade or not." Again, no alternative that was considered practicable was discovered.

With the fall of the Monarchy in 1649, and the growth of revolutionary sentiment, it might be expected that some more drastic course would be taken. A Commission was appointed in 1650 under the chairmanship of Sir Harry Vane to inquire into and report on the state of trade. Among the heads of inquiry were ". . . how the commodities of this land may be vented, to the best advantage thereof into foreign countreys, and not under-valued by the evil management of trade . . . how obstructions of trade into foreign parts may be removed . . . and . . . by all means, how new ways and places may be found out, for the better venting of the native commodities of this land . . . whether it be necessary to give way to a more open and free trade than that of companies and societies, and in what manner it is fittest to be done; wherein . . . they are to take care that government and order may be preserved and confusion avoided."<sup>1</sup> These instructions illustrate the desire to expand trade, on the one hand, and the fear, on the other hand, that the abandonment of regulation would lead to disaster. Exported commodities were not to be "under-valued by the evil management of trade"; but competition might well result in a price which would be thought too low. Government and order were to be preserved and confusion avoided. There was, in fact, no alternative to trusting that order would emerge out of free enterprise, or to

<sup>1</sup> The instructions to the Commissioners are printed in F. A. Inderwick: *The Interregnum*, pages 74-76.

trying to ensure that there would be order by imposing it by authority. The upshot was that the companies were retained. By 1660 mercantilist opinions were becoming more clearly defined, and, under the pressure of the commercial interest, the State was prepared to assume that control of economic policy which it had previously largely delegated to the companies.



## SECTION 18

### TRADE WITH THE EAST

"Thes Committies . . . have resolved to make a viage to the est Indias, yf her maiestie wil be pleased . . . to graunt to the adventures a priviledge in succession and to incorporate them in a Companie, for that the trade of the Indias beinge so farre remote from hence cannot be traded but in a Joint and a vnyted stock."—*Court Minutes of the East India Company*. (A preliminary meeting held on 25th September, 1599.)

A SUCCESSFUL Dutch voyage to the East Indies, it will be recalled, moved a group of London merchants to discuss the possibilities of a direct voyage from England. The charter of December, 1600, incorporated some 218 persons as the Governor and Company of Merchants of London trading into the East Indies.<sup>1</sup> It is interesting to notice that a considerable number of these were members of the Levant Company, and, therefore, already familiar with Oriental products. The area of the monopoly of the new company was defined as that between the Cape of Good Hope and the Straits of Magellan; but trade was not to be prosecuted in any district in "the lawful and actual possession" of any friendly Christian prince without first obtaining his permission. In practice this meant that the rights of Spain (including Portugal) and of Holland were normally to be respected. It was anticipated that sufficient spices could not be obtained in exchange for English commodities shipped to the East, because the natives did not require the kind of goods produced in a temperate climate. So the company was authorized to export silver, provided it did not exceed £30,000 in value on any one voyage. The privilege ran directly counter to the prevailing mercantilist ideas, and was one of the chief grounds on which the company

<sup>1</sup> See page 79.

was attacked in the first 25 years of its history. One controversialist accused it of being an enemy to Christendom, for it "carried away the treasure of Europe to enrich the heathen." The four ships, which had sailed in April, 1601, under the command of James Lancaster,<sup>1</sup> arrived at Acheen in Sumatra in the summer of the following year. They went to the Spice Islands again in 1604, and a dividend of 95 per cent was declared by throwing the results of the two ventures together. The third voyage was even more gratifying. The ships took out bullion to the value of £17,000 and goods to the value of £7,280. Some £3,000 was expended on cloves, and they alone realized over £36,000 when sold in London. Still, it was an unsatisfactory feature of this trade in the eyes of contemporaries that a large amount of bullion had to be exported.

The company's agents at Bantam, where a factory had been established, pointed out to the governing body in London that there was a good market in the Spice Islands for the kinds of textiles which were made in India. If the company's ships could secure a share of this trade it might be possible to send out English goods to the Cambay ports of Western India, and exchange them for these native textiles, which in turn could be bartered for spices. To explore the possibilities of this three-cornered trade it was decided that one ship of the third voyage should be detached from the rest to call at Surat. Since the Portuguese had not made a settlement there, this was permissible. But they resented it; for hitherto they had encouraged native boats to convey textiles from the Gulf of Cambay to Goa. The representative of the company was William Hawkins, a nephew of Sir John Hawkins, who had had experience of the Levant trade. He arrived at Surat at the end of August, 1608. His ship,

<sup>1</sup> See page 79.

*Hector*, was there loaded with goods and set out to join the others in the Spice Islands. Hawkins himself made his way to Agra to seek permission for the English to establish a factory at Surat. The Mogul Emperor, Jahangir, was at first favourable, in spite of the efforts of the Portuguese to prejudice him against the newcomers. But Hawkins was not a well-chosen representative, and little real progress was made. Meanwhile, the two ships which undertook the fourth voyage were lost. So the company determined to build a ship particularly designed for the Tropics. She was launched at Deptford by James I, and named *Trades Increase*.<sup>1</sup> Her cargo consisted of cloth, lead, tin, sword-blades, and quicksilver; these were to be exchanged for indigo, calico, and cotton yarn in India, and cinammon, cloves, pepper, etc., in the Spice Islands. But, unfortunately, she was wrecked on a coral reef; most of her crew perished, and the commander, Henry Middleton, died on board "most of heartsore." These misfortunes encouraged the critics of the company to attack its methods. In 1615 appeared a long tract, written by "J.R.,"<sup>2</sup> and ironically called *The Trades Increase*, in which the national importance of shipping was particularly stressed. It was pointed out that the East India Company was wasting mariners and shipping in distant enterprises, and, at the same time, undermining the strength of the country by exporting bullion. This challenge was taken up by Sir Dudley Digges. He contended that the loss of ships was not excessive in "an infant and discovering trade." The importation of eastern goods had broken the monopoly of the Dutch. Spices had been cheaper in England, and large profits had been made by the re-export of the

<sup>1</sup> She was the largest merchant ship of the kingdom, her tonnage being 1,293.

<sup>2</sup> The anonymous author of the pamphlet was apparently Robert Kayll. See E. Lipson: *The Economic History of England*, ii, page 279.

surplus to European countries. It remained for Thomas Mun, himself a director of the company, to demonstrate that it was to the advantage of the country to send out bullion if commodities were purchased with it which were afterwards sold in other countries. He thus widened the conception of the balance of trade by showing that foreign trade was more complicated than had been assumed. An unfavourable balance with one country might well be the condition of securing a favourable balance with another. The trade with the East was to be judged by the opportunities it offered for exploiting re-exports by making England an entrepôt for their distribution in Europe.

While the company was on its defence at home, it was also contending against great odds abroad. The Portuguese tried to dislodge it from Surat. The ships of the ninth voyage were attacked, and succeeded in driving off the Portuguese in an engagement in Swally Roads. Two years later—in January, 1615—the attempt was made in greater force, and again the English sailors gave a good account of themselves. The prestige of the company was now so well established in India that it was resolved to send out an accredited representative of the country to negotiate with the Mogul Empire. Sir Thomas Roe was chosen for this embassy, and was given full power by James I to treat with Jahangir “concerning the maintenance and continuance of the amity and course of merchandise between us, our realms and dominions, and the realms and dominions of the said Mogul.” The position at Surat was consolidated. Before the middle of the century new settlements were made at Madras and near the present site of Calcutta. At the Restoration Charles II made over to the company Bombay, which was part of the marriage dowry of his Queen, Catherine of Braganza. The English had, in fact,

turned to the mainland of India as the chief sphere of their activities in the East. In the Spice Islands their presence had always been resented by the Dutch. In 1623 occurred the incident known as the Massacre of Amboyna, in which, according to a contemporary statement, the English and their native servants "were taken prisoner by the Hollanders and suffered such unspeakable cruelties that out of 800 persons only 150 survived." The memory of this affair so rankled in the English mind that thirty years later, after the first Dutch War, Cromwell exacted an indemnity of £85,000 from the Dutch as compensation. Prior to the quarrel between the Commonwealth and Holland, the company had found it impossible to persuade the English Government to complicate its foreign relations in Europe by espousing its cause in the East. There was constant complaint that the company was not supported to the same extent as its rivals, the Dutch, were by their Government. After the Restoration, however, the English Company was received into royal favour. Charles II defended them against a new series of attacks at home. As it strengthened its position in India, the company began to import calicoes, muslins, and silks to this country. This aroused the opposition of the woollen industry, seconded by the Levant Company, which in its reorganized form was developing the old trade with the East by way of the Mediterranean. The charge was made that the East India Company would "in the end be the destruction of the manufactory trade . . . because the people of India are such slaves as to work for less than a penny a day, whereas ours will not work under a shilling, and they have all materials also reasonable and are thereby enabled to make their goods so cheap as it will be impossible to contend with them." With the help of the King the company was for the time able to hold its own ;

but prohibitions were actually imposed later on certain classes of Indian fabrics in the interests of the English textile industries. The company was also upheld in the defence of its monopoly against interlopers. Here it had a fairly good case. The establishment of factories in India had been a difficult and hazardous task at first. It had also required much persistency to get concessions from the native rulers. Why should unauthorized persons be allowed to trade with the area and thus gather where they had not strawed? An interloping ship might also do a great deal of harm to the interests of the company. It might ill-treat the Indians because it never intended to return. They might thus be so provoked that they would seize the persons and property of agents of the company as the only possible means of exacting amends from Englishmen. The trade had been opened up by the enterprise of the members of the company, and this seemed to constitute a claim to protection against competition. Many interlopers found to their sorrow that the company was well able to look after itself in the East. Still, the profits of the trade were so considerable that despite the risks of reprisals in India and of prosecution in the Courts at home, interloping continued.

## SECTION 19

### TRADE WITH THE WEST

“Plantations being at first furnished and afterwards successively supplied with people from their Mother Kingdoms, and people being riches, that loss of people to the Mother Kingdoms, be it more or less, is certainly a damage, except the employment of those people abroad, do cause the employment of so many more at home in their Mother Kingdoms, and that can never be except the trade be restrained to their Mother Kingdoms.”—SIR JOSIAH CHILD: *A New Discourse of Trade* (1690).

AMERICA was discovered in the course of the efforts to establish new contacts with the East. At first it was regarded as an obstacle, and persistent efforts were made to get round it. Then it began to assert its own claims to consideration, and a series of events were set in motion which have played a dominant part in shaping the modern world. Reference has already been made to the exploitation of the precious metals of the New World by Spain and the consequent revolution in prices in Europe.<sup>1</sup> The Spanish settlements in Mexico and Peru were based on the spoliation of native civilizations. Immediate returns were secured by methods which showed little concern for the future. But the northern seaboard had none of the allurements of the south; the land seemed barren, there were no indications of gold and silver, and the nomadic Indians were formidable fighters. Here no empire could be built on the subjection of a native population. This area, therefore, presented a new problem. If it was to be developed at all Europeans would have to settle in sufficiently large numbers to cultivate the soil in the first place, and then to apply their labour to whatever resources it might prove to have. In other words, colonization or, as contemporaries said, plantation

<sup>1</sup> See pages 81-83.

was necessary. This meant emigration, which constituted a permanent loss of people. Mercantilist opinion was strongly opposed to any course which would result in a reduction of population. It was supposed that a large population was necessary in order that a country should hold its own in trade and attain that favourable balance which was the only means of increasing its wealth. In the middle of the seventeenth century, Roger Coke entered into computations to prove that England might be making an additional £1,750,000 a year from the woollen and fishing industries but for "lack of men." Sir William Petty expressed the view that it would be as well if those who had emigrated to New England would return. Later in the century, Sir Josiah Child reconciled himself to the loss of people by saying that the Puritans would probably have gone to a European country had they not sailed to America, and the "loose vagrant people" who had been transported to Virginia and Barbados would otherwise have died of hunger or been hanged. Since they were in English Colonies it was still possible to profit from them, provided their trade was regulated in the interests of the Mother Country.

The efforts of Sir Humphrey Gilbert to make a settlement in Newfoundland and of his half-brother, Sir Walter Raleigh, to found a plantation farther south ended in failure. At the death of Elizabeth, England had no settlements across the Atlantic. Experience in the promotion of foreign trade by means of chartered companies suggested that the method could be applied to colonization. The companies, of which the best known were the London and Plymouth Companies, secured grants of territory from the Crown, raised money to settle it by the sale of shares, and intended to secure profits for the subscribers out of the venture. The London Company made its first attempt in 1607, when it established



a settlement at Jamestown, Virginia. The colonists had a hard struggle in the early years, and as a matter of fact the investors at home lost their money; but the settlement took root and became a "royal province" in 1624, when the charter was rescinded. The Plymouth Company made little headway at first, and was reconstituted in 1620 under the name of the Council for New England. It sold land within the area of its grant to other companies. From it the group of emigrants called the Pilgrim Fathers secured their grant of land at Plymouth, Massachusetts. The capital for this project had been raised on the basis of a joint-stock; certain merchants in England subscribed to and held the shares, while the money was handed over to the settlers. After a few years, however, the emigrants were in a position to buy out the shareholders. An alternative method of founding plantations was the grant to an individual or proprietor. On such a grant to Lord Baltimore in 1632 was founded the proprietary colony of Maryland. Later Charles II granted 40,000 square miles to William Penn in 1681, and he organized this area as Pennsylvania with its capital at Philadelphia. In all, thirteen colonies were planted along the Atlantic seaboard from the New England Colonies to Georgia. Meanwhile the English had made settlements in the West Indies: in Barbados in 1624, and in several of the Leeward Islands before the middle of the century. Jamaica was captured in 1655. Here the climate was such that white emigrants could make little progress, and slaves were obtained from West Africa to do the field work. This system was also adopted in the southern continental colonies of Virginia and Maryland. It appealed to the mercantilist thinkers for two reasons. It was estimated that for each white man lost to England there were ten black whose labour was directed by him. The joint demand of the group for English

manufactures would employ four men in England. Consequently the initial loss was amply compensated. Further, the slave plantations produced sugar, tobacco, and other crops which did not compete with English agriculture and offered the Mother Country the opportunity of getting valuable imports, part of which could be profitably re-exported.

These considerations led contemporaries to arrange the colonies in an order of importance which was based on the prevailing commercial notions. The sugar islands of the West Indies took the first place. With the assistance of slave labour they produced an exotic for which there was an excellent market in Europe. Of the continental colonies Virginia and Maryland seemed much more valuable than the Northern Colonies because they concentrated on the production of tobacco. "New England," declared Sir Josiah Child, "is the most prejudicial Plantation to this Kingdom . . . all our American Plantations, except New England, produce Commodities of different Nature from those of this Kingdom." Proceeding on these assumptions, the Navigation Act of 1660 adopted the principle of enumeration, that is, it required that "no sugar, tobacco, cotton-wool, indigo, ginger, fustic, or other dyeing woods" should be shipped anywhere, except to England, Ireland, or another English colony. The intention was that the commodities enumerated should, if sent to Europe, be landed in the first instance in England. The Mother Country would thus become the entrepôt for colonial staples. This was designed to have a twofold effect on the balance of trade. England would be independent of foreign countries for these supplies, and, if there was a surplus, it could be exported and so contribute to make other countries debtors to England. It was supposed that since the colonies were in the making, and their settlement had made such demands on the man-power

of the Mother Country, they ought to be fashioned to her needs. The settlers in Carolina, for instance, were given exemption in 1667 for seven years from payment of English customs duties on silks, wines, currants, almonds, etc., in the hope that they would produce these commodities for which England then depended on the Mediterranean countries. It was from the outset difficult to fit the Northern Colonies into any scheme. Their agricultural products could not be admitted into England because protection against such imports was a principle of national policy. But it was desirable that the colonists should buy English manufactures. Steps were taken, indeed, to prevent them from developing manufactures of their own. In 1699, for instance, an Act was passed which forbade them to export any woollen goods. If they were to buy English manufactures some basis of exchange was necessary. The most hopeful solution of this problem seemed to be to encourage them to produce naval stores, and thus eliminate the dependence of England on the Baltic countries for tar, pitch, hemp, etc. By this means a permanent adverse balance of trade between England and the Baltic might be corrected.<sup>1</sup> In 1705 bounties were offered to the colonists on the importation of naval stores into England. The result was disappointing. Tar and pitch were produced in considerable quantities under the stimulus of the bounty—but in Carolina, and not in the Northern Colonies. A colonial system in the sense of a scheme according to which each colony subserved an end defined by the Mother Country could not be realized. Once colonies took root they grew in accord with the facts of their environment. It was no use setting preconceived ideas against such facts. And so an increasing disharmony revealed itself between the Mother Country and the Northern Colonies.

<sup>1</sup> See page 111.

According to accepted principles colonies should be beneficial to their Mother Country. The best way to achieve this purpose seemed to be to control their trade. It was found, however, that the colonists were apt to defy the restrictions placed upon their actions. The Northern Colonies took naturally to agriculture, stock breeding, and fishing. There was a market in the British West Indies for their produce, but it was a limited one. The French continental settlements in Canada and Louisiana, on the other hand, were incapable of supplying the wants of the French West Indies. So the British colonists began to trade with the French sugar islands of Martinique and Guadeloupe. This at once caused an outcry because the French sugar was underselling the British in the European markets. It was said that the sugar was cheap because the French obtained supplies of provisions from the Northern Colonies. The British West-Indian interest brought the matter before Parliament, and in 1733 succeeded in getting an Act passed which placed duties intended to be prohibitive on foreign sugar and molasses entering British colonies. This was a direct test of the system. It meant that if the Act was enforced the Northern Colonies were deprived of an important part of the natural market for their provisions. If it was not enforced the system was merely a paper scheme. As a matter of fact it was not enforced. The British colonists disregarded it and built up a considerable three-cornered trade. Molasses was obtained in exchange for provisions and distilled into rum, which was exported to West Africa and there bartered for slaves. The slaves were sold in the West Indies for bills of exchange on England, with which accounts for British manufactures imported into the Northern Colonies were discharged. So a basis of trade with the Mother Country was found by pursuing a course which was illegal. After the Seven Years' War,

when the needs of the British Exchequer were urgent, an attempt was made to employ the Molasses Act in an amended form as a means of raising a revenue in the Colonies. This was to open a question which led to one misunderstanding after another until at last the thirteen Colonies declared their independence in 1776.

## SECTION 20

### RIVALRY WITH THE DUTCH

"The Trade of the Dutch consists rather in Buying and Selling than Manufactures, most of their Profits arising from that and the Freights they make of their ships."—JOHN CARY: *Essay on the State of England in Relation to its Trade* (1695).

ENGLISH economic writings of the seventeenth century are full of references to the example of Holland. Thomas Mun warns his countrymen of the consequences of "the endeavours of the industrious Dutch." Sir William Petty offers an interesting analysis of the causes of their commercial supremacy, and Sir Josiah Child commends their organization as a model to be followed. The position which the Dutch attained when they had won their independence in the struggle with Spain is partly to be explained by natural advantages. A group of towns connected by waterways and dominating the mouths of the great rivers of western Europe had a unique opportunity for playing the part of an intermediary in trade. The Dutch exhibited industry and ingenuity in making the most of their opportunity. They elaborated methods of conducting business which had far-reaching effects. The capital resources of the country were concentrated on commercial ventures by their banking system. A group of English writers, of whom Sir Josiah Child was the most prominent, ascribed the prosperity of Holland to the low rate of interest which prevailed there. The Bank of Amsterdam seemed to them to provide cheap capital for the many enterprises of the Dutch merchants. They suggested that English trade should be stimulated by a reduction in the legal rate of interest. In this they confused cause with effect. Holland was accumulating capital out of the profits of an active trade, and loans were easy

to negotiate. The secret is to be found in the organization which made a rapid turnover of capital possible. The Dutch had discovered the value of specialization. At that time and for their purposes the most important "machines" were ships. They added greatly to the efficiency of them by technical improvements in construction. They built for speed and low cost, making them manageable by a small crew. They paid attention to the standardizing of parts so that repairs could be effected quickly and cheaply. They designed ships suitable for different kinds of trade. Other economies were secured by providing regular services at short intervals. The total result was that the Dutch were able to quote freight rates that threatened to drive competitors off the seas.

The Mercantilists laid great stress on the national importance of shipping. Navigation Acts were passed from time to time to encourage the building of ships. The cheap freights offered by the Dutch seemed a menace to national security. How could it be countered? Some drew attention to the fact that the basis of the wealth of Holland was the fishing trade, and that it was commonly said that Amsterdam had been built on herring bones.<sup>1</sup> It was alleged that the English Crown had the right to parts of the North Sea which the Dutch found most profitable. If this claim was vindicated, the English would get what rightly belonged to them, and one of the advantages enjoyed by the Dutch would be removed. Why not assert the *dominium maris* and found a national fishing company to exploit it? This was actually attempted in 1630, when the Council and Commonalty of the Fishing of His Majesty's Dominions of Great Britain and Ireland—a joint-stock company—was formed, and

<sup>1</sup> Great importance was attached to the fishing industry in England because it trained sailors. Weekly "fish days" were instituted by Acts of Parliament in the sixteenth century to promote the "maintenance and increase of the navy."

the sea-fishing round the coasts entrusted to it. But the members of the company were inexperienced, their capital resources were inadequate, and their organization was no match for that of the Dutch. In fact, this was an enterprise in which the Dutch had developed a remarkable plan of campaign. They had access to a great market for salt herrings in northern and central Europe. About the middle of the fourteenth century a Dutch skipper had discovered an improved method of curing the fish. It involved gutting and salting the herrings as soon as they were caught. The problem was how to catch as many herrings as possible during the comparatively short season they were moving in shoals. They came south between June and September. So the Dutch ships assembled in the Shetlands towards the end of June, and gradually came south with the shoals until they were off Yarmouth by Michaelmas. The ships actually engaged in the fishing, called busses, did not return to port during this period. They were supplied with food for the crews, and with salt and barrels for curing and packing the herrings by another fleet which came out to take away the herrings already caught. In this way the greatest possible advantage was taken of the season. It is not surprising, therefore, that the efforts to compete with the Dutch in the fishing trade all ended in failure.

There were also constant complaints that the Dutch were capturing other trades, and consequently the policy of the trading companies was much criticized. The question was raised whether the allotting of exclusive areas in Europe to them amounted in practice to a restriction of trade. The companies tended to limit their membership, and were no doubt inclined to make the highest profits they could out of an established trade rather than to seek new openings. For this they were not altogether to blame. They knew that they would



be criticized if the price of English commodities fell. But their monopolistic tendencies played into the hands of the Dutch. The latter undersold them in both the home and foreign markets. It has already been noticed that, as far as English subjects were concerned, trade with the Baltic was confined to three companies.<sup>1</sup> They all felt the weight of Dutch competition. The general practice was to commission English ships for the export of cloth and other commodities and to impose on the ship-masters restrictions in the interests of the companies. The freights they were charged were high, but they were prepared to pay them, for they were a small percentage of the value of such a cargo as cloth, and the merchants did retain a degree of control over the ship. It was otherwise with imports from the Baltic. Such commodities as pitch, tar, flax, corn, etc., were bulky in relation to their value. The English ships which carried out cloth could not supply all the tonnage that was needed. Here was an opportunity for Dutch shipping. The Eastland Company was actually in favour of employing them because of the low freight rates they offered. The Government, however, had to consider the effect of this on English shipping, and in 1615 imposed the provisions of existing Navigation Acts by proclamation. These Acts did not prevent the Dutch themselves from shipping Baltic products to English ports. So the question was raised whether it was not desirable in the interests of English shipping to prevent any foreign ships from carrying to the country commodities which did not originate in the country to which the ships belonged. This would be a direct discrimination against a country engaged in the carrying trade, and the Government was not prepared to take the step. There was another side

<sup>1</sup> Namely the Eastland, Muscovy, and Merchant Adventurers Companies. See page 111.

to Dutch competition in the Baltic. They were in a position to sell English cloth at lower prices than the English merchants could. This arose out of the fact that the Merchant Adventurers had the right to export white or undressed cloths which were dyed and finished in the Low Countries. The Dutch carried the cloth to the Baltic ports, where its superior finish and lower price told in its favour. Complaints had long been made about the export of unfinished cloth on the ground that it was supposed to reduce the volume of employment at home. So an attempt was made in 1615-17 to force finished cloth on European buyers. The Charter of the Merchant Adventurers was set aside in favour of a new company under the control of Alderman Cockayne, a prominent London merchant. He hoped to deprive the Dutch of the supplies of unfinished cloth and export finished cloth direct to the Baltic. But "Cockayne's Project" was a complete failure. The Dutch boycotted English dressed cloth, and the merchants who tried to increase the direct export to the Baltic were involved in heavy losses. In the end the Merchant Adventurers had to be recalled to try to remedy the damage done by the unfortunate experiment. In this as in other directions, the Government singularly failed to counter the Dutch by using the mechanism of the trading company.

The English mercantile classes were accumulating grievances against their successful competitors. But they were not able to move the Government to take any drastic measures because there were good diplomatic reasons for maintaining an understanding with Holland. Enthusiasts for the national conduct of the fishing trade and the extension of English shipping, merchants who complained of competition in the Baltic and the Mediterranean, the members of the East India Company who had their difficulties with the Dutch in the Spice Islands,

all clamoured for something to be done. It seemed likely that the report of the massacre of Amboyna would force James I to take action, but his death in 1625, and the other European complications in which Charles was involved, changed the situation. It remained for the Commonwealth to endeavour to "clip the wings of the Dutch." In 1651 was passed in somewhat obscure circumstances a Navigation Act on the lines already suggested, that is, so designed that it would hit a country which specialized in the carrying trade. Briefly stated, the Act required that goods imported into England should be carried in English ships or in ships of the country of their origin. Contemporaries were inclined to argue that the Act achieved its purpose. Sir Josiah Child considered it to be "one of the choicest and most prudent Acts that ever was made in England." He believed that apart from the Navigation Acts—that of 1651 as revised and expanded in 1660—England would not have been "owners of one half of the shipping, nor trade, nor employed one half of the seamen which we do at present." The obvious effect of the Acts, so far as they were enforced, was to restrict the available shipping and so increase freight rates. This constituted a bounty on the building of ships in England and her Colonies. It may have been worth while to subsidize shipping in this manner from a national point of view, but it placed an economic burden on English trade. There is no indication that it did any serious damage to the Dutch. Excluded from certain forms of the carrying trade they turned to others. Child himself enumerates the number of trades which the Dutch had captured—the Russian, the Greenland, the Baltic, and that of the Spice Islands and the Far East. In fact, Dutch shipping maintained its position well into the eighteenth century. The persistent attempts to counter the superiority which Holland enjoyed in shipping had

obscured the true lessons to be learned from her economic development. Englishmen could not bring themselves to believe that Government action might not be a remedy. They called for Government support in India, legislation to bind the American Colonies to the Mother Country, and a low rate of interest enforced by law. There were other principles at the back of the success of the Dutch.

## SECTION 21

### CREDIT AND BANKING

"Sir Richard Ford did, very understandingly methought, give us an account of the originall of the Hollands Bank, and the nature of it. . . . The unsafe condition of a Bank under a Monarch . . . makes it hard to have a Bank here."—Pepys's *Diary*, under 17th August, 1666.

THE beginnings of banking are obscure because a bank performs a number of functions, each of which has a separate history. It is difficult to trace the development of each particular function in the period before it was blended with others. The general statement that banking in the modern sense of the word had no existence in England before 1640 may be accepted. Prior to that date there were no persons, partnerships, or joint-stock companies that offered facilities for safe deposit of valuables, arranged for the exchange of coins of different countries, provided for the discharge of debts at a distance by means of bills, advanced loans, and accepted deposits. Yet in one way or another these functions had long been performed. In view of the later activities of the goldsmiths it is interesting to find that one Jane Upton, in the fifteenth century, delivered to a goldsmith forty marks of money "savely to kepe" and to return when she wanted it. There is a strong tradition that in the first part of the seventeenth century the goldsmiths developed this practice to such an extent that it insensibly led them to undertake other banking functions. The Tower of London was also used by merchants who had considerable amounts of bullion as a place of safe deposit. This arose from the fact that the Royal Mint was established there, and provision had necessarily to be made for the protecting of the precious metals. When in financial

straits, Charles I had seized £130,000 in bullion which the merchants had placed there, and he refused to restore it to them until they had made him a loan of £40,000. A generation later Pepys speaks of this as an action which will never be forgotten. It seemed dangerous for a public place of safe deposit to exist under a monarchy.

As the volume of foreign trade increased during the Middle Ages the question of the rate at which the coins of different countries were exchanged became important. From the twelfth century money changers seem to have been making profits out of this business. They had many opportunities of sending the heavier coins which passed through their hands to places where their metallic value was high, for owing to clipping and wear coins of the same nominal value were by no means of the same weight. But such conduct ran counter to medieval principles, and attempts were made to assert the royal prerogative in money changing. In England the office of Royal Exchanger seems to have been established about the end of the twelfth century. This official was supposed to supervise all payments made abroad and to see that the proper rate was observed. In this way the trade in bullion, which it was feared would deprive the country of "treasure," was to be prevented. Royal Exchangers were still appointed in the sixteenth century, but their monopoly of exchange transactions was not enforced. Private dealing was allowed in special instances, and it sprang up without the knowledge of the Government in many more. The last attempt to give the Royal Exchanger a real monopoly was made in 1627. It was alleged that the goldsmiths were exporting heavy coins to the detriment of the country. But by this time bullion movements as part of the mechanism of international trade were so usual that to subject them to control would have seriously dislocated the market; for under the head of money changing and the

ascertaining of bullion rates there had grown up elaborate methods of discharging international indebtedness by means of bills of exchange. Normally, bullion was not exported; but the system rested on the possibility of exporting it in certain circumstances. Contemporaries found it difficult to reconcile themselves to the extended uses of the bill of exchange, for they had a strong prejudice against speculation and usury. The bill was undoubtedly employed as a means of giving and securing credit. In some cases, indeed, there were no goods involved at all; the bills were pure finance bills. All this meant that the money changer had developed into the bill discounter. The goldsmith, or any other private person engaged in such business, was becoming a banker. It was natural that the man who could make such use of money should attract deposits and make advances at interest.

There is ample proof that the London goldsmiths played a decisive part in the elaboration of banking facilities in the middle years of the seventeenth century. Their position in the previous century is not at all clear. Evidence could be multiplied that credit accommodation was to be had. But the lenders carried on all kinds of business in addition to money-lending. The cultivator of the soil secured credit from the corn-dealer. The craftsman was assisted by the merchant. The Government borrowed from the wealthy members of the London trading companies. How these rather informal methods developed into the banking system of the goldsmiths cannot be fully explained. As dealers in the precious metals they had to provide for the safe keeping of their stock, and as exchangers they may have developed trade in bullion. Outsiders would recognize that they had facilities for keeping valuables. When gold or silver plate was handed over to the goldsmiths they would give a receipt specifying exactly what had been entrusted to them. At first a depositor who

wished to withdraw the whole or part of what he had deposited, or to transfer the whole or part to a third person, had to go to the goldsmith and arrange the transaction. But the books of some of the early goldsmiths which have survived show that this method was simplified so that the depositor could make a transfer to a third person by note of hand. By this time the fiction that the depositor had handed over valuables for safe keeping had broken down. He deposited cash which the goldsmiths felt themselves free to lend so long as they were in a position to meet their customers' withdrawals from day to day. So they became lenders by means of promissory notes. In other words, they had fallen upon devices which roughly correspond to the cheque and the bank note. Some of the more important goldsmiths, such as Robert Viner and Edward Blackwell, built up great banking houses. The extent to which they advanced money to the Government is exhibited by the embarrassments they experienced when Charles II in 1672 temporarily suspended payments out of the Exchequer. Five of them were ultimately driven to bankruptcy because a considerable part of their assets were no longer liquid. This experience suggested that it was necessary to place the banking arrangements of the country on a more satisfactory basis.

Although Genoa and Venice had banks with an instructive history, seventeenth-century interest was centred on the "Hollands Bank" at Amsterdam. Sir Josiah Child ascribed the prosperity of the Dutch to the organization of banking and the low rate of interest on loans.<sup>1</sup> A century later Adam Smith thought it worth while to devote a special section of the *Wealth of Nations* to a description of the operations of the Bank of Amsterdam. As he pointed out, Holland was, before 1609, suffering

<sup>1</sup> See page 128.



from all the inconveniences of a great variety of coins entering it in the course of trade. Most of them were below their nominal value. The Bank of Amsterdam was given the monopoly of valuing such coins so that the merchants who deposited them with the Bank had a credit in bank money which was of a definite amount and easily transferred. In this way a standard was established which made Amsterdam an international financial centre. The opportunity of profiting from the example of Holland arose when William of Orange became King of England. Several prominent Whigs had lived in exile in Holland during the reign of James II. William Paterson, a Scotsman particularly interested in finance, had been there with them. To him is due the plan of establishing a bank in London. His proposal was to raise a sum of money for the forwarding of the war against Louis XIV and to grant to the subscribers a charter constituting a bank. In this way the political requirements of the moment would be met, and an institution would be launched which would provide for the commercial needs of the country. The actual form of the scheme which was adopted was that of a public loan of £1,200,000, in return for which the State guaranteed £100,000 a year from the yield of special taxes to meet the charges of interest and management. The subscribers were to become the Governor and Company of the Bank of England with privileges set out in the charter of incorporation. In particular the Bank was to be empowered to issue notes to the value of its original capital. On this issue banking business could be undertaken. Bills could be discounted and loans advanced against securities. Deposits could be attracted by offering to pay interest on them. It is true that Paterson's project was converted into an actuality by the pressure of political exigencies. The Tories and other opponents of the scheme complained bitterly of

the means adopted to force it through the Houses of Parliament. They tried their best to create prejudice against the plan. But the necessary subscriptions were quickly obtained, and on 27th July, 1694, the charter of incorporation was granted. Circumstances favoured the development of the bank. At first there was no guarantee that the Government would not raise a further loan by setting up another bank under an Act of Parliament. In fact a Tory scheme for a Land Bank on this basis was promoted in 1696. The possibility that a rival would enter the field caused the Bank of England stock to fall from 107 to 83. But the Land Bank proved a fiasco, and the Government had to fall back on the Bank of England for a new loan. It now promised that no other bank would be established by Act of Parliament until after 1711, when the charter would come up for revision. The question of the renewal of the charter was discussed in 1709 and the Bank's "monopoly" was then made more specific. It was safeguarded not only against the competition of a second chartered bank, but also against that of partnerships "exceeding the number of six persons." Under this regulation the Bank of England assumed its monarchical position in the English banking world. It performed functions which no other bank could undertake. As private and "country" banks developed they found it convenient to keep their balances with the Bank of England. The significance of all this, however, was to be revealed in the future. For the present London had secured an institution capable of meeting its financial requirements. The rate of interest for loans steadily fell, and the international dealings of the London money market rivalled those of Amsterdam itself.

PART IV  
THE INDUSTRIAL AGE  
THE FIRST PHASE

SECTION 22

COMMERCIAL BASIS

“It is plain that the maritime kingdoms and states of Europe have increased in riches and power in proportion to the right regulations of their trade, the improvement of manufactures, the increase of shipping, and the extent of their navigation. . . .”  
—JOSHUA GEE: *The Trade and Navigation of Great Britain Considered* (1729).

FROM the time of the discovery of America and of the sea route to India the countries of Western Europe had come to look upon overseas enterprise as the means of promoting national wealth. Economic policy, as expressed in the mercantile system, was directed to the maintenance of a favourable balance of trade. If the value of the goods exported exceeded that of the goods imported, the difference, it was contended, would have to be paid in bullion.<sup>1</sup> In this way a country which had no gold or silver mines could secure a supply of the precious metals, which were regarded, in a peculiar sense, as “treasure.” Between European countries the question of the balance seemed simple. It was one of encouraging the export of manufactured goods and getting a good price for them, while restricting or even prohibiting the import of foreign manufactures. But the extension of trade to the East and the West, as we have seen, presented new problems. It made it possible to get silver by direct importation from the new mines of Mexico and Peru,

<sup>1</sup> See page 108.

and also greatly to swell the volume of exports by means of such re-exports as spices, tobacco, sugar, and tea.<sup>1</sup> The experience of Spain was to show that the monopolization of American silver was impossible and that there was no necessary relation between the possession of great hoards of the precious metals and general national prosperity. By the beginning of the seventeenth century commercial leadership had passed to Holland. She did not exact tribute in the form of silver and gold from the newly-discovered countries. Her strength was derived from the organization of long-distance trade, out of which she made high profits. At first she found Oriental spices extremely lucrative. But the demand for them was limited, and she had to destroy large quantities in the Spice Islands to keep up good prices in Europe. Then she went on to carry tobacco, sugar, and tea, for which growing popular consumption created an ever-expanding market. The rapidly increasing volume of trade in these commodities was the chief characteristic of early eighteenth-century commerce. It offered great gains to those who had capital to finance it and bear its risks.

The Dutch acquired the control of such capital, and elaborated methods of employing it to the best advantage. "The labour of seamen and the freight of ships," Sir William Petty pointed out, "is always of the nature of an exported commodity." From the yield of this "commodity" Holland built up her vast resources. Amsterdam was the money market of the world. English merchants borrowed there to enable them to make advances to sugar planters in the West Indies. The Dutch had considerable holdings in British Consols and in Bank of England and East India Company stock in the eighteenth century.<sup>2</sup> But Holland's internal resources

<sup>1</sup> See pages 118 and 124.

<sup>2</sup> Cf. E. L. Hargreaves: *The National Debt* (1930), pages 86-87.

were limited. The expansion of her overseas trade could not stimulate a high degree of industrial development at home. She was the last and greatest example of commercial supremacy in the pre-industrial age. For a hundred years England had been consciously following her example. It has been noticed that the English Navigation Acts were designed to encourage shipping and to make England an entrepôt for colonial staples.<sup>1</sup> Tobacco from Virginia and sugar from the West Indies were to come in the first instance to this country in British ships. This was obviously an attempt to take advantage of colonization to build up a commercial position similar to that of Holland. Contemporaries pointed to the quantities of tobacco and sugar imported as a proof of the success of this policy. This trade was unfavourable to the Mother Country in the sense that the value of the imports greatly exceeded that of the exports. In other words, sufficient goods could not be sent directly to Virginia and the West Indies to pay for the tobacco and sugar. But this did not alarm contemporaries. They considered the profits of the shipping employed to be of great national importance. The tobacco and sugar were re-exported in large quantities to the continent of Europe. This contributed to the creation of a favourable trade balance there. Trade with the Southern Colonies and the West Indies had also to be taken in conjunction with that of West Africa. Heavy exports to Africa, with practically no direct imports, were called for by the slave trade. The slaves were transported across the Atlantic and sold there, thus supplying the tobacco and sugar planters with cheap labour. The whole system, indeed, was frankly regarded as resting on slavery.<sup>2</sup> That individuals made great fortunes is proved by the influence

<sup>1</sup> See page 124.

<sup>2</sup> "The labour of negroes is the principal foundation of our riches from the Plantations."—WILLIAM WOOD: *Survey of Trade* (1718).

wielded by the West Indian interest in domestic politics in the eighteenth century. Lord Shelburne declared that "there was scarcely ten miles together throughout the country where the house and estate of a rich West Indian were not to be seen." One estimate, made towards the end of the century by an observer who knew the West Indies well, was that £70,000,000 had been invested there. In India the position of the East India Company, first as a trade monopolist and then as virtual owner of large areas, presented similar opportunities for investment.

The commercial pre-eminence that England had thus attained by following the Dutch lead was challenged by France, both in the East and in the West. Colbert, Louis XIV's Finance Minister, was a convinced exponent of Mercantilism. He wished to promote domestic manufactures and develop colonies. The steps that he took caused alarm in England. It was assumed that trade with France would necessarily be unfavourable to this country if it was carried on with any degree of freedom. So a tariff was adopted in 1678, which placed duties, in many cases so high as to be prohibitive, on French goods. Political considerations prevented any modification of this tariff until 1786. The Tories, indeed, advocated more liberal principles, and actually tried to embody lower duties on French commodities and the most-favoured-nation treatment as a general rule in the terms of the Treaty of Utrecht (1713). But these proposals were defeated. In the next decade serious concern arose about the sugar trade. England's position in the European markets was becoming weak. The French made such progress that by 1740 they had practically captured them. It was, in fact, impossible for the cultivators of the exhausted soils of Barbados and the Leeward Islands to compete with the French planters in Martinique and

Guadeloupe. But naturally the British West Indian interest wanted to safeguard their investments. They attempted, by means of the Molasses Act (1733), to prevent the New England colonists from supplying the French with provisions and other necessaries.<sup>1</sup> In 1739 they gained the right to export sugar direct to the continent of Europe on the ground that the costs of sending it by way of England reduced its competitive strength. These measures proved of no avail. The colonial position was further complicated by the fact that the French had settlements in Canada and Louisiana. Alarmists alleged that they, with the help of the Indians, would some day drive the English colonists into the sea. British success in the Seven Years' War offered the opportunity for dealing with these questions. In the West Indies, Martinique and Guadeloupe had been captured, and the defeat of Montcalm meant the surrender of Canada. When negotiations for peace were opened it became clear that France would not give up both her West Indian Islands and Canada. The question which she should cede raised a fundamental issue. On the old view of the value of sugar as a re-export there could be no doubt. With Martinique and Guadeloupe, Great Britain would recapture the European markets. Canada was of little immediate use: a liability rather than an asset. Probably public opinion in Great Britain would have decided in favour of retaining the islands. But this did not suit the West Indian interest. They saw their investments imperilled if the French islands were kept within the British system. So they were restored to France. It was an important decision. Although taken at the dictation of the West Indian interest, it marked the decline of their influence. The course of British commerce had insensibly changed. It was coming more and more to rest on the

<sup>1</sup> See page 126.

export of manufactured goods produced at relatively low costs because of the invention of new machinery.

Mercantilist opinion, it has been noticed,<sup>1</sup> had always regarded the Northern Colonies with suspicion. They could not supply commodities which differed from those produced in the Mother Country. There was an ever-present danger that they would undertake manufactures, and thus become economically fairly independent. Acts were passed to prevent the development of the woollen industry and to restrict the colonial ironmasters to the production of pig-iron as the raw material of British manufactures. These regulations probably had little effect. The colonists were always tempted to push out towards the west, and the labour market was therefore so limited that would-be industrialists had little opportunity to set up manufactures. By 1760 there were about 800,000 whites in the colonies north of Maryland. It was largely an agricultural population which was attempting to live up to a Western European standard of comfort. Consequently it was a potential market for all kinds of manufactured goods, and of much more importance than that of the predominantly slave populations of the West Indies, for the fact had to be faced that the white population in the sugar islands was stationary at about 40,000. This number could only be maintained by immigration, for the mortality among children was high, and adults were frequently the victims of tropical diseases. The result of the growth of the Northern Colonies was shown in trade statistics. By the middle of the century the demand for manufactured goods had so increased that the trade of the Mother Country with the continental colonies as a whole became favourable to her. In other words, the unfavourable balance with the plantation colonies of the South, which was mainly due to the

<sup>1</sup> See page 124.



tobacco trade, was eliminated by the purchases of the North. Great Britain was supplying this demand for manufactures. Her commerce had stimulated industry. The response to this stimulus gave her the economic leadership of the world. The transition was not immediately recognized. It came about in spite of the teachings of the Mercantilists, and it was marked by the loss of the very colonies that had contributed so much to effect it. But political loss did not prove to be synonymous with economic loss. The United States required British manufactures.

## SECTION 23

### THE WOOLLEN AND WORSTED INDUSTRIES<sup>1</sup>

"The woollen manufactures of Great Britain are the general wear in all the countries in Europe—go where you will, you find it: 'tis in every country, in every market, in every trading place; all the world wears it, all the world desires it, and all the world almost envies us the glory and advantage of it."—DANIEL DEFOE: *A Plan of English Commerce* (1728).

UNTIL the later decades of the eighteenth century, the wool textile industry was without question the staple industry of England. Its development had been primarily due to the native supply of wool of good quality. As foreign immigrants introduced the knowledge of the more skilled processes of manufacture this natural advantage was exploited to the full. In our climate there is a constant demand for the finished article, and the district which could best meet it had the opportunity, as means of transport improved, of specializing in production. References have already been made to the consequences of the growth of the industry—the break-up of the gild system,<sup>2</sup> the competition of the country workers with those of the chartered towns,<sup>3</sup> the resort to enclosure for sheep-rearing,<sup>4</sup> and the efforts to profit from geographical discoveries by finding new markets for cloth.<sup>5</sup> Towards the end of the seventeenth century, Gregory King estimated that the annual national income of England was £43,000,000, and that the woollen manufactures accounted for £8,000,000 of this total. Naturally the expansion of English commerce would be reflected in increasing exports

<sup>1</sup> The distinction between woollens and worsteds is based on the length of wool used and the method of treating it. Woollens are made from short wool which is carded, and worsteds from long wool which is combed. Woollens are shrunken until the weave pattern is obscured while in worsteds it can be seen.

<sup>2</sup> See page 71. <sup>3</sup> See pages 94–96. <sup>4</sup> See pages 88–90. <sup>5</sup> See page 75.

of woollen goods, for they were the chief means of paying for imports. But the Mercantilists were not content to allow the laws of supply and demand to take their course. They made attempts to ensure that there should be markets. The export of raw wool was prohibited in order to deprive possible European competitors of supplies. Ireland and the Colonies could be dealt with more directly. The English Parliament in 1699 passed an Act which forbade the export of all goods made or mixed with wool from Ireland so as to eliminate that country from international trade in cloth. Similar legislation was adopted to prevent the American Colonies from developing a woollen industry and thus becoming less dependent on English manufactures.<sup>1</sup> Diplomacy was also exercised to gain access to foreign markets. The best example is the Methuen Treaty with Portugal, which was negotiated in 1703. The Portuguese Government agreed to remove the existing prohibition on the import of English woollens in return for preference on their wines entering England.

The woollen industry was the first to exhibit the tendency towards localization. While the manufacture of cloth for domestic use was general throughout the country, three areas were specializing in production as early as the fifteenth century. They were the West Country, East Anglia, and the West Riding of Yorkshire. In the West Country—particularly Somersetshire, Wiltshire, and Gloucestershire—woollens of the finest quality were made, their broad cloth enjoying a high reputation at home and abroad. Defoe found here a "prodigious manufacture" in the early eighteenth century. He states that it was calculated that over a million persons were engaged in spinning and weaving. The area was well supplied with water, and great flocks of sheep were grazed on the Cotswolds and in Dorsetshire. In

<sup>1</sup> See page 125.

East Anglia the worsted industry had developed during the fourteenth century in the small towns and villages grouped round Norwich. The immigration of weavers from the Low Countries in the reign of Elizabeth gave fresh life to the district. It became the centre of the "new draperies," a term which included a variety of finer cloths, the making of which required a high technical skill. Defoe says the east part of Norfolk was "very populous and thronged with great and spacious towns." Sudbury in Suffolk and Colchester in Essex were the chief centres of the industry in those counties; but, as in Norfolk, the manufacture was spread over the whole countryside. The West Riding industry was later in achieving importance, but it was destined to eclipse the other two areas. Its chief product was the coarse cloth called "kersey," until worsted was introduced towards the end of the seventeenth century. With its resources in the supplies of wool and its many streams, Yorkshire was beginning to show by the middle of the eighteenth century competitive superiority over the older centres in the south. Leeds had a famous cloth market, Halifax made kersies and shalloons, Wakefield paid particular attention to the finishing processes, and Huddersfield and Bradford were making steady progress. But the industry was by no means confined to the towns. Defoe describes the country as "one continued village," with hardly a house out of speaking distance from another; and he adds that "every considerable house was a manufactory."

The industry was still in the domestic stage. Spinners and weavers did their work in their own homes. But the distribution and collection of material in an industry of such proportions obviously involved a high degree of organization. This function was performed by classes of middlemen, who had to have command of considerable capital. The system was, therefore, definitely capitalist.

It survived because, as the industry was then carried on, the domestic basis offered the greatest economies. If capitalist middlemen could have made higher profits by congregating workers in large establishments, they would have done so. Their control was complete. Since the wool clip of a year was on hand at the time of the shearing, it was an expense for the farmer to hold or for the clothier to buy before he required it. So the wool merchant bought the clip and sold it as it was wanted. When he sorted the wool and so offered the clothier particular qualities, he was called a wool stapler. If he organized the spinning of the wool—an important function, since the localization of spinning did not correspond with that of weaving—he was a yarn merchant. In order to keep the weavers as fully employed as possible in the chief centres of the industry, it was necessary to send wool to be spun all over the country. Defoe says that wool was carried from the Eastern counties to be spun in Westmorland, and the yarn was brought back to Norwich. The clothier, who was the true *entrepreneur* of the system, had the option of buying raw wool direct from the farmer, or the kind of wool he wanted from the wool stapler, or yarn from the yarn merchant, the course he took depending largely on the amount of capital he had. The smaller men would buy from the yarn merchant. The characteristic function of the clothier was the organization of the manufacture. In the West Country the clothiers were wealthy and influential. The workers depended on them for employment, since they could not get the material they wanted or market their product except through them. In Yorkshire the "clothiers" were themselves manual workers, buying wool from the dealers and selling their cloth in the open market. They enjoyed, therefore, a degree of independence of merchant middlemen. In Halifax, where short staple wool of poor quality was used, they were

freer from control than in Bradford, where long staple wool was used. This points to the conclusion that where more primitive conditions survived, capitalism played a smaller part. In East Anglia the organization was more complex. The master combers who gave out wool to be combed for the worsted industry were wealthy merchants. There were clothiers who employed weavers and finishers, some who confined themselves to finishers, and others who had their cloth finished in London. But weavers who bought their material and sold their cloth themselves were quite common.

The control exercised by merchant middlemen was due to the capital they could apply to the buying of raw material in large quantities, to the organizing of its distribution and collection, and, finally, to the arranging for its sale. Those engaged in marketing fell into three main classes. There were the travelling dealers who attended fairs and markets and bought wholesale from the local clothiers, and then supplied the shops, usually on credit terms. There were the merchants who bought cloth from the clothiers and had it carried to London, where it was disposed of for them by the factors at Blackwell Hall.<sup>1</sup> Bitter complaints were made about the activities of these factors, and the clothiers actually appealed to Parliament in 1695 for protection against their exactions. But the factors performed a useful function, though they may have charged too heavily for their services. They allowed the merchants and clothiers who employed them to draw upon them by means of inland bills of exchange before their cloth was sold or before the drapers, who normally required six months' credit, had paid for it. Finally there were the merchant exporters, who had their agents in foreign countries. From the end of the seventeenth century they were free to export where

<sup>1</sup> See page 70.

they wished if they respected the monopoly of the Levant, Eastland, Muscovy, and African companies. The extent of their trading and the profits they derived from it greatly impressed contemporaries. Probably the annual value of exported woollen goods at the beginning of the eighteenth century reached £3,000,000 sterling, which was about half of that of the total export trade of the country. The size, complexity of organization, and capitalist basis of the woollen and worsted industries are important facts. A proper understanding of them dispels the illusion that inventions effected a revolution. Circumstances had brought about great changes in the staple industry of England in the late seventeenth and the early eighteenth centuries. In externals it seemed to have preserved its traditional form. No technical improvements had been made which needed the abandonment of the domestic system. John Kay's fly-shuttle, which was invented in 1733, was a device which could be attached to the ordinary hand-loom. But behind the outward form far-reaching economic changes may be detected; the method of production was retained, but the organization had become much more complex. The growth of the capitalist control, which accompanied the development of the industry, was an indication of what would happen when mechanical inventions were adopted. The domestic system could offer no resistance, because it had already been completely undermined.

## SECTION 24

### THE COTTON INDUSTRY

"From the year 1770 to 1788 a complete change had gradually been effected in the spinning of yarns. That of wool had disappeared altogether, and that of linen was also nearly gone; cotton, cotton, cotton, was become the almost universal material for employment."—WILLIAM RADCLIFFE: *The Origin of Power-Loom Weaving* (1828).

THE history of woollens and worsteds illustrates the gradual development of technique and organization in well-established industries as an increasingly wider market for cloth was found. Cottons sprang from obscurity into the first rank within half a century. The contrast supplies some indications of how industrialization came about. Public policy was directed to the fostering and protecting of the interests of the woollen and worsted industries. There seemed to be very little prospect in the first part of the eighteenth century that the manufacture of cotton goods in this country would ever challenge their supremacy. Since cotton is a sub-tropical plant, every ounce of it had to be imported. Small quantities had come from the Levant and had been used in the making of textiles at least as early as the sixteenth century. But probably none of these fabrics were pure cottons. The coarse yarn then spun was woven as weft with linen warp to make fustians. Native spinners could not compete with Indian workers, whose fine yarns were suitable for calicoes and muslins. The danger which contemporaries apprehended, indeed, was that the East India Company would do serious damage to the woollen industry by importing large quantities of Indian fabrics.<sup>1</sup> Steps were taken to avert this, but the possibility of

<sup>1</sup> See page 119-120.



competition from English cotton goods was hardly considered. An Act was passed in 1700 which prohibited the import of printed or dyed calicoes—unless they were warehoused for re-export—so as “to preserve and encourage the woollen and silk manufactures.”<sup>1</sup> The result was that plain calicoes were imported and printed here. Protests against this led to the Act of 1721, which extended the prohibition to the use or wear of any kind of calicoes.<sup>2</sup> The woollen industry suggested that this meant that printed fabrics which contained cotton could not be offered for sale within the country. Such an interpretation would have covered printed fustians, for which the prohibition of Indian goods had created a demand. This was not the intention of the legislature, and the position was made clear by the Act of 1735—commonly called the “Manchester Act”<sup>3</sup>—which safeguarded the interests of “the ancient fustian manufacture of this kingdom.” The effect was that the woollen industry, in obtaining the prohibition of Indian textiles, had quite unintentionally secured protection for the nascent cotton industry. It made steady progress in the next thirty years. The import of raw cotton increased from 1,545,000 lb. in 1730 to 3,870,000 lb. in 1764. But pure cotton goods could not claim the benefits of the “Manchester Act.” When important technical inventions made it possible to manufacture them by the beginning of the 'seventies, the Act of 1735 became a bar to progress. It was repealed in 1774,<sup>4</sup> largely through the representations of Richard Arkwright.

Although imported cotton-wool (as it was generally called) was used in textile manufactures in a variety of places, the localization of the industry in Lancashire, especially around Manchester and Bolton, became very

<sup>1</sup> 11 and 12 Wm. III, c. 10.

<sup>2</sup> 7 Geo. I, c. 7.

<sup>3</sup> 9 Geo. II, c. 4.

<sup>4</sup> 14 Geo. III, c. 72.

marked as it developed. Like the woollen industry, it was organized on the domestic basis. There were merchant middlemen, who supplied the spinners and weavers with material. Fustian masters, in particular, gave out raw cotton and linen to the weavers, who made their own arrangements for the spinning of the cotton. When the cloth was made, it was collected by the fustian masters and marketed through other classes of merchants. It would appear that there was a growing demand for it in Europe and in the American Colonies during the first half of the eighteenth century. The problem of textile industries in the domestic stage was that of adjusting the output of the spinners to the requirements of the weavers. In the woollen industry the wide area over which spinning was distributed made it easier to solve the difficulty. Still, weavers were often held up by lack of yarn, and, unless they had other resources, as, for instance, a small holding or a craft, the discontinuity of employment was a real hardship. In the cotton industry spinning was confined to a narrower region. Consequently it was not so easy to expand the supply to meet an increasing demand. This explains the constant preoccupation with the question whether improved methods of spinning could be invented. Kay's fly-shuttle, which gave the weaver greater efficiency, merely accentuated the difficulty. The first attempt to improve spinning was made by John Wyatt and Lewis Paul. A patent was registered in 1738 for spinning by rollers, but for reasons that are not quite clear the machine did not prove a success. The rights of Wyatt and Paul expired in 1752. About the middle of the 'sixties, James Hargreaves of Blackburn invented a machine which could be worked by hand. It simply multiplied the number of spindles a spinner could operate at the same time, the first spinning-jenny, as it was named, having eight spindles.

This invention was followed by that of Richard Arkwright, who, in 1769, patented his machine for spinning by rollers. Since it required power to drive it, Arkwright's invention marks an important new departure. The water-frame did not fit into the domestic structure of industry. How far Arkwright picked other people's brains when he constructed his machine is an interesting question. But, even if he stole the idea from someone else, he must be credited, for good or ill, with the driving force and organizing power which effected the transition from the domestic to the factory stage in cotton spinning. After an experiment at Nottingham, Arkwright built a mill at Cromford, near Derby, in order to take advantage of the power supplied by the Derwent as it flows through a gorge. In 1779 this mill is said to have contained several thousand spindles and to have employed 300 workpeople. Meanwhile, he had erected other mills in Derby, Belper, and Birkacre. Both Hargreaves and Arkwright took their inventions at first to Nottingham, partly because there was less hostility to machinery in the hosiery industry, and partly because they found there a readier market for the yarn they were able to spin. But with the building of the mill at Birkacre, near Chorley, Arkwright returned to Lancashire. In 1780 he put up a large factory in Manchester itself. It is said to have cost him and his partners £4,000 and to have been capable of employing 600 workpeople. With his patents—for he held several—Arkwright's position, though not unassailed by rivals, was a strong one. His method was to finance enterprises by entering into separate partnerships in different places. He also allowed mills to be equipped with his machinery under licence. But his real talent was proved when his patents were annulled in 1785, for he retained leadership in the industry and had amassed a fortune of half a million pounds at the time of his death in 1792.

Inventions undoubtedly played a decisive part in the transformation of the cotton industry. They made it possible to spin yarns which combined strength and fineness. With Arkwright's water-twist pure cotton goods could be made, there being no longer any need to use linen as warp. But the twist was too coarse for muslins. Samuel Crompton, who had experience in spinning from his early boyhood, set himself to contrive a machine which would spin a fine yarn. Apparently he succeeded in 1779. His invention, known at first as the "muslin wheel," included the principles of the spinning-jenny and of the water-frame, with important modifications of them. Nicknamed the "mule," Crompton's invention solved the problem of fine spinning. He did not seek a patent, but handed over the machine to the trade on the understanding that those who profited from it would make a subscription for his benefit. The results were meagre, and he died a disappointed man. Mule spinning was rapidly adopted in England and Scotland. It was estimated that in 1785 the output of muslins in Great Britain was about 50,000 pieces. Indian skill was now excelled by machinery, and the way was prepared for the invasion of Eastern markets by the cheap products of Lancashire. William Radcliffe has described the concentration on cotton spinning in the township of Mellor, near Stockport, where, he tells us, the demand for "the mule-twist . . . the water-twist and common jenny yarns . . . put all hands in request, of every age and description." The career of Samuel Oldknow illustrates the transition from the function of the merchant middleman to that of the manufacturer. He began by giving out raw materials to spinners and weavers to be worked up according to his instructions. But step by step he became a direct employer of labour in his own works. He did his own bleaching and printing; then he set up spinning

mills and even a loom house for specially skilled weavers. Robert Owen's account of the origins of the cotton mills at New Lanark throws a flood of light on the problems which the manufacturer had to face. David Dale, a Glasgow merchant, chose the site because the Falls of Clyde provided the water-power required to drive the machinery. But the district was sparsely inhabited, and "all the regularly trained Scotch peasantry disdained the idea of working early and late, day after day, within cotton mills." To get the requisite labour, 500 pauper children were taken from Edinburgh and lodged in a large house erected for the purpose. A village was built, and an attempt made to attract adults by offering the houses at low rents, but "only persons destitute of friends, employment, and character, were found willing to try the experiment." No doubt Dale's difficulties were greater than those of the manufacturers in Lancashire, for there was not a decaying domestic industry to make his task easier. Still, so long as water-power was essential, mills had to be in out-of-the-way places, and labour could best be secured by having resort to pauper children. The stimulus of prospective high profits led many unscrupulous employers to exploit the advantages of the moment. The rush to spinning was so great that there was a serious crisis in 1788-89, because the market was overstocked. For some years such congestion recurred periodically until the industry had arrived at some kind of equilibrium. Changes were taking place in methods of production, fresh sources of supply of raw cotton were opening up, and new markets had to be found for the manufactures. Before 1790 insignificant amounts of cotton had come from the United States, the main supplies being from Brazil and the West Indies. In 1791 50 per cent of the cotton was imported from Portugal, where it had been shipped from her colony, Brazil. This cotton was of a quality suitable

for the muslin industry. One curious result of this development was that the balance of trade with Portugal, despite the operation of the much-vaunted Methuen Treaty, became unfavourable to Great Britain. But the growing of cotton in the Southern States made rapid progress in the last decade of the century. In 1792 Eli Whitney, a teacher in Georgia, perfected his cotton-gin, which made it possible for a slave to clean 300 lb. of cotton a day. American cotton thus became marketable, and the planters turned their slave labour to its cultivation. By the beginning of the nineteenth century the United States had taken the first place as the source of raw cotton. Liverpool's position as the great cotton port was assured, and the localization of the industry in Lancashire confirmed.

## SECTION 25

### THE IRON INDUSTRY

"It is an all important fact of this subject that the ore is carried to the fuel, not the fuel to the ore."—W. STANLEY JEVONS: *The Coal Question* (1865).

IRON was a necessary on the medieval manor. It was supplied by smiths, who crushed the ore, mixed it with marl and lime, heated the mass by means of a charcoal fire, and subjected it to successive hammerings until the impurities were removed. The iron thus produced was good quality "wrought" or malleable iron, suitable for making agricultural implements and other such articles. Forges, where this process was carried on, were to be found in many parts of the country, but the total output was small. Apparently the art of bringing the metal to the melting point so that it could be run out into moulds was not introduced into England until the fifteenth century. It was then employed by alien immigrants in the casting of cannons. From the Tudor period the distinction between the forge and the furnace is well marked. Forges continued to use the old methods, though to an increasing extent they secured "pigs," i.e. iron which had been smelted at the furnaces, as their raw material. This cast iron was reheated and refined or made malleable.

In many cases forges and furnaces were associated with the same enterprise, and iron "works" were set up. Examples may be quoted from the sixteenth century. The lands of the Cistercian Abbey of Robertsbridge, in Sussex and Kent, passed at the dissolution into the hands of Sir William Sidney, and he set up a forge and furnace on them in 1541. Detailed accounts of these ironworks

are extant.<sup>1</sup> They show that a variety of workpeople were employed—dykers, masons, sawyers, and carpenters on construction work and repairs, and colliers, miners, furnace fillers, founders, and fyners in the actual making of the iron. The regular workmen seem to have been paid piece rates. The colliers, who prepared the charcoal from timber, received so much a ton. Hammermen and fyners were paid on the same basis. The Sidney family extended their operations with the assistance of skilled ironworkers who were induced to come across from Germany. Later, Sir Henry Sidney was a member of a partnership which developed the industry in Glamorgan. The records of the Sidneys illustrate the chief features of the iron industry in Tudor times. The initiative was taken by a landowner who had capital at his disposal and obtained additional resources by admitting others into partnership. The workers were definitely wage earners paid on the basis of output. On technical points it was necessary to appeal to the metallurgical knowledge of German iron workers.

The iron industry, therefore, did not pass through the phases so characteristic of the textiles. In general outline the organization remained the same. Works were set up by capitalists and they employed workpeople. Expansion meant enlarging the producing unit and did not involve a transition such as that from the domestic to the factory system. The explanation of this is fairly obvious. A considerable initial capital outlay was essential. The industry could only be established by those who had access to land where ore could be dug and timber cut. It had none of the characteristics of a town handicraft. The main determining factor in its localization was that of fuel. Until the eighteenth century

<sup>1</sup> See Historical Manuscripts Commission Report on the Manuscripts of Lord de L'Isle and Dudley (1925), pages 305-321.



furnaces required charcoal, and consequently they had to be erected in wooded areas. At first districts where both ore and timber could be obtained were naturally chosen. From the sixteenth to the eighteenth century the Weald, which includes parts of Kent, Surrey, and Sussex, was the largest iron-producing centre in England. Enterprise in the Forest of Dean, South Staffordshire, Shropshire, and elsewhere was on a less extensive scale. The consumption of timber by the furnaces caused alarm as early as 1543, when an Act was passed which required that so many trees to the acre were to be left standing. The Weald was exempt from this provision. In the reign of Elizabeth, however, the policy of conservation of timber was developed and ironworks were not to use wood which grew within so many miles of the Thames or of the sea coast. This legislation seemed called for in the interests of shipbuilding. It is doubtful whether it had much effect; but it was an expression of the opinion that the iron industry would have to be restricted because the country could not supply fuel for its expansion. In the seventeenth century it was generally recognized that, apart from some new discovery, smelting would have to be gradually abandoned within the country. It was encouraged in Ireland, which was still well wooded. Richard Boyle, the Earl of Cork, is said to have made £100,000 from iron furnaces. Munster was in a comparatively short time denuded of trees. The policy of promoting smelting by admitting iron—bar or pig—while excluding iron manufactured articles was also applied to the American Colonies, where there were abundant timber resources.<sup>1</sup> English iron manufacturers, it was hoped, would thus be able to get raw material without depending so much on supplies from the Baltic. As a matter of fact the largest import of American bar iron for a single year

<sup>1</sup> See page 146.

was 2,200 tons, which must be compared with the 43,600 tons of foreign bar iron imported, mostly from Russia and Sweden, during the same year. The highest figure for American pig iron was 53,000 tons in 1771. In the later stages of the charcoal period the English market depended to a growing extent on Baltic supplies of iron. The home industry was quite obviously decaying. In the second quarter of the eighteenth century the total national annual output of bar iron was less than 20,000 tons, and that of pig iron did not greatly exceed this amount.

The idea of using coal in the iron industry had attracted some attention as early as Elizabeth's reign, when a patent of monopoly had been granted for the purpose. But apparently nothing was done. In 1611 Simon Sturtevant definitely proposed to smelt iron with coal, and held a patent for a short time. His account of how he treated the ore and coal is not intelligible. It would seem that his practical experiments were also unsatisfactory. More imposing claims were put forward by Dud Dudley in his *Metallum Martis* (1665). According to his own account, when he left Oxford he had charge of a furnace and two forges at Pensnet in Worcestershire. Almost at once he succeeded in smelting iron with coal, and in 1621 his father, Lord Dudley, secured a patent for the process. The circumstances are suspicious. A young man of twenty-one years of age, recently down from Oxford, is hardly likely to have solved the problem in such a short time. In his book he alleges that the opposition of rivals, floods, debts, and eventually the outbreak of the Civil War in 1642, ruined his enterprise. Even those who lend credence to his statements have to admit that his secret died with him; others are inclined to believe that he greatly exaggerated what he achieved and made the most of his misfortunes as a means of cloaking his failure. Experiments continued as the shortage of timber

became more serious. Smelting had been established in the wooded district of the Severn, where it winds through the old forest of Wrekin. Here the problem of the new fuel was destined to be solved. In 1708 Abraham Darby, a Quaker iron master who had devoted special attention to castings, went to this area from Bristol and leased the furnace and forges at Coalbrookdale. Four years previously he had been in Holland studying Dutch methods of casting iron pots and other utensils. He began with experiments in casting in sand instead of loam. Then it occurred to him that, since raw coal proved to be unsuitable for smelting, it would be worth while to try coal which had been reduced to coke. The records of his works prove that he was buying fairly large quantities of coal from 1709 onwards. On the basis of the improved and cheaper method of casting, and the discovery of the use of coke for smelting, the Darby family was able to build up a considerable business. It is remarkable, however, that the lead was not immediately followed in other districts. Probably part of the explanation is that others did not find the process satisfactory with the coal they used. Darby himself recognized that a particular kind of coal was necessary for the best results. At that date, also, such castings as he made were not an important section of the iron industry. So it took time for the method he had evolved to extend to furnaces in general. This did not happen until the second half of the eighteenth century. Then John Wilkinson undertook casting at the family works at Bersham, near Wrexham, at new works at Broseley, near Coalbrookdale, and at Bradley, near Bilston in South Staffordshire. As the Wilkinson business developed, deposits of iron ore and coal mines were secured and a market found for its products at home and abroad. Dr. John Roebuck founded the Carron ironworks in Scotland, and put the first furnace into blast on 1st

January, 1760. In the same year John Guest went from Broseley to Dowlais in Glamorgan, and Richard Crawshay some years later assumed control of the well-known works at Cyfarthfa. These large-scale enterprises turned out such great quantities of cast iron that the whole position of the industry was revolutionized. Iron and coal had been brought into relation, a fact which more than any other explains the industrial leadership which Great Britain now definitely assumed.

Darby's invention made it possible greatly to increase the output of cast iron; but its uses are limited by the fact that it breaks under strain. To refine the iron obtained from the furnaces, charcoal was still necessary. Roebuck attempted to produce malleable iron by using coal at Carron, but failed to perfect the process. In 1783 and 1784 Henry Cort of Gosport, who had a forge and slitting mills at Fontly in Hampshire, brought a series of experiments to a successful issue. Briefly stated, he heated the pig iron with coal in a reverberatory furnace and then stirred or "puddled" it until impurities were consumed. The metal was then passed at welding heat through a rolling mill. Puddling and rolling made it possible to prepare malleable iron which could be employed in the construction of machinery. Other improvements, such as the powerful blast driven by the steam engine, followed Cort's inventions. The new iron industry was an essential basis of the machine age, and it also profited from machinery. Dependence on coal dictated the localization of the industry. Coal-mining, which had hitherto made little progress except in the Newcastle district, was now stimulated, especially in the Midlands, South Wales, and Scotland. Its problems, such as penetrating to deep seams and dealing with water, were met by the adoption of machinery, and this promoted a further demand for iron.

## SECTION 26

### THE STEAM ENGINE

"I shall never forget Mr. Boulton's expression to me, 'I sell here, Sir, what all the world desires to have—POWER'. He had about seven hundred people at work. I contemplated him as an iron chieftain, and he seemed to be a father to his tribe."—JAMES BOSWELL: *Life of Johnson* (Visit to Soho Manufactory, Birmingham, in 1776).

IN the pre-industrial age the work of the world was mostly done by man's own muscular effort. He had the assistance in heavier tasks of the ox and the horse; but science gave him little control over the forces of Nature. In favourable circumstances, wind and flowing water were employed to drive wheels. Flour mills, fulling mills, and ironworks depended very largely on water power. It has already been noticed that the new spinning machinery required considerable motive force, and that Richard Arkwright built a factory at Cromford and David Dale chose New Lanark because in each case the river could easily be harnessed.<sup>1</sup> For some years, indeed, cotton spinning was so dependent on water power that it was the main factor in determining localization. But future development clearly demanded mechanical power which could be used anywhere. In some cases it was impossible to take the work to the power. Mines subject to flooding presented such a problem. It is significant, therefore, that the early efforts to use steam power were applied to the pump. Thomas Savery invented what he described as "an engine to raise water by fire" (1698) in order to meet the difficulties encountered in the Cornish copper mines, where, after a certain depth, water impeded the work. His main idea was to create a partial vacuum in a

<sup>1</sup> See pages 157 and 159.

tank by cooling it when it was full of steam. Atmospheric pressure would cause the water to rise through a pipe and fill the tank; then steam could again be used to force it upwards through another pipe. This engine, with its succession of taps, was slow and cumbersome, and since the steam pressure could not be measured, it was extremely dangerous. It was superseded by Newcomen's engine, which was invented in 1705 or 1706, but was not made quite practicable until about 1720. The principle was simply to condense steam in an upright cylinder and thus cause the weight of the atmosphere to lower the piston. Successive filling of the cylinder with steam and then cooling it to effect condensation gave an up-and-down motion. The cooling of the steam was at first brought about by pouring cold water on the cylinder, but by a later improvement a jet of water was sprayed into it. By an elaborate system, the whole process of opening and closing taps was made automatic, and a safety valve removed the danger of explosion. The engine was pretty widely adopted in mines, and for pumping water in connection with town supplies and canals. It was even applied indirectly to manufacture. In 1743 an engine was erected at Coalbrookdale to pump back the water which had passed over the wheels, thus making it possible to get continuous working of the blast in dry weather when there was shortage of water. This device was adopted elsewhere.

Newcomen's engine was a great consumer of coal because the steam in the cylinder was condensed by cooling the cylinder itself. It was obvious that great economy would be effected if the necessity for this cooling of the cylinder after every stroke of the piston could be eliminated. But how this could be done was not at all apparent. In the winter of 1763-64 James Watt, who was employed at Glasgow College to make and repair scientific instruments, was called upon to put a model of

Newcomen's engine into working order. He saw that the engine did not make the best use of steam. It was not until May, 1765, that, walking one Sunday across Glasgow Green, the idea came into his mind that "as steam was an elastic body, it would rush into a vacuum, and if a communication was made between the cylinder and an exhausted vessel, it would rush into it and might be there condensed without cooling the cylinder." The conception of the separate condenser was the most brilliant single improvement ever applied to the steam engine. Watt found by experiment with a model that it solved his problem. Instead of using atmospheric pressure and cooling the cylinder, he encased his cylinder and employed the expansive power of steam to raise the piston, while the vacuum created by the exhaust into the condenser gave him the down stroke. It was, however, one thing to demonstrate that the principle would work in a model and another to construct a large engine for industrial use. There were two main difficulties. Watt was a poor man, and the erecting of an engine was expensive. Even more serious was the fact that the mechanism of his engine involved much more precise workmanship than that required in a Newcomen engine. The cylinder, since it was closed and the piston within it was driven up by steam pressure, had to be bored true. Watt found that engineering skill was not capable of giving him what he wanted. For nine years he made comparatively little progress. In fact, he was not continuously employed at the engine, for he had to undertake work as a canal surveyor in order to make a living. But he was fortunate in getting the financial assistance of Dr. John Roebuck of the Carron ironworks. It was at Kinneil House, near Linlithgow, where Roebuck resided, that Watt constructed his first engine. The agreement was that Roebuck should enter into partnership with Watt, taking over his existing

debt, supplying him with means to perfect the engine, and paying the expenses of the application for patent rights. In return, he was to have two-thirds share in future profits. But Roebuck's commitments in other directions—at Carron, and particularly in coal mines and salt works at Bo'ness—overstrained his resources, and he was forced into bankruptcy. Matthew Boulton of Birmingham was among his creditors. Watt had visited Boulton's new factory at Soho in 1768, and had admired the excellent arrangements there. Boulton was very anxious to secure an efficient engine, for the local water power often failed him. It was now arranged that Roebuck should transfer his rights in Watt's invention to Boulton in discharge of his debt to him. The Kinneil engine was taken to pieces and the metal parts sent to Birmingham.

Matthew Boulton had succeeded his father as a maker of Birmingham "toys"—steel buttons, metal buckles, watch chains, etc.—and moved the business from Snow Hill to a new site in Handsworth, where he built a well-designed factory and set himself to manufacture new types of goods, such as bronze ornaments, chandeliers, plated goods, and a great variety of other articles. His reputation as "the first manufacturer in England" was well established when he was offered the opportunity of taking up the exploitation of Watt's patent. The new partnership, destined to achieve such fame, was an extraordinary combination. Watt was always subject to fits of despondency, in which he undervalued his work and despaired of ever bringing it to complete fruition. Boulton never lacked courage, and difficulties brought out his mastery over circumstances. An extension was secured for Watt's patent for another twenty-five years from Parliament, that is from 1775 to 1800. So that the records of the firm of Boulton and Watt, which are preserved in the Birmingham City Library,



indicate the extent to which the steam engine was applied to industry in the last quarter of the eighteenth century. When Watt had sufficiently perfected his designs to offer to install engines for customers, the organization of the business was a great demand on Boulton's capacity. It must not be supposed that Soho was at once converted into an engine-building works. Some of the most important parts were made elsewhere and sent direct to the place where the engine was to be assembled. The bored cast-iron work—cylinders and pump barrels—came from Coalbrookdale, Carron, or the Wilkinson works at Bersham or Broseley. Boulton and Watt ordered such parts from the makers on the customer's account, and sent members of their staff to supervise erection. Some of the finer work was done at Soho itself under Watt's personal direction. The main orders for some years came from the Cornish copper mines. Arrangements had to be made for the several parts to be taken to the coast and shipped to Cornwall. From Soho they were carted to the canal and then taken to Stourport for Gloucester or Bristol. This involved two transshipments and took much time. The customer paid directly to the various manufacturers for the parts. Boulton and Watt received an annual payment calculated in a peculiar way. Their claim was that their engines were much more economical in the use of coal than the ordinary Newcomen type. One-third of the cost of the coal saved had to be paid annually to the firm of Boulton and Watt for the duration of their patent. Since this arrangement merely provided for an annual premium, there was not a capital turnover sufficiently large to pay for extensions of the manufacturing plant at Soho. It was not until 1795 that the firm established its own foundry on a site about a mile from the original works. Here they undertook an increasing number of processes in the manufacture of the engines.

From the point of view of demand, it must be remembered that the engine was a pump until Watt invented his rotative motion in 1781. Then it was possible to use it for the direct driving of machinery. Up to 1785 one-third of the engines made were to be found in the Cornish copper mines, and the majority of the rest were used as pumps by colliery, canal, and other such enterprises. The first to be applied to any other purpose was the engine at Broseley Ironworks, which Wilkinson used to blow his blast furnaces. The demand in Shropshire and Staffordshire was stimulated by his example. Some of the cotton mills installed engines to pump the water back, so that it might pass over the water-wheels several times. Arkwright seems to have used a Newcomen engine for this purpose in his Manchester mill from about 1780. Boulton was alive to the possibilities of a rotative engine in Lancashire, though Watt himself was sceptical whether the cotton industry had prospects which would repay the capital expenditure involved. In 1785 the first steam spinning mill was built at Papplewick in Nottinghamshire. The leaders of the Lancashire cotton industry soon followed suit. Boulton and Watt engines were ordered by Robert Peel, Peter Drinkwater, Richard Arkwright, and Samuel Oldknow. By 1800 there were more engines in cotton mills than in any other industry. Out of a total of two hundred and eighty-nine erected by Boulton and Watt up to the time of the expiry of their patent, eighty-four are accounted for in this way. The new invention thus powerfully assisted the industry which made the greatest progress in the later years of the eighteenth century. The thirty engines at collieries and the twenty-eight at ironworks also show that steam power was solving the problem of large-scale production in the basic industries. The genius of James Watt had "enlarged the resources of his country and increased the power of man."

## SECTION 27

### MEANS OF TRANSPORT

"Good roads, canals, and navigable rivers, by diminishing the expense of carriage, put the remote parts of the country more nearly upon a level with those in the neighbourhood of the town. They are upon that account the greatest of all improvements."—ADAM SMITH: *The Wealth of Nations* (1776).

THE growth of commerce depends on the nature of transport facilities. Unless commodities can be moved at a reasonable speed and with comparatively low costs they cannot enter into long-distance trade. Possibly the most important single industry of modern times is that of transport. Without it industrialization would have been impossible. Certain areas would not have been able to specialize in production; for they could neither secure abundant raw material nor gain access to wide markets. Means of transport stimulate trade—as is demonstrated by the exploitation of sea routes by the Dutch<sup>1</sup>—and their improvement is also called for by the subsequent expansion of trade. Cause and effect are inextricably linked together. In England internal means of communication were so defective in the second part of the eighteenth century that they were setting a definite limit to the potentialities of industry. Reference has been made to the difficulties which the firm of Boulton and Watt experienced in getting the heavy parts of their engines to the places where they were to be erected. They had to make what use they could of the coasting vessels, which were then the only means of dealing with bulky articles. The size of the cargo the ships carried made the charges so low that such a commodity as coal could be profitably conveyed from Newcastle to London. It could

<sup>1</sup> See page 129.

even bear the costs of transhipment into barges which took it up the Thames as far as Abingdon or Oxford. But the cost of carrying it any distance from the river by carts or pack-horses was prohibitive. Coal was also shipped from the South Wales ports to Bristol and elsewhere, and Dublin burnt coal brought by sea from Whitehaven. Practically all this was used for domestic purposes. When the demand for coal for smelting and for raising steam sprang up the need of some method of distributing it in increasingly large quantities was seriously felt.

All contemporary evidence goes to show that, although there were many roads in England, they were of such primitive construction, or so out of repair in the first part of the eighteenth century, that travelling was difficult, and the transport of heavy goods practically impossible. They were broadly divided into parish roads and those under the supervision of special local trusts. The former were not metalled, and the responsibility for their upkeep rested on the parish, which could call for six days' compulsory labour from the poorer inhabitants, and for the provision of a man, cart, and horse from those of an income of more than £50 a year. As a matter of fact these statutory requirements, which were not removed until 1835, were fulfilled in a perfunctory manner. The best roads were those which came under the second head. "Turnpike" trusts date from the end of the seventeenth century. Their essential characteristic was that they empowered local landowners and others to improve a stretch of road and then levy a charge on vehicles using it. Out of the fund thus collected they had to meet costs of original outlay and subsequent upkeep. This principle was widely extended by special Acts of Parliament until there were over a thousand separate trusts in the country. Some of them had a good income and spent it well. But there was no uniformity. A good piece of metalled road

might lead to a very indifferent one, and there might be a long section where the ruts were so deep that it was dangerous to attempt it in a wheeled vehicle. Stage coaches travelled regularly between the chief towns in the first part of the eighteenth century. In 1742 a "flying coach" began to run between London and Birmingham once a week in the summer months. The single journey took two days. A "flying coach" is advertised in 1754 to do the journey between London and Manchester in four and a half days. The extension of coaching—there were thirty a week between London and Birmingham at the end of the century—was accompanied by road improvements. But no new principles of construction were introduced until the beginning of the nineteenth century, when the two great road makers, Telford and McAdam, showed by precept and example how to deal with the problems of foundation and surface. But in the meanwhile the canal had come to meet some of the pressing needs of expanding industry.

As early as 1677 Andrew Yarranton, who had been in Holland and had realized the important part which waterways played in the economy of that country, had suggested that English rivers should be made navigable wherever possible, and that they should be connected by cutting canals. He personally supervised the deepening of the Stour between Stourport and Kidderminster, and of the Avon between Stratford and Tewkesbury. But his larger projects were looked upon as quite impracticable. Acts of Parliament were passed in the first part of the eighteenth century for river improvements. The Aire and Calder, for instance, were made navigable to meet the requirements of the woollen industry of the West Riding. No attempt was made to construct a canal until 1759. The expense of such an undertaking was obvious, but the return on the investment was uncertain. A

pioneer was needed to reveal the possibilities of canals. This part was assumed by the Duke of Bridgewater, who had coal mines at Worsley, and conceived the idea of transporting the coal from there to Manchester by water. The cost of carrying the coal by road was between nine and ten shillings a ton, though the distance was less than seven miles. When the canal was opened in 1761 he found that the coal could be sold at half the old price. Bridgewater was fortunate in finding as his engineer James Brindley, a man of remarkable natural genius. He next undertook the ambitious scheme of making a more direct connection between Manchester and Liverpool than was supplied by the existing Mersey and Irwell navigation. A canal was to be built from Manchester to Runcorn, where it was to join the Mersey by means of a flight of locks. Those who had spent money in improving the long river route naturally resisted this project in Parliament. But Bridgewater eventually secured powers, and the canal was completed by 1767. The two canals had cost £220,000, and had completely exhausted the Duke's resources. A great impetus had been given to canal construction. Brindley was called upon to plan a comprehensive scheme of inland waterways. He designed the Grand Trunk Canal, which by means of its several branches was to link up the Mersey, Trent, Severn, and Thames. Among his enthusiastic supporters was Josiah Wedgwood, who saw that the development of North Staffordshire depended on the provision of better means of transport. Canals were peculiarly well adapted for carrying crates of pottery to Liverpool for export, and for getting the china clay, which came by sea to the Mersey from Cornwall, to North Staffordshire. The Grand Trunk Canal and its branches proved to be of the greatest value to the Midlands. The "Black Country" was soon intersected by a network of canals, which

afforded means of access to the Severn, the Mersey, and the Thames.

Roads and canals were provided by different methods. All the roads which were of any importance had been constructed and were maintained by turnpike commissioners, who levied tolls on the users to cover their expenditure. Canals were built by incorporated bodies which issued shares on which they hoped to pay dividends to the subscribers. Like the roads, they were authorized to levy tolls; but unlike the roads, they aimed at making a profit. Since their capital outlay per mile was much higher than that of the turnpike commissioners, the canals had either to perform services for which the roads were not suitable or to attract a much greater volume of such traffic as the roads enjoyed. They did both. Until 1845 roads and canals were organized on the same principles. Actual transport was in the hands of carriers, who paid tolls for the use of the road or canal. They had to decide which means of conveyance best suited their purpose in particular cases. The objection to canals was that they were relatively slow. To meet this difficulty "fly boats" were constructed which could make a speed of three or three miles and a half per hour, and were manned to continue their journey day and night. Their average load was ten tons, and, since the other expenses were high, they had to charge much more per ton-mile than the more slowly moving heavier barges. When the roads were at all good the "express" canal service was not superior. The canals obviously had the advantage in dealing with heavy traffic for which quick delivery was not essential. Goods were carried by them which otherwise could not have borne the cost of transport for any great distance. Canal competition, therefore, did not have an adverse effect on the roads.

Both roads and canals, however, were likely to suffer

if Watt's engine could be converted into a locomotive suitable for running on a prepared track. But this was a possibility hardly envisaged at the end of the eighteenth century. Watt himself expressed his doubts whether "a steam carriage" would ever be practicable. But Murdock, a young Scotsman, who was taken on at Soho as an engineer, actually devised a steam propelled vehicle in 1784, when he was representing the firm in Cornwall. The "railway" was also in existence. Simple arrangements of wooden rails were employed at collieries to allow loaded wagons to run down a gradient up which they were hauled light by horses or by a stationary engine. Cast-iron rails took the place of wooden ones about 1767. Since these rails were made for vehicles with ordinary wheels they had to have a plate which prevented the wagons from running off. In 1788 William Jessop, who was constructing a colliery tramway in the neighbourhood of Loughborough, took what proved to be the momentous step of putting a flange on the wheels. He thus made possible a precise gauge and high speed. But it remained for George Stephenson and his predecessors—Trevithick, Blenkinsop, and others—to follow up Murdock's experiments, and to bring the steam locomotive into relation with the railway. It was not until the opening of the Stockton and Darlington railway in September, 1825, that it was definitely demonstrated that a new form of traction was available. The uses which were made of it in the subsequent half-century have tended to obscure the real services of the canal system in the first phase of modern industry.



## SECTION 28

### AGRICULTURE

"Great farms have been the soul of the Norfolk culture; split them into tenures of an hundred pounds a year, you will find nothing but beggars and weeds in the whole county."—ARTHUR YOUNG.

THE changes which affected manufacturing industries in the eighteenth century also revealed themselves in agriculture, the occupation in which the great majority of the population was then employed. There were the same tendencies to adopt improvements in technique, to enlarge the size of the unit of enterprise, and to reduce the worker to the status of a wage-earner. But the transition in agriculture has always been regarded as something of a calamity. This is to be explained by the fact that it destroyed the village as an organic whole, and deprived large numbers of an independent, if meagre, means of livelihood. There was a sense of social loss which long rankled in the minds of the people and expressed itself in a strong feeling of anti-landlordism. At the beginning of the eighteenth century the English countryside, although there had been a continuous process of enclosure since the important movement of the Tudor period,<sup>1</sup> retained the recognizable features of earlier times. In the open field area, stretching through the Midlands from Yorkshire to Hampshire, holdings were still intermingled in large unenclosed fields. The method of cultivation was ruled by custom. Until 1773, when Sir Richard Sutton's Act<sup>2</sup> provided that a majority of three-fourths of the occupiers could decide to change the course of husbandry, no departure from custom was possible, except by common consent of all concerned. Where the open fields survived,

<sup>1</sup> See pages 90-93.

<sup>2</sup> 13 Geo. III, c. 81.

therefore, improvements were difficult. The system was admittedly uneconomical. The strips were too narrow to allow of cross-ploughing, drainage was effected by heaping up the soil in high ridges, and the balks were fruitful seed-plots for weeds. It was associated with rights of common in meadow and pasture, which meant that the village cattle and sheep grazed together, and it was hard to cope with the spread of disease or to improve the stock. To the enlightened agriculturists the open village represented the survival of the "barbarity of our ancestors," as Arthur Young put it.

The obstacles which traditional methods placed in the way of progress seemed unreasonable to the ruling class. They did not realize what the destruction of the open fields and the rights of common would mean for the poorer members of the village. As the century advanced, the enthusiasm for improvements gathered momentum until it was powerfully reinforced by the high prices of wheat in its later decades. An enclosure movement on a scale of much greater magnitude than that of the sixteenth century practically obliterated all traces of open-field cultivation. The great pioneer of more scientific farming was Jethro Tull. He began his experiments at Howberry near Crowmarsh, Oxfordshire, in 1699. The results of his long and careful observations were given in his *New Horse Hoeing Husbandry* (1731). He insisted on deep ploughing and a thorough breaking up of the soil. Seed was to be sown in regular lines, and not broadcast, and for this purpose he invented the drill. The horse hoe was to be used when the crops were growing, thus providing the roots with air and moisture. By these methods Tull revealed the possibilities of intensive cultivation, raising a succession of crops in the same field without manuring. He pointed the way to the rotation of crops, which would eliminate the necessity of fallow and provide roots as

winter feed for the stock. This aspect of farming was taken up by Lord Townshend, who, like Tull, was acquainted with methods employed in Holland; and, on his retirement from politics, he devoted himself to the development of his estate at Raynham, in Norfolk. His name is particularly associated with the field cultivation of turnips and the elaboration of the Norfolk four-course rotation, namely, wheat, turnips, barley, clover. His example was followed by many great landlords in the middle years of the eighteenth century. In the closing decades, Thomas William Coke, who began the improvement of his estate at Holkham, in Norfolk, in 1776, was the acknowledged leader of the movement. He is said to have spent more than half a million on his schemes. From 1778 to 1821 he entertained visitors on a magnificent scale at the time of the annual sheep-shearing, and thus disseminated the knowledge of the latest improvements in agriculture and stock-breeding, for the two things went hand in hand. The provision of winter feed—roots and artificial grasses—made it possible to experiment with cattle and sheep. Robert Bakewell, of Dishley Grange, in Leicestershire, demonstrated that by careful selection and breeding the farm stock could be vastly improved. His best known success, the New Leicester sheep, spread all over the country. He also greatly improved the old Midland long-horn cattle, and produced a breed of black horses for heavy farm work. The new rotations provided the means of increasing the yield of cereals, and also of food for sheep and cattle, which were definitely bred for their fattening tendencies. The needs of a growing industrial population were thus supplied.

The improvers, and particularly the great propagandist of the movement, Arthur Young, were unanimous in their condemnation of the old open-field system. They saw that capital could not be profitably applied to the land until

the scattered holdings were consolidated and the old methods abandoned. Under Anne, 1,439 acres were enclosed; under George I, 17,960 acres; under George II, 318,778 acres; and from 1760 to 1797, 2,804,197 acres. The attitude of the State was quite different from what it had been in the sixteenth century. Then, commissions, proclamations, and legislation were directed to the prevention of enclosure. In the eighteenth century, Parliament gave every facility to the improvers. Enclosure was promoted by way of Private Bills. The larger holders took the initiative. They were practically certain that the majority of the proprietors, if their votes depended on the amount of their land, and not on the counting of heads, would support a local petition in favour of enclosure. The petition would lead to the introduction of a Bill, against the terms of which objection could be made when it was in the committee stage. But small proprietors found this course too expensive, or they feared that in the event of their being unsuccessful they might suffer some subsequent disadvantage when the enclosure was effected; for, when the Bill was passed, commissioners were sent down to carry out the details of the scheme, and they enjoyed wide discretionary powers. They re-drew the map of the village. The old open fields and commons disappeared, and all proprietors were ascribed compact holdings in lieu of all their claims. Within a given time they were required to put up hedges round their land and make provision for roads. This expense was often too heavy for small proprietors, and they sold their share to their wealthier neighbours. The whole procedure was unquestionably to their disadvantage, for a small, compact holding without common rights of grazing might well prove uneconomical. Those who were not proprietors—small tenant farmers, cottagers, and squatters—had no claims to consideration from the enclosure commissioners.

The result was that the village tended to be divided into three classes—the landlord or landlords, substantial tenant farmers, and landless agricultural labourers. The old open-field village had contained a population which was too large for the new conditions. Many had now to find their way to the growing industrial towns. Those who remained as labourers received wages which were inadequate to meet the rise in the cost of living after the outbreak of the war with France in 1793. The year 1795 was in particular one of acute distress, and witnessed the introduction of the vicious principle of giving parish relief in aid of wages.<sup>1</sup> Agricultural labourers thus became paupers even when they were in regular employment. The old self-respect which had made the countryman disinclined to enter the new mills and factories was destroyed.

It is difficult to balance the loss and gain of the revolution in agriculture. On the one side can be placed the bringing of new land under cultivation, the improvement of the yield per acre, the new crops introduced, and the work of the stock-breeders—all these added to the resources of the country, and proved to be of great national importance during the French Revolutionary and Napoleonic Wars. As an industry, agriculture enjoyed a period of great, if unhealthy, prosperity. On the other side must be put the break-up of the village, which bore heavily on the classes least able to bear the strain it involved. The hardships of those who left and the poverty of those who remained were the price paid for improvement. It is not to be wondered at that some have felt that the price was too high. They have deplored the disappearance of the small freeholder and the degradation of the agricultural labourer. A contrast is drawn between the survival of peasant proprietorship in France and the building up of large estates by the gentry in this country.

<sup>1</sup> See page 196.

But it must be remembered that in England economic forces were undermining the position of the peasant, and political power was concentrated in the hands of the great landowners before the Agrarian Revolution. In France the nobles clung to little except the shreds of an outworn feudalism, and these were destroyed by an uprising which perpetuated peasant proprietorship. Agricultural improvements made slow progress in France in the subsequent years. The typical holding was too small, and the peasant too poor and too conservative to adopt the new methods of cultivation and stock-breeding. Industrial development did not call for an increased yield from the land as it did in England. Given the structure of government, central and local, and the opportunities for improved farming, the course of events in this country is explicable enough. When the French nobles were becoming courtiers, the attitude of English landowners is well defined by Edward Laurence in his *Duty of a Steward* (1727). The model steward, he says, should always be inquiring as to "the disposition of the freeholders, within or near his lord's manors, to sell their lands, that he may use his best endeavours to purchase them at as reasonable a price as may be for the lord's advantage and convenience." With the prestige that attached to land ownership, the widespread interest in improvements, the wealth in the hands of commercial magnates who were anxious to become "landed," it is no wonder that large estates were built up. By the reduction in the number of small freeholders,—for it is an exaggeration to speak of their "disappearance"—the village was deprived of the advantage of a class which could keep alive the sentiment of independence. There were few left to bridge the gulf between the labourer and the squire.

# THE INDUSTRIAL AGE

## THE SECOND PHASE

### SECTION 29

#### THE INDUSTRIAL LEADERSHIP OF GREAT BRITAIN

"Although coal and iron were not the original causes of England's leadership, yet all that makes that leadership unique in the world's history was partly dependent on them . . . with their mighty aid, she has pioneered so strongly, that the leading ideas of those mechanical industries which are transforming the world to-day are fundamentally hers."—ALFRED MARSHALL: *Industry and Trade* (1923).

It is hoped that the attention which has been paid to this country in sketching the main features of economic evolution has not tended to obscure the fact that, until modern times, England did not play the leading part in it. In the Middle Ages the pioneers of long-distance trade were Italians and Germans; the English were as indebted to them for the extension of foreign trade as they were to the Flemings for the development of the woollen industry. The great maritime discoveries of the fifteenth and sixteenth centuries were made by the Portuguese and Spaniards. In the seventeenth century, the Dutch were predominant in commerce, banking, and agriculture. But in the course of the eighteenth century, England revealed her capacity for commercial and industrial leadership. She was the home of the "Industrial Revolution." If we could confine our attention to that century the reasons for this are not so obvious as they become when looked at from the standpoint of later knowledge. It is true that important inventions were made in England and that there were attempts

to retain the secrets of their construction.<sup>1</sup> But all these efforts were doomed to failure. The French were particularly persistent in endeavouring to get details of the new machines and to induce English artisans to emigrate to their country. John Holker, a member of a Lancashire Catholic family, promoted the development of the cotton industry in France. The Milnes, also from Lancashire, were assisted by grants from the French Government in setting up mills equipped with machinery based on Arkwright's principles. Wood and Hill, two English workmen who emigrated to France, had actually been employed at Cromford. Even after war broke out between the two countries in 1793, French agents were busy in England buying machines which they contrived to smuggle out in parts and afterwards assemble.<sup>2</sup> As far as inventions were concerned, therefore, the advantage this country enjoyed was one which could not be preserved.

France was the only possible rival to England in the process of industrialization in the second half of the eighteenth century. In some ways she seemed formidable. Her population was about two and a half times that of Great Britain.<sup>3</sup> The inherited skill of her craftsmen was universally recognized. She had good markets in the Eastern Mediterranean and in her colonies. Her system of inland communications was the best in Europe. She had, however, serious handicaps. Her public affairs were in a deplorable condition. When the younger Pitt was, by his fiscal reforms, re-establishing confidence in England, every attempt which was made to set French finances on a sound basis proved ineffectual. The instability of public finance was reflected in the weakness

<sup>1</sup> See page 228.

<sup>2</sup> Charles Ballot: *L'Introduction du Machinisme dans l'industrie française* (1923) is an excellent detailed study of the whole subject.

<sup>3</sup> The population of Great Britain was just under 12,000,000 in 1811, while that of France had reached 29,000,000 in 1806.



of private credit. England had elaborated a banking system which was exhibiting a growing capacity to meet the requirements of industry. In England, too, individual initiative was less restricted than in France, where many of the old limitations on enterprise still survived. Although she possessed good roads, commodities passing from one district to another within France were burdened by heavy tolls and other charges, with the consequence that internal trade was discouraged. Great Britain enjoyed the advantage of being a single free-trade area. Such obstacles to movement as existed were physical and they were being steadily surmounted. Until 1789, too, the French peasantry were bound to the soil by the feudal burdens they still carried. The English agricultural labourers were free to move and even compelled to do so by the destruction of the old village economy. In the French towns the gild regulations were still enforced, while in England they had long fallen into desuetude. When the French Revolution at last swept away these medieval survivals, the country had to face the hostility of Europe. For a whole generation she was involved in warfare, which taxed her resources to such an extent that her economic progress was retarded. Still, it remains true that in the first phase of industrial development France was a possible rival to England. If the factors of that phase had remained in operation the superiority of this country would not have been so marked.

This first phase, which may be said to fall between 1760 and 1800, was characterized, as we have seen, by a great growth of the textiles, particularly cotton, and the gradual permeation of industry by steam-power. Water-wheels were still generally employed to drive machinery. Transport was provided by road and canal. So long as water was used for motive power, and waterways were the chief means of transporting heavy commodities,

France was at least as well placed as England. It is in the second phase, roughly from 1800 to 1860, that her relative weakness became apparent. Industry came to depend more and more on coal, for steam-power became dominant. France did not possess good supplies of coal, and what she had was neither of high quality nor well situated. Since the progress of industry was now more influenced by the releasing of the great reserve of energy stored up in coal than by any other factor, France inevitably fell behind. Her industrial progress as compared with that of England was arrested. The more conservative elements of her national life were able to maintain themselves. Peasant proprietorship preserved the older forms of rural organization, and the skilled industries, conducted on a small scale, survived in the towns. There was no marked concentration of population in industrial areas; nor was there a notable increase in its total. In England, however, great industrial communities were built up in close proximity to the coal-fields. An industry more remote from a coal supply, such as the woollen industry in the West Country, could not hold its own against that of the West Riding, where coal could be easily obtained. The population tended to move from the hitherto well-populated south-east to the hitherto sparsely populated north-west. Not only was it redistributed but it also increased, decade by decade, at a rate for which the past provided no parallel. England seemed destined to be, and to remain without fear of challenge from any direction, the workshop of the world.

The contrast between England and France which is here suggested is based on knowledge of what actually happened in the first half of the nineteenth century. It assumes that at bottom the advantage England possessed was one of resources, particularly of the extensive deposits of coal of high quality. There was also, of course, the use

made of these opportunities. The economic structure which had been evolved from the end of the seventeenth century in England provided a suitable setting for rapid industrial change. Regulations had gradually lost their force, and restrictions had been removed. There had been a growing presumption in favour of individual freedom of action. This found a classical expression in Adam Smith's *Wealth of Nations* (1776). He exposed the follies of the mercantile system, and enunciated the doctrine of natural liberty. His work, in fact, was well designed to prove a solvent of older beliefs and prejudices, because he assailed them, not by the mere assertion of theoretical principles, but by a detailed examination of their practical working. The changes, social and economic, implied in the industrialization of a country are never effected without friction; but in the England of the early nineteenth century the friction, strong as it was at times, did not seriously retard the process. The explanation of this fact is to be found in the past history of the country.

The obstacles to industrialization naturally inherent in a non-industrial community may be said to include that of modifying an existing economic structure which has centuries of tradition behind it, that of changing the daily habits of the people, and that of securing the capital necessary for the equipment of new industries. In England, as we have seen, the old rural economy had been gradually breaking down until in the second half of the eighteenth century it could no longer offer any effective resistance to change. Divorce from the land was certainly resented, and ideas of a return to it found constant expression in popular movements of the early nineteenth century; but the mass of the people acquiesced, and the rural tradition steadily decayed. Benjamin Disraeli made an eloquent plea for the maintenance of the balance between agriculture and industry in his opposition to the

repeal of the Corn Laws; for such a balance, he averred, was essential to the happiness, prosperity, and morality of the people.<sup>1</sup> But the logical consequence of industrialization could not be evaded. "Our subsistence," Jevons could write in 1865, "no longer depends upon our produce of corn. The momentous repeal of the Corn Laws throws us from corn upon coal. It marks, at any rate, the epoch when coal was finally recognized as the staple product of the country; it marks the ascendancy of the manufacturing interest, which is only another name for the development of the use of coal."<sup>2</sup> Reference has already been made to the difficulty which David Dale experienced in getting labour for his cotton mills at New Lanark.<sup>3</sup> It was not that the lot of a Scottish peasant was an easy one; he worked long hours, but he set his own pace. Those who entered the new factories, however, had their working-day regulated by the hooter. They were under discipline, and often a severe and arbitrary discipline. So the hand-loom weavers, for instance, fought a stubborn and hopeless fight against entering factories where power-looms had been installed. Robert Owen, who retained the peasant tradition, makes an interesting contrast between the relative freedom and neighbourliness of country life and the long hours of drudgery in the factories where "the employer regards the employed as mere instruments of gain" and the workpeople "acquire a gross ferocity of character."<sup>4</sup> In some industries, indeed, employers avoided the more unpleasant aspects of management by systems of subcontracting, which placed the responsibility of labour control on the shoulders of others.

<sup>1</sup> The relevant passages are quoted from the Parliamentary Debates in Bland, Brown, and Tawney: *English Economic History, Select Documents*, pp. 709-10.

<sup>2</sup> Jevons: *The Coal Question* (1865), page 173.

<sup>3</sup> See page 159.

<sup>4</sup> Robert Owen: *Observations on the Effect of the Manufacturing System* (1815).

Gradually the workers were inured to the new order of things, and set about the long and difficult task of defining working conditions by means of their trade organizations. The industrial pioneers, such as Matthew Boulton, Josiah Wedgwood, and Richard Arkwright, had to finance their enterprises by forming partnerships, the personal reputation of the members of which made it possible to raise loans, and also by reinvesting in the business a large proportion of their profits. The convenient mechanism of the joint-stock company was not then available. Low labour costs, provided efficiency could be maintained, offered the means of adding to the capital equipment out of profits. The pressure on the standard of life of the workers, therefore, tended to be heavy. In the hey-day of *laissez-faire* the advocacy of a "five years' plan" would not have occurred to anyone; but rapid industrialization, with all the sacrifices it involved, had to be justified in some way.<sup>1</sup> Such justification was found in the inculcation of the virtues of hard work and thrift.

<sup>1</sup> It is interesting to observe that the classical political economy, which was appealed to as the philosophy of this phase of economic development, never commended itself to imaginative writers. There is a continuous protest against the implications of *laissez-faire* from the conservative Southey and the revolutionary Shelley, through Carlyle, Kingsley, and Dickens to Ruskin and Morris. Although these writers differed so widely on many issues, they all subscribed to the indictment of political economy which accused it of being dismal and inhuman. Special reference may be made to the social novels of the period. In *Sybil* (1845) Benjamin Disraeli draws a lurid picture of industrial life and advocates reform on "Young England" principles. Mrs. Gaskell's *Mary Barton* (1848) is an excellent account of contemporary Manchester and a plea for "Christian interventionism." *Alton Locke* (1850), with its strong denunciation of competition and schemes for co-operation, is Charles Kingsley's contribution to the popularizing of the doctrines of Christian Socialism. In *Hard Times* (1854) Charles Dickens makes his somewhat unfair, but ever-memorable, attack on political economy as he insinuated it was understood and applied by industrialists.

## SECTION 30

### THE ECONOMIC EFFECTS OF WAR

"War never leaves where it found a nation."—EDMUND BURKE:  
*Letters on a Regicide Peace* (1796).

DURING the century in which England was laying the foundations of her commercial and industrial leadership she was involved in a succession of wars. Obviously, they must have exerted a considerable influence on her economic development; but it is not easy to assess that influence with any degree of precision. There is a school of thought which is content to notice that, taking the century as a whole, it was marked by recurrent wars and by commercial expansion. From these facts it is deduced that the wars were "commercial" and that they achieved their purpose. Some such conclusions may be gathered from the writings of Sir John Seeley in this country and of Gustav Schmoller in Germany. It is a superficial generalization. On closer examination it will be found that, while commercial interests found expression both in the conduct of war and in the negotiation of peace, the issues were complex. To assume singleness of purpose and the possibility of pursuing it for a long period is to over-simplify history.<sup>1</sup> It was certainly not the view of contemporaries that England in the eighteenth century was scoring one advantage after another, and, in some sense, completing the details of a well-conceived, if selfish, national programme. They were mostly pessimists who felt that each war was a more serious blow to national prosperity than the last. So far from congratulating themselves that war was an instrument for commercial aggrandisement, they spoke gloomily

<sup>1</sup> *The Phases of British Commercial Policy in the Eighteenth Century*, by J. F. Rees in *Economica*, June, 1925.

about the imminence of national bankruptcy. When we remember that in 1783 Great Britain had to recognize the independence of her American Colonies after a struggle in which she had had to face the combined hostility of France, Spain, and Holland, we must recognize that they had some justification for their point of view. The disruption of what the mercantilists had hoped to make a self-contained Empire seemed an irreparable blow. It looked as though the very success which had attended British arms in the Seven Years' War (1756-63) had now brought about an overwhelming disaster.

If we get behind the special political issues of the moment and away from its military aspects we shall discover that the economic consequences of a war—and of its ultimate cessation—are remarkably similar in every instance. There is always the undue and uneven expansion of industry which is demanded by the prosecution of war. It is undue because the demand is temporary, and it is uneven because it is not exercised in a normal way over the whole field of production. In the eighteenth century, for instance, the iron industry suffered from periodical artificial stimulus followed by subsequent depression. During the long war against the French Republic and Napoleon, which lasted with hardly any intermission from 1793 to 1815, the iron industry made great progress; but it entered upon a period of acute distress at the conclusion of the war, when ironworks were closed down and thousands were thrown out of employment.<sup>1</sup> In the textiles industries the coarse woollens of the West Riding were in great demand during the war, while the overseas markets for the finer products of the West Country and East Anglia were uncertain. The natural course of trade was diverted, and even when it flowed in

<sup>1</sup> See Chapter VI on "The Iron Industry in Peace and War" in T. S. Ashton's *Iron and Steel in the Industrial Revolution* (1924).

its old channels, there was the constant risk of it being interrupted. It was therefore highly speculative. There was a major crisis in 1810-11, precipitated by the attempts of Napoleon to establish a blockade of Great Britain and by the counteraction of this country represented by the Orders in Council. Manufacturers found stocks accumulating on their hands to an alarming degree, and were faced by the alternative of closing down or of reducing their costs of production by some means, with a view to flooding foreign markets with cheap goods as soon as opportunity offered. In either case there would be distress and possibly also outbreaks of violence.<sup>1</sup> The reaction of the war on agriculture was similar. By the opening of the nineteenth century Great Britain had ceased to be self-sufficing in cereals. It has been estimated that her shortage in a normal year amounted to supplies for approximately seven weeks.<sup>2</sup> But the yield of the home harvests varied widely from year to year. Resort was had, therefore, to inferior soils in the attempt to make sure of adequate supplies. This could only be justified by higher prices. The high price of bread, which entered so largely into the dietary of the poor, aroused much discontent, and local food riots broke out from time to time. These examples are perhaps sufficient to show that the economic structure suffers a strain during war, and is forced into a form which is bound to present difficulties on the reversion to peace.

Then it need hardly be said that war involves expense and that it must somehow be met. Fundamentally, it is a question of providing the State with the services and

<sup>1</sup> In *Shirley* (1849) Charlotte Brontë describes the difficulties of a manufacturer and the consequences of his determination to introduce labour-saving machinery. The attack on his mill is a faithful picture of an actual incident in the struggle between a mill-owner and his operatives.

<sup>2</sup> W. F. Galpin: *The Grain Supply of England During the Napoleonic Period* (1925).



materials which it requires for the conduct of the war. The State may secure the means of purchasing these services and materials by taxation, open or disguised in the form of inflation, and by borrowing, either at home or abroad. The easy road is that of borrowing, for taxation is resented. In the eighteenth century the tax system was crude; the usual method of imposing heavier taxation was that of multiplying new taxes, most of them more ineffectual than those already in existence. It was not until 1798 that Pitt adopted an income tax as a war measure. He had already borrowed so heavily from the Bank of England that when that institution was faced by a crisis in 1797 it had been obliged to suspend cash payments. For the rest of the war banknotes were inconvertible and they depreciated in terms of gold.<sup>1</sup> Borrowing during the war period had the effect of increasing the total annual debt charge from nine to thirty-two millions. Since the revenue fell to nearly fifty millions after the war it will be seen that the weight of the debt made a reform of the tax system virtually impossible. The income tax itself was considered as strictly a war measure, and was therefore withdrawn in 1816. The heritage of indirect taxes, which hampered trade in every direction, took thirty years to reduce to reasonable proportions.

Further, the State has to do what it can to maintain the *morale* of the civil population. It may find it necessary to prevent the spread of discontent by adopting some means of counteracting the rise in the cost of living. This may be done by control of prices or by means of a "war bonus" which is added to salaries and wages so as more or less to neutralize the increased prices. In 1795 this question arose in an acute form owing to the failure

<sup>1</sup> The depreciation was real, but not spectacular. It seems to have been between 15 and 25 per cent in the later years of the war.

of the harvest. Several proposals were put forward, including the legal enactment of a minimum wage which would vary with the selling price of wheat. This was rejected as an unwarranted interference with economic laws.<sup>1</sup> Local magistrates, however, found that something had to be done, and, following the lead of the Berkshire Justices of the Peace, they widely adopted the "Speenhamland" system. This was an arrangement by which the local poor law authorities made an allowance in addition to wages calculated on the price of the loaf of bread and the number of the labourer's family. It was in every way a bad solution of the problem. Each district was left to deal with the question as it thought fit, and consequently the allowance system spread sporadically through the country. It was vicious because it meant that the labourer who elected to become a pauper was given a subsidy, while his more independent neighbour had to compete with him for work at a disadvantage. In the long run it meant increasing pauperization with a heavy rate burden on the parishes, but, it should be remembered, not a pure rate burden, for in it was included a wage bonus.<sup>2</sup> The war had here created a condition of things which was not grappled with until after 1834.

Incipient discontent may also be dealt with by adopting repressive measures, provided the Government feels that it can rely on the support of the politically effective section of the community in taking that course. The war with revolutionary France was one against the spread of ideas which were considered peculiarly dangerous. Any suggestion that groups of people in the country

<sup>1</sup> It was opposed on this ground by Pitt, who was a student of Adam Smith's *Wealth of Nations*.

<sup>2</sup> Castlereagh replied in the House of Commons to the complaint that "rental was eaten up by poor rates" by pointing out that "in cases where 19s. or 20s. in the £ were paid for poor rates 15s. would be found to be wages in the shape of poor rates."

sympathized with those ideas was the cause of immediate alarm. Meetings of artisans seemed particularly likely to lead to revolutionary agitation. Under the stress of war conditions it was only natural that workmen should want to discuss their grievances, and that new life should be given to the trade clubs which had long existed. Such clubs or unions had often been tolerated in the past if they did not too frequently indulge in industrial disputes. They now came under suspicion. In 1799 an Act was rushed through Parliament which made any combination of workpeople to agitate for higher wages or improved conditions illegal. The intention seems to have been to suppress all unions and make strikes impossible; for any workman who joined a union or organized a strike was liable on conviction to imprisonment. There were protests from trade clubs and benefit societies from all parts of the country; but the only result was the confirmation of the Government's policy in the more elaborate Combination Act of the following year. For the next half-century labour organization, though by no means completely suspended, had to run the risk of conflict with the law.

It is interesting to notice that the difficulties and dangers of combination threw the workmen back on the older securities they had enjoyed when the State had attempted to regulate industry.<sup>1</sup> Appeal was made to the sections of the Statute of Artificers which dealt with the assessment of wages and apprenticeship. The powers under the Statute had long been falling into disuse. That it was recognized they existed is proved by the fact that the Berkshire Justices of the Peace at Speenhamland considered whether they should be applied and definitely decided against granting "assistance by regulating the wages of day labourers according to the directions of the

<sup>1</sup> See page 86.

Statutes of the 5th Elizabeth and 1st James." <sup>1</sup> In actual fact workpeople had preferred to try to make their own arrangements by collective bargaining rather than to rely on the good offices of local magistrates. It was only the ban on trade clubs that had suggested that the old machinery might be employed. Any real revival of the law, however, was out of the question. It did not apply to the newer industries which had grown up, and the suggestion that it should be extended to them would not have commended itself to the House of Commons. The only result of the agitation was a special Arbitration Act for the cotton industry, and this encountered the hostility of the employers. It was repealed in 1813, and in the next year the assessment of wages and apprenticeship clauses of the Statute of Artificers were also formally repealed.

We can only speculate whether the industrialization of England would have been effected without inflicting so much hardship on the people had it been carried through under more normal conditions. The forces called into being by the war certainly complicated the situation. Their operation, indeed, was not confined to the war period itself. Much energy was employed in the post-war years in undoing what, apart from the strain and stress of the war, might never have been done.

<sup>1</sup> Bland, Brown, and Tawney: *English Economic History, Select Documents*, page 656, quoting a notice in *The Reading Mercury* for 11th May, 1795.

## SECTION 31

### UNREST AND REFORM

"And on the day on which peace was signed, the great customer of the producers (i.e. *the war*) died, and prices fell as the demand diminished. . . . The barns and farmyards were full, warehouses loaded, and such was our artificial state of society, that this very superabundance of wealth was the sole cause of the existing distress."—*Life of Robert Owen by Himself* (1857).

THE short-period consequences of the return to peace conditions may be said to have spent themselves by 1819 when the incident of Peterloo<sup>1</sup> definitely heralded the resumption of the Reform agitation which had been suppressed during the war. From 1815 to 1819 economic dislocation was the cause of acute distress. Outbreaks of disorder were met by increasingly severe measures of repression. In February, 1817, the Government suspended the Habeas Corpus Act, and the immediate result of the tragedy of Peterloo was the passing in November, 1819, of the "Six Acts," which practically deprived the citizen of the rights of public meeting and greatly restricted the liberty of the Press. But by 1820 the worst was over, and there was a growing disposition to face the wider issues of readjustment. The abrupt conclusion to the demands of war had been particularly felt in the iron centres of Shropshire, Staffordshire, and South Wales. The industry found itself burdened with excess productive capacity. Many ironworks closed down; some were sold at ruinous prices, and others were actually abandoned. Where, as in South Wales, an attempt was made to continue in production by reducing wages so that costs might be cut and some hold on the market retained,

<sup>1</sup> The break-up of the popular Reform demonstration in St. Peter's Fields, Manchester, on 16th August, 1819, by a military charge in which eight were killed and about four hundred injured.

violent resistance broke out and the military had to be rushed to the area. Generally, however, the collapse was so complete that the workpeople were reduced to helpless despair. It is true that in some industries, such as that of the Birmingham fancy goods, there was a short-lived speculative boom because there seemed some prospect of large sales on the Continent; but this proved a disappointment and even contributed to accentuate the country's difficulties, because it created so much alarm abroad that steps were taken against such "dumping" in the future.

The Government had no vestige of what we would now call a reconstruction policy. The idea that it should have had one is indeed something of an anachronism. There was then no clear conception of social services and no machinery for carrying out a general scheme of relief. Meetings of influential citizens were called and some attempt to define the problems was made.<sup>1</sup> But the Government practically confined itself for the first few years to keeping order, and the actions of extremists supplied it with some kind of excuse for exercising severity. The decisions taken by the House of Commons were not helpful. It defeated the Chancellor of the Exchequer's proposal to continue the income tax at half the war rate, which would have enabled him to avoid further borrowing. This defeat meant that the Budget could not be balanced. A still more serious consequence was that it meant the maintenance of the prohibitory and high protective duties which hampered trade recovery. Opponents of the income tax spoke of it as a burden on industry, oblivious to the fact that its repeal left industry strangled by multitudinous and vexatious restrictions. The one step which

<sup>1</sup> Robert Owen gives an interesting account of the deliberations of a committee over which the Archbishop of Canterbury presided. He wished to place his solution, i.e. that of self-contained communities, before it.—See *Life of Robert Owen by Himself*.

had been taken in anticipation of the return to peace conditions was the passing of the famous Corn Law of 1815. Alarmed by the possibility that there might be a fall in cereal prices, it was decided that no foreign wheat should be admitted at the ports until the home price reached 80s. a quarter. The landlords were determined to do what they could to maintain war rents.<sup>1</sup> It is interesting to notice that in the discussion of the Corn Law the opposition between the interests of the landowners and the manufacturers was clearly stated. The high price of corn, it was argued, would involve a high cost of labour and would therefore be a handicap on the sale of manufactured goods in foreign markets.<sup>2</sup> This point of view, with the growing hostility between the two interests which it fostered, exercised a decisive influence on the course of events at a later stage.

In the 'twenties, as has been said, the country had so far recovered from the immediate effects of the return to peace that economic problems could be more dispassionately considered. Some observers had all along contended that the cause of the distress could be traced to the state of the currency. They strongly urged that the Bank of England should be required to resume cash payments at the earliest possible moment. There is always a case for a sound currency; and so long as the Bank had the unrestricted right to issue paper, and Government finance was not too sound, the possibility of inflation was present. As a matter of fact, prices had been falling steadily since the end of the war, and, apart from a small rise in 1818, they continued to do so. The resumption of cash payments, which was to include a return to the use of a gold coinage as well as to the gold

<sup>1</sup> See page 183.

<sup>2</sup> For a detailed account of the passing and subsequent operation of the Corn Law of 1815 see D. G. Barnes: *A History of the English Corn Laws, 1660-1846* (1930), pages 117-79.

standard, would obviously accentuate the fall. For good or ill, however, it was decided in 1819 that the Bank should resume payments in 1823; it actually sought and obtained permission to do so on 1st May, 1821. The argument of those who had believed that paper currency was the cause of the country's discontent then lost any force it had ever had.<sup>1</sup>

Those who explained the stagnation of trade by pointing to the tariff restrictions were given a definite lead by the Merchants' Petition which was presented to the House of Commons on behalf of a London group in May, 1820. It enunciated the general principle that "freedom from restraint is calculated to give the utmost extension to foreign trade and the best direction to the capital and industry of the country," and suggested that an investigation would show that the general distress had been considerably aggravated by the restrictive system. Manchester merchants followed this up some days later by a petition in which they expressed their opinion that "to indulge an expectation that other countries will take the manufactures of this Kingdom without our receiving in return such articles as they produce, is delusive and injurious to our best interests."<sup>2</sup> The petitioners recognized that the Government's difficulty was to find compensation for any temporary loss to the Exchequer which might follow a reduction or remission of duties. A reconstruction of the Government, accompanied by a general improvement in trade, prepared the way for a consideration of the question. In 1823 and subsequent years, Robinson, the new Chancellor

<sup>1</sup> Of course it was possible to argue, with much plausibility, that the policy of currency deflation was the cause of economic distress. Thomas Attwood of Birmingham did so, and denounced the return to the gold standard because it bound trade to an inelastic currency.

<sup>2</sup> A. Redford: "Some Problems of the Manchester Merchant after the Napoleonic Wars," in *Transactions of the Manchester Statistical Society*, 1930-1, page 76.



of the Exchequer, and Huskisson, who succeeded him at the Board of Trade, took the first steps towards a simplification of the unwieldy tariff. The general principles were the removal of prohibition and the reduction of duties to a standard of 30 per cent. The Navigation Acts were also revised and powers assumed to enter into agreements with other countries on the basis of reciprocity. Huskisson, who was mainly responsible for the tariff revision, struck a balance between Free Trade and Prohibition, working in the direction of a moderate protective system in the face of strong opposition from vested interests. After 1825 he was on his defence, and he was able to make little more progress, for the crisis<sup>1</sup> of that year undermined confidence in fiscal reform.

While Huskisson was openly conducting his fight in favour of a less restrictive commercial system, Francis Place was quietly and persistently doing all in his power to destroy the Combination Laws. In the years of depression workmen had discovered how harsh their enforcement could be. Attempts to prevent the reduction of wages and the imposition of less favourable conditions of labour were almost certain to involve them in difficulties if they acted together. Place assiduously collected information about the operation of the laws from all parts of the country. In 1824 Joseph Hume, a Radical member of the House of Commons, acting on the suggestion of Place, moved for a select committee to consider, among other things, the Combination Laws. The committee, which was supplied with the evidence at the disposal of Place, reported in favour of repeal. A bill was promoted and successfully passed through all the stages. The crisis of 1825 revealed the consequences of repeal; as trade conditions became worse, workmen up and down the country sought protection by forming trade unions. The victory

<sup>1</sup> For the causes of this crisis see pages 208-209.

of Hume and Place had been too sweeping, and influential groups of employers approached the Government to reconsider the question. A new bill was promoted. By great skill, however, Place saved the situation, though the Act of 1825 was much more conservative than that of the previous year. Trade unions were no longer illegal; but the conduct of their members might easily expose them to prosecution under the common law of conspiracy.

Towards the end of the 'twenties the movement for reform gathered force. The general ferment found expression in two main directions. There was the reform movement proper, which demanded an extension of the franchise and a redistribution of constituencies. The agitation culminated in the passing of the Reform Bill of 1832, which gave the franchise to the middle-class and representation to such industrial centres as Manchester and Birmingham. Parallel with this movement there was much activity among the working class, advanced members of which were by no means convinced that the enfranchisement of their employers would better their position. From 1829 to 1834 the ideal of a trades-union, comprehensive of all workers, was enthusiastically pursued. It was contended by some of the leaders that one great organization might, by means of a general strike, change the entire structure of society and ensure to the workers the right to the whole product of their labour. Robert Owen threw himself whole-heartedly into this movement. It reached its climax in the formation of the Grand National Consolidation Trades Union, which is said to have secured a membership of half a million. In 1834 the organization came into conflict with the law and collapsed; and the frustration of the hopes aroused in these years left a heritage of discontent which contributed to the Chartist movement at the end of the 'thirties.

The Reform Parliament proved a disappointment in

the economic sphere. It was feeble in its handling of the national finances and it did little to simplify the tariff. The reconstruction of local government by the Municipal Corporations Act (1835) laid the foundations for future improvements. But the one achievement that had immediate social reactions was the Poor Law Amendment Act (1834). A Royal Commission had been appointed in 1832 "to make a diligent and full inquiry into the practical operation of the laws for the Relief of the Poor in England and Wales." The commissioners fastened their attention on the "allowance system," the ramifications of which had greatly extended since 1795. During the war and the subsequent periods of depression the method of relief had been freely employed. At first it had been applied, for the most part, to agricultural labourers, but in the course of the years industrial workers had, to an increasing degree, taken advantage of it. The main problem, as it appeared to the commissioners, was to devise a scheme which would serve to eliminate able-bodied pauperism. To them it seemed axiomatic that "the situation of the able-bodied pauper should be less eligible than that of the independent labourer of the lowest class." They recommended, therefore, that parishes should be thrown together to form larger administrative units and that within each area there should be institutions which the claimants for relief might be required to enter. There they would find rigorous discipline and an inferior dietary. So the offer of the workhouse would become a self-acting test; no one would submit to it if he had any prospect of work or maintenance outside. There was to be a permanent central authority to see that uniformity was enforced on the local authorities. These recommendations were incorporated in the Poor Law Amendment Act (1834), and Poor Law Commissioners were appointed to apply the new principles. Their work aroused bitter

opposition. To attempt to deprive the poor of a means of relief to which they had become accustomed was a drastic step. The commissioners achieved a fair measure of success; but it was at the price of creating a grievance which was an important element in the Chartist agitation.

## SECTION 32

### ECONOMIC POLICY

"*Laissez-faire*, in short, should be the general practice; every departure from it, unless required by some great good, is a certain evil."—JOHN STUART MILL: *Principles of Political Economy* (1848).

IN the second quarter of the nineteenth century Great Britain was able to work out a more or less definite economic policy. She was relatively free from international complications and able to concentrate on her internal problems. The question of political reform had reached a definite stage in 1832. Parliamentary representation was at last based on an intelligible principle. It is true that, as social distress deepened, a strong demand arose for a further extension of the franchise; for the Chartist Movement was essentially a social ferment expressing itself in political terms. But the ruling class felt that the issue ought not to be reopened. Chartism itself was distracted by sectional leadership and confused objectives. The settlement of 1832, therefore, survived until 1867. Meanwhile, an equilibrium of forces, which may be regarded as the characteristic compromise of British industrialism, had been established. It fairly well expressed the views of the classical political economists and satisfied the requirements of the new manufacturing interest. The presumption was in favour of freedom for individual enterprise and against all forms of government intervention.

An increasingly complex industrial community could not achieve stability in the complete absence of regulation. The question was how best to provide a structure within which individual initiative might safely be allowed to function freely. Public administrative action, it was felt, ought to be reduced to a minimum. For, while the

reformers had an unbounded confidence in representative bodies, as is shown in the setting up of elected Boards of Guardians and the adoption of the same principle for municipal corporations, they did not contemplate the recruitment and training of a large body of paid officials for either central or local government. Jeremy Bentham, to whom we must ultimately ascribe the formulation of the ideas on government which were then gaining the ascendancy, thought that laws could be so adjusted to the scale of pain and pleasure that they would, to a considerable degree, work of themselves, provided that there was a small body of central commissioners to enforce their observance on the responsible authorities. This is very well illustrated by the provisions of the Poor Law Amendment Act (1834). The means test was self-acting. Workhouses were to be provided and organized, in theory at any rate, on certain uniform principles; it was left to the able-bodied applicant for relief to decide for himself whether he would enter the institution or not. This machinery, it was calculated, would eradicate the evils of the payment of relief in aid of wages, and a large number of paid officials would not be required to work it.

The same principle of attempting to eliminate evils by the indirect method may be illustrated in another connection. There was a growing concern about the crises which were periodically such a set-back to industrial progress. It was no longer possible to explain them by reference to abnormal war conditions. They seemed to be due to some defect inherent in the system itself. The crisis of 1825-6 by its very nature concentrated attention on the financial aspect, for its chief characteristic was a collapse following a speculation mania. For two or three years there had been cheap money seeking an outlet. The Government, in fact, had taken advantage of the

situation to carry through conversion operations. At this juncture the establishment of the new republics in South America seemed to offer a very favourable field for investment. There was a great boom in their mining shares and other issues. A loss of confidence came at the end of 1825. Between sixty and seventy English country banks were obliged to suspend payment. This feature of the crisis greatly impressed the Government. The right to issue notes of low denomination, which these banks enjoyed, seemed to be the main cause of credit inflation. To prevent abuse in the future the circulation of notes for less than five pounds was forbidden by law. At the same time permission was given for the formation of joint-stock banks with the right of note issue, provided that they had no branches within sixty-five miles of London. The existing limitation of note issue to partnerships not exceeding the number of six persons seemed to encourage a multiplicity of small concerns with inadequate resources and lack of a sense of responsibility.<sup>1</sup>

These precautions, however, proved ineffectual. Another crisis occurred in 1836-9. Financial complications had arisen in the United States, largely owing to land speculation and the sinking of capital in transport enterprises which had proved unproductive. At home, too, undue investment in railway projects created difficulties. The reserve of the Bank of England was subject to a severe drain, and it fell to the very low figure of £2,406,000 in September, 1839. Again the banking system seemed to be at fault. Banks had the right to issue notes at their own discretion; for it was assumed that the fact that they were convertible on demand was a sufficient guarantee against over-issue. The question was now raised whether this safeguard actually operated when an incipient trade boom offered apparently sound opportunities

<sup>1</sup> See page 140.

for advancing credit. The banks really had it in their power, it was pointed out, to expand the volume of the currency when they thought fit, and thus stimulate unhealthy speculation. If they did so and subsequently failed to redeem their notes, they were contributing to the frustration of the proper working of the gold standard. The effects of the existing system on the currency were expounded in a series of tracts by S. J. Loyd (afterwards Lord Overstone), and his arguments convinced Sir Robert Peel that restrictions would have to be imposed on the banks. He therefore proposed to introduce new legislation as soon as opportunity was offered for the revision of the Charter of the Bank of England. The result was the Bank Charter Act of 1844. It was based on the principle that all notes beyond a certain amount should have a backing of coin or bullion. The Bank of England was given an "uncovered" issue of £14,000,000; other banks had their issues limited to their average for the twelve weeks preceding 27th April, 1844. A self-acting system was thus adopted. If a bank wished to issue a single note beyond a fixed limit it had to place coin or bullion in reserve against it. The control of gold over prices would thus be ensured. Peel and those who thought with him considered that they had found a means of preventing the undue expansion of credit and therefore of eliminating the periodical crises. Subsequent events were to show that they were mistaken.

It may be said that while S. J. Loyd persuaded Peel that unrestricted note-issue was the primary cause of financial crises, Richard Cobden convinced him that restriction on trade was the main reason for social distress. The fiscal system, he came to believe, did not give the requisite freedom to commerce. The Committee on Import Duties, which reported in 1840, had drawn attention to the fact that there were nearly twelve hundred



items in the list of dutiable articles. In its view a drastic reduction of these would promote trade and actually benefit the revenue. Peel determined to put its recommendations to the test. Providing for a possible temporary loss of revenue by reviving the income tax for three years, he effected a comprehensive revision of customs duties. He went on the general principles of a reduction of duties on raw materials of manufacture to not more than 5 per cent *ad valorem*, on partially-manufactured articles to not more than 12 per cent *ad valorem*, and on manufactured articles to not more than 20 per cent *ad valorem*. In 1845 he was satisfied that trade had responded to this treatment, and he carried through a second simplification of the tariff, completely removing from the list some 430 articles, mostly the raw materials of manufacture. Meanwhile, Cobden and Bright, with the highly-organized Anti-Corn Law League behind them, were attempting to focus attention on a question which was considered to be the vital test of protectionist principles. One of their contentions was that as long as Great Britain refused freely to admit foreign food supplies her market abroad for manufactured articles must necessarily be a restricted one. It was obviously short-sighted for Great Britain to set any limits to the possibilities of trade if she wished to take full advantage of her favourable industrial position. Her leadership depended on the greatest possible freedom of exchange of goods with other countries. Circumstances forced Peel to deal with the Corn Laws in 1846.<sup>1</sup> Once they were removed in the face of the calamity of the Irish Famine, they could not be re-imposed. The repeal of the Corn Laws, important as it was, should not be allowed to overshadow what Peel had done in 1842 and 1845 in carrying forward the reforms begun by Huskisson. He had reduced the tariff

<sup>1</sup> See page 235.

to manageable proportions. It only remained for W. E. Gladstone, in the Budgets of 1853 and 1860, to remove the last traces of Protectionism. Adam Smith had written in 1776 that "to expect freedom of trade would ever be entirely restored in Great Britain was absurd." Within a century it had been achieved. The great developments in industry had lent aid to Adam Smith's arguments; for the real service of the classical political economy was that it gave a clear objective and theoretical justification to the aims of practical men. In the sphere of foreign trade the policy of non-intervention won a singular triumph. Free Trade remained the guiding principle of British commerce during the great period of its expansion.

But there was one problem which could not be solved either by a self-acting system or by mere absence of regulation. Should the State impose conditions on the employment of labour? On this question an interesting conflict arose, in which it was difficult to find theoretical consistency. Restrictions which had survived from an earlier period were obviously a hindrance to industrial development. Their removal was advocated on the ground that freedom of contract and competition were the true foundations of national prosperity. So the last vestiges of the old Elizabethan system disappeared from the Statute Book.<sup>1</sup> Alrcady, however, new regulations had been laid down in the Health and Morals of Apprentices Act (1802). It may be argued, indeed, that this was merely a Poor Law regulation. The Act only applied to pauper children employed in cotton mills, and was called for by the abuses which had arisen out of the special arrangements which, in this instance, had been made to supply child labour. Still, it is significant that the Act, in addition to clauses which had particular reference to pauper children, contained a limitation on the hours of

<sup>1</sup> See page 198.

labour to twelve a day and also provision for the cessation of night-work. These were principles which might be extended to children generally. Such extension, however, was strongly resisted. Robert Owen took up the question after the end of the Napoleonic wars. He had in his mills at New Lanark reduced the working-day to ten and three-quarter hours. Children under ten were not employed. To support his campaign he undertook an extensive tour of textile centres and collected facts in favour of further legislation. This aroused much more alarm than had the proposals of 1802. His opponents accused him of grossly exaggerating such abuses as he found, and they contended that matters would soon right themselves if the State refrained from interference. New restrictions would inevitably do harm to trade and tend to drive industry from the country. With the assistance of Sir Robert Peel (the elder) an Act was secured in 1819. It was a great disappointment to Robert Owen, for in every detail his suggestions had been modified. In particular, his plan for the appointment of paid and qualified inspectors, who were to see that the terms of the Act were observed, was not adopted. With all its shortcomings, however, the Act of 1819 was in fact the precursor of the great code of factory legislation. Progress was exceedingly slow. *Laissez-faire* was winning victories in one field after another. Direct repudiation of the doctrine of non-intervention stamped a man as something of a crank. The issue had to be fought on other grounds. The factory reformers appealed to the humanitarian sentiment which had so powerfully influenced opinion in favour of the abolition of slavery.<sup>1</sup> This meant that emotion was enlisted in a cause to which, in the opinion

<sup>1</sup> A bill to abolish slavery within the British Empire was passed in 1833 and the slaves were given their freedom on 1st August, 1834. Compensation to the extent of £20,000,000 sterling was paid to the slave-owners.

of many, non-moral economic considerations ought properly to have been applied. In their different degrees Richard Oastler, Michael Thomas Sadler, and Lord Shaftesbury were all "emotionals"; the economists despised them for their ignorance and denounced them for their recklessness. The first fruits of the efforts of the reformers was the important Act of 1833. No children under 9 were to be employed in textile mills. Their hours of labour were specially regulated. Protection was also given to "young persons," night-work being prohibited for all under 18, and their hours were limited to 12 a day or 69 a week. The most important feature of the Act, however, was that it provided for the appointment of four inspectors, who had powers to enter any factory, examine conditions, call witnesses, and summon any person to give evidence. This is the first instance in which a department of the Central Government with paid inspectors was charged with the administration of a particular Act of Parliament. Step by step factory legislation was extended. New classes of "protected" persons were defined: children, young persons, women (1844); but the presumption against making any rules applicable to men remained strong. The first real breach in it was with respect to the fencing of machinery (1856). New industries were also included. At first the legislation was confined to textile factories; then it was made to cover such allied employments as print works, bleach and dye works, and lace factories. In the 'forties the special Mines Acts began to impose regulations on coal and metalliferous mines. The great extension of State intervention, however, came in the second half of the nineteenth century when the opposition to regulation had considerably weakened.

## SECTION 33

### RAILWAYS

“What was to be done with all those who had advanced money in making and repairing turnpike roads? What with those who may still wish to travel in their own or hired carriages, after the fashion of their forefathers? What was to become of coach-makers, and harness makers, innkeepers, horse breeders, and horse dealers?”—SIR ISAAC COFFIN (opposing the third reading of the Liverpool and Manchester Railway Bill in the House of Commons, 1826).

THE perfection of steam locomotion was the most important single contribution made by Great Britain to the second phase of industrialization. In no department of economic activity are the advantages and disadvantages of pioneering more clearly exhibited. Whether the new means of transport would supersede the existing ones, what would be the consequences of competition between them, and, assuming the ultimate success of the railways, what control, if any, should the State exercise over construction and operation, were all questions to which past experience supplied little material for answers. Three stages may be distinguished. First, there were the years of experiment with the locomotive engine. Then followed the building of the early railways, particularly the Stockton and Darlington and the Liverpool and Manchester, in face of the opposition of public prejudice and vested interests. Finally, when it was clear that the local lines must be connected up in a complete system, a practical problem of the greatest difficulty was presented to a generation which regarded free competition as a fundamental principle and State intervention as an evil only to be accepted in extreme cases. It is no wonder, therefore, that the history of British railways differs from that of other countries in important particulars. They were

promoted by private enterprise and had no protection against the hard terms exacted by landowners. From the beginning they were heavily capitalized. Only in a small and highly industrialized community could they have borne the burden and won their way to the dominating position they long enjoyed.

By the 'twenties of the nineteenth century, the inadequacy of the canal system was becoming increasingly evident. The movement of goods was slow at the best: it was often interrupted by frost in winter and drought in summer. Canals were not particularly suitable for some of the most important industrial areas. In the Black Country pumping was essential to ensure the necessary supply of water; in South Wales and Monmouthshire the change in level on all routes running from the hills to the seaboard involved the building of frequent locks.<sup>1</sup> There were also constant complaints about the policy of the canal companies in maintaining high rates for facilities which they made little effort to improve. Active spirits among the manufacturers were ready to support an alternative means of transport if it could be proved to be practicable.

The general principle of the rail-road was well known. Such roads had long been employed by colliery undertakings and were frequently provided as adjuncts to the canals themselves.<sup>2</sup> Propulsion was usually supplied by means of horses; but here and there, especially on steeper gradients, stationary engines were used to operate a cable attached to the wagons. The idea of constructing a locomotive engine was no new one. Allusion has already been made to the experiments of William Murdock.<sup>3</sup>

<sup>1</sup> The Glamorgan Canal between Merthyr and Cardiff (opened 1794) fell some 468 feet in its course and had 51 locks, i.e. on an average one lock every half-mile.

<sup>2</sup> About 400 miles of rail-road were laid down in South Wales and Monmouthshire in the first quarter of the nineteenth century, mostly in connection with collieries and ironworks.

<sup>3</sup> See page 178.

The problem was taken up by Richard Trevithick, John Blenkinsop, William Hedley, and others, and their work more clearly defined the difficulties which were involved. In 1814, George Stephenson, who was employed as engine-man at Killingworth Colliery, made the most successful model yet achieved. He continued his experiments for the next ten years and at last had the opportunity of displaying what the locomotive could do when he was appointed engineer of the projected Stockton and Darlington Railway. From the opening of the line on 27th September, 1825, Stephenson's engine "Locomotion" was regularly employed in hauling coal wagons. The horse, however, was by no means superseded. The railway was a public one—in fact, the first which can claim that name—and passengers for some time elected to travel in horse-drawn coaches.<sup>1</sup>

The importance of the Stockton and Darlington Railway is clear enough in retrospect; it initiated steam traction on a public railway which carried both passengers and goods. But the enterprise was a local one, which did not challenge existing interests. It was quite different when an Act was sought to construct a railway from Liverpool to Manchester. The canal company offered the most strenuous resistance. They were successful in 1825; but in the following year the opposition was weakened by concessions and Parliament granted the necessary powers. When the railway was under construction the question of the kind of traction to be employed remained an open one. In the end the directors decided to offer a premium for a locomotive which would fulfil certain prescribed conditions. At the Rainhill trials in October, 1829, Stephenson's "Rocket" greatly surpassed all expectations. When the railway was publicly opened on 15th September, 1830,

<sup>1</sup> The company was under statutory obligation to allow proprietors of coaches to use the railway provided they observed its by-laws.

it may be said that the future of the locomotive was assured. The "Rocket" was the real forerunner of our great express engines.

Railway projects now began to multiply. Birmingham, in particular, wished to get more efficient means of communication with London in one direction and with Liverpool in the other. This suggested a scheme on a much larger scale than anything yet attempted. In 1830 a bill was introduced to authorize the building of a railway between Birmingham and London. It was defeated by the combined opposition of the landlords through whose estates the line was to run, of the canal companies interested in the traffic, and of the proprietors of the coaching establishments. This failure cost the projectors £32,000. They were not dismayed. By introducing amendments in the scheme to propitiate some of the more strenuous opponents they ultimately secured a bill. The expenses had been greatly augmented. The diversion of the route to avoid Northampton, which had strongly objected to the line, involved the cutting of the Kilsby tunnel at a cost of £300,000. The original estimated cost of the line was under £1,500,000; but this figure had to be revised from time to time until the authorized capital of the company reached £5,500,000. It was opened on 17th September, 1838. The results of its competition on roads and canals are worth summarizing. A proprietor who ran nine coaches between Birmingham and London had to reduce them to two in 1839. The aggregate tolls taken by the turnpike companies on the route fell from £28,000 in 1836 to £15,798 in 1839. The consequences on the canals were not so immediate. By 1844, however, the revenue of the Grand Junction Canal had fallen to nearly one-half of what it had been in 1838. Its shares stood at £330 before the railway was opened; they fell to £155 in 1844, £100 in 1846, and £70 in 1853. There



was an outcry against unfair competition. The road users, it was pointed out, had to bear much heavier public charges than had the railways. They had to pay the licence duty on stage coaches, the assessed tax on coachmen and guards, and the assessed tax on draught horses. Railways, on the other hand, only paid  $\frac{1}{8}$ d. per passenger per mile. The canal companies complained that the railways took away from them the goods which could bear heavier freight charges, or, as we should now say, "the cream of the traffic." It is interesting to compare these allegations with those which the railways are to-day making against road motor transport.<sup>1</sup>

At the time of its opening the London and Birmingham Railway was the longest in existence. Already the Grand Junction Railway had been built from Birmingham to Warrington, and a connection had been made with the Liverpool and Manchester. By 1850 over 4,000 miles of railway were under construction. This made possible a great trunk line from London to the North. A complete network, in fact, had actually been laid down. The question of consolidation by amalgamation had been forced on public attention by George Hudson, who in 1844 succeeded in uniting three railways which met at Derby to form the Midland Railway Company. Two years later the London and Birmingham gained control of the Grand Junction (which had already absorbed the Liverpool and Manchester), and thus the London and North Western came into being. The railway companies had also initiated the policy of buying up canals. Parliament, in these circumstances, had to face the possibility of transport monopolies of national extent. The presumption was in favour of allowing freedom to individual

<sup>1</sup> In this paragraph I have drawn upon a lecture of mine on *The Development of Transport Facilities in the Midlands during the First Part of the Nineteenth Century*, which was printed in *The Journal of the Institute of Transport*, April, 1928.

enterprise. Was it right, therefore, to exercise control over the number and nature of railway projects approved by Parliament? If so, what was to be the principle of selection? If not, was it possible that competition would prove wasteful? It was an awkward dilemma. A select committee, of which W. E. Gladstone was chairman, expressed the definite opinion in 1844 that railway schemes ought to be reviewed in relation to the national requirements. A special department of the Board of Trade was set up to conduct such inquiry. The pressure of private interests when the railway boom of 1846 was developing was too powerful to be controlled, and there was so much opposition to supervision that the plan was allowed to drop. But the irony of the situation was that those who were the champions of the principle of competition, when they were advocating a new scheme showed every disposition to eliminate it when they had achieved their ends. Amalgamation was the very negation of competition. Should Parliament ensure competition by preventing amalgamation, or, recognizing it, impose restrictions on the conduct of railways? Restrictions seemed the better course. Beginning with the requirements that all railways were to run one train a day, stopping at all stations, and carrying third class passengers for a fare of 1d. a mile (1844), and going on to compel them to afford reasonable facilities and to prevent them from giving any of their customers undue preference in the matter of rates (1854), the State built up an elaborate system of control. It may, indeed, be said that the problems presented by the railways contributed more than any other to the extension of State action.

The provision of the country with a complete network of railways was a stupendous task. It was a great financial operation. The finding of the capital for railway construction was at first a matter for local effort; but, as

the schemes became more extensive, it was centred in London. The result was to strengthen its position and to prepare the way for the part which its financiers played in the promotion of railway schemes on the Continent and overseas. Railway building also produced the great contractors with their armies of skilled "navigators" (navvies). Samuel Morton Peto is said to have employed 14,000 men. Thomas Brassey built twenty foreign railways between 1850 and 1870, his contracts being so scattered as France, Hungary, India, the Argentine, and Canada. Material was exported and men were sent out to do the work. Five thousand Englishmen were employed in constructing the Paris to Rouen railway. Railways, therefore, offered a great field for investment at home and abroad, created a demand for labour in construction and subsequent operation, and provided experience in the direct management of large enterprises.

## SECTION 34

### THE PROGRESS OF INDUSTRY

"Under the benignant influence of peace and liberty, science has flourished, and has been applied to practical purposes on a scale never before known. The consequence is that a change to which the history of the world furnishes no parallel has taken place in our country."—LORD MACAULAY: *The History of England*, vol. i (1848).

It is difficult for us to appreciate the note of self-congratulation with which the industrial achievements of Great Britain were referred to in the middle years of the nineteenth century. In comparison with the scale and technique of modern production the manufacturing equipment of the country seems to have been modest enough. But contemporaries were able to contrast it with the much simpler conditions which had existed in eighteenth-century England and still survived on the Continent. The miracles which had followed the bringing of coal and iron into relation, and all the elaborations of that relationship in the new developments of machinery and transport, still fascinated them. They could regard the triumphs of science with genuine satisfaction, for as yet the leadership of Great Britain was unchallenged. Whether the test was the output of coal, or the production of iron, or the construction of machinery, or the application of steam-power to manufactures and to land and sea transport, she was pre-eminent. All these activities were so closely interlocked that they represented a degree of industrialization which it seemed unlikely that any other country would attain.

When statistics of the annual output of coal were first collected in 1854 it was found that Great Britain was producing sixty-four and a half million tons.<sup>1</sup> This had

<sup>1</sup> Production reached 280,000,000 tons in 1923 and has subsequently declined.

been made possible by the great advances in mining technique. The problems involved in sinking shafts to deep seams had been solved one after another. The safety-lamp had reduced the dangers from explosion. New methods of ventilation had been introduced. The steam-engine, which had been first extensively employed as a pump to remove water from mines, could now be used to wind the cages. The locomotive, which had also been first developed in connection with mines, was now the means of hauling coal along the new railways to an ever-increasing number of internal markets and to the coast for shipment. Growing efficiency in production and greater facilities for distribution made it possible to offer coal at such prices that the demand for it was stimulated. The main uses were for household purposes, for the smelting of iron, for the fuel of the steam-engines employed in manufacture and transport, and for export. How the total output was divided among these uses cannot be ascertained with any certainty. It was estimated that in 1849 eight million tons were consumed in producing pig-iron and over eleven million tons were sea-borne, including that which was carried coastwise.<sup>1</sup> The amount used for smelting would certainly be greater in 1854, for, although improvements in the blast-furnaces were reducing the quantity required per ton of iron, the increase in the total production of iron more than maintained the demand. Up to the middle of the century the Northumberland and Durham coalfields still made the greatest contribution to the British output—something like 25 per cent of the whole. The Lancashire coalfield came second with a greater output than that of either South Wales or Scotland.

In the 'thirties the iron industry had entered upon a

<sup>1</sup> The value of the coal exported in 1860 was £3,316,000: not as yet an important element in the total value of exports.

period of rapid expansion. Production was nearly trebled in twenty-five years. This was partly effected by building more furnaces, and partly by a considerable increase in the average yield per furnace. The most remarkable development occurred in Scotland, where the industry had hitherto experienced difficulties owing to the nature of the local iron-stone and the poor coking quality of the coal. In 1829 J. B. Neilson of Glasgow demonstrated that it was possible to use a hot blast. By this means the ore could be more easily smelted. Four years later it was discovered that with the hot blast raw coal could be used in the furnaces.<sup>1</sup> Consequently the Scottish industry made a great leap forward. It was localized in Lanarkshire, chiefly at Coatbridge, Airdrie, and Wishaw. In the older centres the progress, though not so spectacular as in Scotland, was steady. The Black Country and South Wales were pre-eminent in the production of pig-iron. In 1856 the Black Country had 147 furnaces in blast and contributed nearly 22 per cent of the total British output.<sup>2</sup> The great ironmasters of South Wales—the Guests of Dowlais and the Crawshays of Cyfarthfa—were extending the scale of their enterprises and well maintaining their leadership in the industry.<sup>3</sup> The invention of the hot blast also opened the way for the establishment of the iron industry in the anthracite area on the west of the Welsh coalfield. The demand for iron grew with the multiplicity of the uses to which it was put. Railway construction at home and abroad exercised the

<sup>1</sup> "With the cold blast coke had to be used, and 8 tons 1½ cwt. of coal converted into coke was required to reduce one ton of iron. It was found that when heated air was employed the coal might be used raw, and that 2 tons 13½ cwt. was sufficient to smelt a ton of iron, including 8 cwt. required for heating the air."—David Bremner: *The Industries of Scotland* (1869), page 40.

<sup>2</sup> G. C. Allen: *The Industrial Development of Birmingham and the Black Country* (1929), page 89.

<sup>3</sup> In 1846 Sir John Guest had eighteen furnaces in blast at Dowlais; there were eleven at Cyfarthfa.

strongest influence. Rails, bridges, locomotives, etc., were made of iron. Municipal development, particularly the supply of gas and water, meant the provision of engines, machinery, and mains. All types of factories were adopting steam-power and machinery.

The applications of iron to industrial purposes had become numerous and complex. A succession of inventors, notable among whom were Henry Maudslay, James Nasmyth, and Joseph Whitworth, had laid the foundations of the machine-tool industry. The old difficulties of machine construction, which James Watt and others had experienced, were removed. Even the most skilled workman could only arrive at an approximation to accuracy if he had to use hand tools. When he was most successful his machine was likely to be unique. To repair it called for skilled attention. The perfecting of the machine tool changed all this; mechanical precision could be obtained and parts standardized. Boring, turning, planing, and many other processes were performed by machines. Machines were made by machines. Great Britain was thus able to equip her industries with every form of mechanical contrivance for large-scale production. The achievements of the engineer not only facilitated the production of coal and iron, but were even more strikingly exhibited in the uses to which the products of those industries were put. To the engineer must be ascribed the penetration of steam-power and machinery into all forms of manufacture. It is not easy to express his triumphs statistically. If the chief textile industries be taken as examples, the significance of his work becomes plain. In 1856 the cotton industry gave employment to over 340,000 persons. It had 25,797,000 spindles and 275,590 power looms. Of the motive power 92.4 per cent was provided by steam. The high degree of localization is demonstrated by the fact that 78.4 per cent of the spindles and 81.8 of the

looms were in Lancashire. The same tendency to concentration is found in the woollen industry. In 1856 it employed 67,385 persons. There were 1,466,000 spindles and 13,463 power looms. Of the spindles, 67·7 per cent were in the West Riding of Yorkshire and 18·6 in Lancashire; of the power looms, 46·6 per cent were in the West Riding of Yorkshire and 42·5 per cent in Lancashire. Steam supplied 74·1 per cent of the motive power.<sup>1</sup> It is not remarkable, therefore, that in engine and machine manufacture the West Riding of Yorkshire and Lancashire were the chief centres. They had the advantage of a local demand on a scale greater than elsewhere in the country.

An examination of the country's foreign trade would prove to any inquirer that Great Britain had gained a key position. The value of exports had increased three-fold between 1830 and 1860. They consisted almost entirely of manufactured goods. The pride of place was occupied by cotton piece-goods and yarn. In fact, their value had risen to nearly half the total value of exports. They constituted an industry which by its very nature illustrated the service which a strongly localized manufacture with skilled workers and an efficient mechanical equipment could perform. The whole of its raw material had to be imported; nearly all of it from the United States of America. The finished article found markets all over the world. The flow of textile piece-goods from Asia to Europe, which had greatly exercised the Mercantilists, had now been completely reversed. So great was the volume going to the East that the question arose as to what commodities could be sent in payment for

<sup>1</sup> Further statistical details are provided in a convenient form by H. D. Fong in his *Triumph of Factory System in England* (1930). The figures given above for the woollen industry do not include worsted manufacture. It employed an additional 37,561 persons in 1856, 79·4 per cent of them being in the West Riding of Yorkshire.



them. After 1834, when the East India Company lost the last remnants of its trading monopoly, a solution had to be worked out by private enterprise. China paid largely in tea, and coffee-growing was successfully established in Ceylon. India itself exported a greater variety of products, including, for instance, jute, which was grown in steadily increasing quantities in Bengal to supply the requirements of the new industry at Dundee. An analysis of British imports, indeed, shows that they were mainly raw materials. Cotton, wool, and timber were the most important. Such interdependence of raw material producing countries and the manufactures of Great Britain suggested a world economy of which this country would be the pivot. It was possible to contemplate with Richard Cobden the inauguration of a period of international peace and understanding.

How could the position be strengthened and maintained? By opening British ports to the produce of all countries without the imposition of any protective or preferential charge. This free trade policy seemed amply justified by events. Its success had created a strong presumption in favour of its extension. There were many writers on the Continent who believed that its general adoption was well within the realm of practical politics. Among orthodox economists, freedom of trade was an axiom of their science. The contention of Friedrich List, in his *National System of Political Economy* (1841), that a country should not open its doors freely to foreign goods until its own economic potentialities had been thoroughly explored had not yet attracted attention. Even he admitted that, when a country had arrived at a proper balance between industry, trade, and agriculture, restrictions ought to be removed. The Commercial Treaty, which Cobden was so largely instrumental in negotiating with France in 1860, seemed an important indication of

a general tendency towards Free Trade. In itself, and particularly in its operation, it served to lower tariff walls and so to remove a serious cause of friction between nations. France agreed, in the first instance, to admit British manufactured goods at a rate not higher than 30 per cent *ad valorem*. Subsequently, this rate was considerably reduced, for a most-favoured-nation clause ensured that Great Britain should enjoy the advantage of the lowest rate which France granted to any other country. A network of treaties was based on that of 1860, with the result that tariff barriers in Europe were substantially lowered.<sup>1</sup>

There were, however, forces in operation which threatened Great Britain's monopoly as a manufacturing country. Incipient industrialism could be detected elsewhere. British policy actually seemed to be fostering it. In the eighteenth century laws had been passed to prohibit the export of machinery. These had been modified by Huskisson in favour of a licensing system. The Board of Trade had authority to grant licences for the export of machines which were entered as prohibited in the schedules to the Customs Regulations Acts of 1825 and 1833. No doubt it exercised this discretion with caution where complete machines were concerned. It was not so easy to detect parts of machines. In any case, legislation could not be devised which would prevent foreigners from obtaining models and drawings. Nor could the export of the new machine tools be regulated. In 1843 the effort to control the export of machinery was finally abandoned, all restrictions being removed. It seemed to many shortsighted to allow, for instance, textile machinery to be sent abroad where its products would undermine the demand for British goods. The answer to their doubts was that

<sup>1</sup> C. J. Fuchs: *The Trade Policy of Great Britain and her Colonies since 1860* (1905), Chapters I and II.

export could not be prevented in practice and that the sale of machinery was in itself a valuable trade. After all, Great Britain was equipping other countries with railways to her great profit. She was, in fact, finding outlets for the investment of capital which could not be absorbed at home. But it was impossible to export capital and at the same time take precautions that the countries which borrowed it should not become industrialized. Trade returns were already exhibiting a feature which was later the subject of much agitated discussion. There was an unfavourable balance in the sense that the value of goods imported was much greater than that of goods exported. The services of British shipping and the yield of foreign investments actually filled the gap and gave a substantial surplus. Still it is true that this country was assisting others to become industrialized; her very success was contributing to the overthrow of her monopoly.

## SECTION 35

### THE POSITION OF AGRICULTURE

"It is, indeed, certain that agriculture has made a greater progress since the abolition of the Corn Laws than it ever made in any previous period of equal duration."—J. R. McCULLOCH (1863).

THE effect of the industrialization of a country on its agriculture may be stated in general terms. It involves the diversion of part of the labour and capital from traditional uses to new enterprises. This is brought about by offering them better terms. Agriculture would thus seem to be placed at a disadvantage. But the industrial classes have to be fed, and agriculturists may be able to dictate the prices of the necessaries of life. Provided there are no alternative sources of supply, they may have the last word. The incipient industrial movement will be arrested. Industry is but a general name for a number of specialized modes of production. All such specialization must justify itself by gaining access to a wide market. An appropriate exchange of commodities has to be established. The industrialist is driven, if he cannot sell his goods profitably in the immediate region, to attempt to do so at a greater distance. He is always trying to force a wider economic interdependence. In this larger sphere the position of agriculture may be quite different from what it had formerly been in the more restricted area. Supplies produced under more favourable circumstances may now be available, and a new and lower price level will rule. This process may be retarded. If the cost of transport is high, local supplies will continue to enjoy some degree of natural protection. The agricultural interest may be politically strong enough to get protective tariffs imposed in its favour. The result in either

case will be a slowing down of industrial development. As it proceeds, however, there is an inevitable readjustment of balance between agriculture and industry.

In the first half of the nineteenth century it was possible to argue, as many did, that Great Britain's economic progress was being held back by the protection given to agriculture. Theoretically, the contention is sound. The extension of foreign trade requires as a primary condition the removal of restrictions. Whether, in the existing circumstances, there would have been more demand for manufactured goods abroad had corn been admitted freely is open to question. Even some of the advocates of the repeal of the Corn Laws did not think so; for in their opinion the home producer would normally be able to sell more cheaply than his foreign competitor. The cost of transport would definitely discourage imports. A bad harvest would no doubt lead to heavy importation; but the home producer would share with the foreign the advantage of high prices, and it was obviously in the national interest that some limit should be set to the rise. Stated in this way the Corn Laws would appear futile rather than harmful. They excluded foreign corn when it was not profitable to send it and admitted it as soon as it was. This is to state the case too simply. The question of the Corn Laws aroused such bitterness and provoked so much mutual recrimination that we must assume that the controversialists believed there were vital principles involved. They failed to define them at all precisely. Whatever benefit it may be claimed that the Corn Laws conferred, or whatever damage it may be alleged that they inflicted, it cannot be shown that agriculture flourished under their operation, or that it entered upon its decline when they were repealed. For the first three-quarters of the nineteenth century agriculture experienced its worst years under Protection and

attained its highest degree of prosperity under Free Trade. This is a demonstration that fiscal policy, while important, is not so overwhelmingly so as the opposing schools are apt to imagine. There are always other factors present, and many of them prove to be beyond the control of legislation. Recurrent periods of distress made the agriculturists cling to Protection, while they made the industrialists clamour for cheaper bread. The analysis of the causes of the distress is a difficult problem. That it arose out of the process of industrialization is clear. We cannot accurately measure the strains and stresses of that process.

Agriculture felt the consequences of war and post-war conditions even more acutely than did other industries. It was stimulated by special demands and by the shortage of foreign supply. High prices for cereals had encouraged the cultivation of inferior soils. The advantages had been shared rather unequally among the landowners, the farmers, and the labourers. Rents had steadily mounted up; there were cases in which land let before the war at less than 10s. an acre rose to 45s. or 50s. an acre in the course of it.<sup>1</sup> The farmers were prepared to offer such rents because they had the prospects of making good profits. There are many indications that those who were successful did very well. But their ventures were highly speculative. A sudden collapse of prices—and such falls occurred even during the war years when there was an exceptionally good harvest—reduced them to serious financial straits. The labourers had hardly been able to improve their position at all. There was strong opposition to any advance in wages, and when there was an undue rise in the cost of living parish relief was very generally given.<sup>2</sup> The end of the war threatened calamity. If prices were allowed to slump the landlords would not

<sup>1</sup> W. H. R. Curtler: *A Short History of English Agriculture* (1909), page 286.

<sup>2</sup> See page 196.

be able to collect their rents. They would find themselves deprived of the greater part of the income upon which they had counted to meet their expenditure on improvements and in other directions. The farmers, for their part, would not be able to carry on unless their rents were drastically reduced. The burden of the poor rates would appear excessive, and attacks would be made on the relief given to able-bodied labourers just at the time that it was most necessary. The Corn Law of 1815 was an attempt to save the situation. If foreign wheat could be excluded until the home price reached 80s. a quarter, disaster to agriculture might be averted. It was a vain hope. Two seasons were sufficient to expose the crudity of this solution. The harvest of 1815 was good and prices fell. Many farmers were unable to meet their rents. In the following year there was a poor harvest, particularly abroad, and prices went well above the 80s. limit in the winter of 1816-17. The Corn Law could do nothing to prevent this ruinous fluctuation in prices.

The agriculturists themselves were forced to recognize that the policy of 1815 required some modification. Much of their trouble was due to the fact that a deficiency or an excess in the harvest had an altogether disproportionate effect on prices. It was true that a rise in prices when there was a shortage was ultimately arrested by opening the ports to foreign grain. It was impossible, however, to legislate against the embarrassment of an abundant harvest and the consequent fall in prices. An attempt was made in 1822 to prevent the abrupt transition from prohibition to free import at a given price; but the new rates were not to come into effect until that price was reached. Since prices continued low the new Act did not become operative. The agriculturists found a new grievance in the resumption of cash payments, and claimed that if the price level was to be depressed by the return

to the gold standard, a comprehensive revision of old contracts and leases ought to be undertaken. They were, however, reluctantly adjusting themselves to the new conditions. Landlords had revised rents, and the farmers who had survived post-war depression were making reasonable profits. Protection, they felt, had done little for them, and the time was certainly not opportune to ask that it should be made more effective. Huskisson was revising the tariff, and industrialists were coming to be more and more convinced that the special privileges enjoyed by agriculture were a hindrance to foreign trade. The Government came forward in 1827 with a proposal that the principle of a sliding-scale should be adopted in place of that of prohibition up to a given price. In their opinion the scale should be devised to secure, as far as it was possible, a price of 60s. a quarter. Huskisson had to make concessions, and the scale actually established by the Act of 1828 (which repealed that of 1815) was more favourable to agriculturists than were the proposals of the previous year. A scale of duties was now imposed which varied inversely with the price of corn. It was designed to correct an undue fall of prices in the home market by placing an increasingly heavy duty on imports as the prices fell; as the prices rose the duties were reduced, until at 73s. a quarter they became nominal, and so foreigners were encouraged to supply the deficiency when the harvest had been a poor one.

The Act of 1828 is the Corn Law against which the Anti-Corn Law League opened its campaign in 1839. It was vulnerable at many points. So far from making for steadier prices it encouraged speculation and tended to accentuate fluctuations. When prices were rising the dealers would hold up foreign supplies to get as high a price as possible and pay a low duty. If prices were falling they would be tempted to rush in supplies before



they had fallen so far that the duty would be too heavy. The farmer was, therefore, quite unable to forecast what prices he might expect, and so regulate his sowing. The alternation of a series of good harvests with a series of bad ones continued, with the same consequences as in the war, and immediate post-war, years. Towards the end of the 'thirties a particularly bad series provoked renewed agitation against the Corn Laws. It now became continuous and highly organized. Sir Robert Peel tried to meet it in 1842 by a revision of the Act of 1828. The experience of the last few years had shown that wheat could be profitably grown for about 56s. a quarter. He introduced a new sliding-scale with the object of getting prices to range between 54s. and 58s. a quarter. It was also ingeniously arranged to check speculative dealing by an upward and downward "rest," i.e. two points at which the duty remained fixed. The Anti-Corn Law League merely intensified its efforts in favour of complete repeal. They were joined by a grim ally in the autumn of 1845. The potato crop in Ireland failed. The ports had to be thrown open. "The remedy," wrote Peel, "is the removal of all impediments to the import of all kinds of human food; that is, the total and absolute repeal for ever of all duties on all articles of subsistence. You might remit nominally for one year. But who will re-establish the Corn Laws once abrogated, though from a casual and temporary pressure?"<sup>1</sup> In the following year he carried through the repeal. For thirty years agriculture had been discussed in terms of Protection and Free Trade. All other aspects of it tended to be overlooked. What progress had it made as an industry? How far had the lessons of the great improvers been learnt and followed?

<sup>1</sup> C. S. Parker: *Sir Robert Peel from his Private Papers* (1899), iii, page 224.

High prices during the war had not encouraged improvement. The fall in prices, which, though irregular, was continuous after 1815, also told against it. In the war period quick returns were snatched even by breaking up soils quite unsuited for cereals. After the war it was a question of avoiding heavy losses. There was no capital to invest in new ventures. The science of agriculture made slow progress. The beginnings of a new revival of interest in it can be detected towards the end of the 'thirties. The Royal Agricultural Society of England was founded in 1838<sup>1</sup> and it promoted its first exhibition of livestock and implements at Oxford in the following year. Its *Journal* did excellent service in drawing the attention of landowners and farmers to new developments. Three main themes run through its early numbers and are some indication of the lines along which improvements ran in the 'forties and more markedly in the 'fifties. These were fertilizers, drainage, and agricultural machinery. The results of the work of Justus von Liebig at Giessen were made known by the publication of *The Relation of Organic Chemistry to Agriculture and Physiology* (1840). John Bennett Lawes was laying the foundations of the great experimental station at Rothamstead. He secured a patent for the manufacture of superphosphate and built a factory at Deptford to produce it. Wider knowledge of the chemistry of the soil led to many experiments in the use of the new fertilizers.<sup>2</sup> There is also much discussion in the *Journal* of the methods of land drainage. A new system of underground parallel drains had been elaborated by James Smith of Deanston in Perthshire. He had filled the drains with loose stones, but a great

<sup>1</sup> The society received its charter in 1840. The unofficial Board of Agriculture, through which Arthur Young had done so much of his work, had come to an end in 1822.

<sup>2</sup> Much use was made of guano, imported from the islands of the Pacific and elsewhere. The importation reached an average of nearly 300,000 tons a year in the 'fifties.

step forward was made possible in the 'forties when cheap cylindrical pipes could be obtained. The urgent necessity of better drainage was recognized by Sir Robert Peel. He introduced a bill in 1846 which authorized the Government to advance £2,000,000 in drainage loans, repayable in twenty-two instalments. There is much evidence that farmers had been slow in adopting machinery. The labourers were naturally opposed to it. During the disturbances in south-east England in 1830 the destruction of threshing-machines was very common.<sup>1</sup> To do the work in barns with hand flails seemed to guarantee some kind of a livelihood. The travelling steam-engine and threshing-machine were still rarely seen in the 'forties. Reaping was generally done with the scythe and cradle. James Caird, who made a detailed inquiry into the state of English agriculture as a *Times* commissioner in 1850-51, gives the impression that what he calls "antiquated farming" was still the rule.

The problem, as it appeared to Caird, was that of raising the general standard of farming to the level of the best. Even in the same neighbourhood he found traditional methods followed alongside of the new improvements. He constantly draws attention to the survival of primitive and wasteful rotations, and of the old practice of bare fallow as a means of recovering fertility on heavy soils. Under the influence of Protection, the majority of landowners had in his opinion neglected their land, for they had felt no stimulus to make improvements. Their tenants usually held on yearly agreements and consequently had little inducement to expend their own capital. There was no drainage where it was the only thing needed greatly to enhance the value of the land. The farm buildings were very defective. The contrast

<sup>1</sup> J. L. and B. Hammond: *The Village Labourer, 1760-1832* (1912), Chapter XI.

between the high farming of the Lothians, where large farms had their own steam-engines and a variety of agricultural machinery, and some of the counties of the south of England was one of centuries. Still, Caird took an optimistic view of the future. He believed that in eighty years the value of land in England would be more than doubled. There were many signs of a general advance in agriculture and the future seemed bright. The increase of the industrial population meant a demand for a greater variety and larger quantity of foodstuffs. Stock raisers and dairy farmers were particularly prosperous. Cereal production, if carried on according to the best methods, was likely to remain profitable. Transport costs would continue to make it impossible to flood the market with cheap corn, in spite of the fact that the ports were now open. The third quarter of the century, indeed, was the best that British farming has ever experienced. The fears of the protectionists appeared to have been baseless. After 1853 the harvests were good, and the discovery of new gold deposits in California and Australia expanded purchasing power. The outbreak of the Crimean War (1854-56) cut off the Russian supplies, which had hitherto been the chief element in wheat imports. The American Civil War (1861-65) postponed the day when the United States could make effective use of her western expansion. It was not until the middle 'seventies that the consequences of the large-scale development of her corn lands and the revolution in ocean transport created a new situation. British agriculture then entered upon a period of acute depression.

# THE INDUSTRIAL AGE

## THE THIRD PHASE

### SECTION 36

#### THE EXPANSION OF INDUSTRIALISM

"A good deal of confusion may be avoided by considering the Industrial Revolution always as a single series of changes in relation to a world market. Thus, there was no French, German, or Russian Industrial Revolution, but only *the* Industrial Revolution as it spread to those countries and adjusted itself to their peculiar conditions."—H. E. BARNES and F. FLÜGEL: *Economic History of Europe in Modern Times* (1929).

THE process of industrialization, once set in motion, gathers momentum. It is essentially dynamic. We have already noticed with what urgency an industrial community seeks wider markets for its goods. The end would seem to be the exchange of its manufactured articles for the food and raw materials of other countries. But this end can only be achieved if tendencies towards industrialization elsewhere are immediately detected and frustrated. How can such a policy be pursued? Precautions, it might be supposed, could be taken to retain the secrets of the new machines and methods of manufacture. Experience has proved that this is virtually impossible. Great Britain, as we have seen, finally abandoned even the pretence of regulating the export of machinery in 1843.<sup>1</sup> An effort might be made to prevent another country from profiting from the knowledge it had secured, by flooding its market, at the appropriate moment, with the kind of goods it proposed to make for itself, and at a price with which it could not compete. It would be worth while to do this at a loss for the time if

<sup>1</sup> See page 228.

the new enterprise could be crushed. There was a suspicion, particularly strong in the United States, that British manufacturers, in the first part of the nineteenth century, deliberately adopted this course. Such action, however, defeats itself; for the other country can plausibly appeal to the arguments in favour of the protection of "infant industries."<sup>1</sup>

The two methods of attempting to maintain the advantage of industrial monopoly here mentioned are crude and, in the end, futile. There is, indeed, a factor which comes into operation in the course of industrialization which works powerfully and subtly in the other direction—the pressure to find an outlet for surplus capital. The industrial country is eager to lend: the non-industrial country hardly less eager to borrow. To that extent their interests are mutual. The lending will be governed by the view which individual investors take of the prospect of getting a good return. The borrowing will depend on the policy pursued in the other country. Its Government may want money for its own purposes, e.g. for the buying of munitions, or it may wish to assist development schemes directly or through organized groups. The lenders are not concerned to promote the export of goods produced in their own country, nor are the borrowers obliged to buy such goods. The transaction may well be a complicated one; the loan will lead to export, but not necessarily to direct export. At first lenders will no doubt be attracted by State loans or State-guaranteed loans; for public security seems better than private. In the middle of the nineteenth century probably quite half the foreign investments of the United Kingdom were of this nature.

But investors were becoming increasingly familiar with

<sup>1</sup> Friedrich List (see page 227) insisted that a country capable of developing an industry ought to safeguard itself against competition until that industry has been firmly established.

the mechanism of the joint-stock company with limited liability. It had obvious advantages. At the worst the investor could only lose the sum he had risked. There was, however, strong opposition in England during the 'forties and 'fifties to the general adoption of the principle, for it was feared that it would lead to undue speculation and fraud. Companies instituted by royal charter or a special Act of Parliament, such as the canal and railway companies, enjoyed the privilege; other trading associations were in law partnerships, and members of a partnership had unlimited liability for its debts.<sup>1</sup> The advocates of the principle of limited liability argued that the result of this distinction was that preference was given by investors to joint-stock companies both at home and abroad. It amounted in practice to a premium on the diversion of capital in one particular direction—that of railway promotion. This contention could no doubt be pressed too far; but it pointed to a significant fact. A very considerable amount of the capital invested abroad was raised for the construction of railways.<sup>2</sup> This meant a demand for iron rails, locomotives, etc., which this country was best able to supply. But railways contribute powerfully to the integration of a country, bringing its scattered resources into relation. In helping to build foreign railways, therefore, the British investor inevitably stimulated a response where conditions were favourable. He assisted in launching such countries on an industrial career.

<sup>1</sup> The Joint Stock Companies Act of 1856 finally made it possible to create corporate bodies with limited liability for any trading purpose. See H. A. Shannon: "The Coming of General Limited Liability" in *Economic History*; Supplement to *Economic Journal*, January, 1931.

<sup>2</sup> It is estimated that between 1854 and 1860, £30,000,000 a year was on the average invested abroad, much of it in "the form of machinery and stock for railways," A. L. Bowley: *England's Foreign Trade in the Nineteenth Century*, page 76. The total of foreign investments in 1860 is estimated as about £750,000,000.

The brief description of the industrial activity of Great Britain in the middle 'fifties already given<sup>1</sup> indicates in a general way the nature of her foreign trade. She concentrated on a relatively small range of industries—textiles, iron, engineering, and coal. Her chief imports were raw cotton (mainly from the United States), wool (in increasing quantities from Australia), hemp (mostly from Russia), jute (all from India), timber (mostly from the Baltic), and wheat (from Russia, Prussia, and the United States, in that order of importance).<sup>2</sup>

Her exports were chiefly cotton piece-goods, woollens and worsteds, manufactured iron, machinery, and coal.<sup>3</sup> It was roughly an exchange of manufactured goods (and coal) for raw materials and food. Apart from cereals, the imports could hardly be regarded as competitive. Probably a quarter of the wheat consumed was imported; but the price of it showed no tendency to fall. It is certain, however, that if the restrictions on import had not been removed the price would have risen considerably in the 'sixties. Importations of meat were limited by the fact that it could only enter the country in the form of live-stock. There was, therefore, little misgiving expressed by any interest as to the consequences of free-trade policy. An exception should, perhaps, be made of the silk industry, which regarded with alarm any lowering of the tariff barriers in favour of France.

Against this general background may be set in turn France, Germany, and the United States, with a view to detecting any tendencies which seemed likely in their working out to challenge Great Britain's industrial

<sup>1</sup> See pages 222-226.

<sup>2</sup> About half the wool, one-seventh of the cotton, and one-fourth of the jute were re-exported.

<sup>3</sup> About one-third in value of the exports in 1860 went to European countries, one-third to British Possessions, less than one-sixth to the United States, and rather more than one-sixth to the rest of the world. A. L. Bowley, *op. cit.*, page 122.



leadership. A broad contrast between France and this country has already been suggested.<sup>1</sup> By 1860 it had been amply illustrated. The industrial development of France had been slow; so slow, indeed, that there had been no break in her tradition. She was still a predominantly agricultural country, and was destined to remain one.<sup>2</sup> Her industries retained the domestic form to a very great extent: the small workshop was the typical unit. She held her own by quality rather than by quantity of output. It is easy to assert that this is to be explained by reference to national character, but it is difficult to prove the contention. So far as Great Britain's position was due to the great expansion of the iron and coal industries—and to a considerable degree it was—France obviously did not have the means of following the same road.<sup>3</sup> Her coal resources were limited. Although her total annual consumption was comparatively small, she was obliged to import one-third of it by the middle of the century. The metallurgical industries were consequently hampered. Most of the pig-iron produced—and the quantity was not large—continued to come from scattered charcoal furnaces. As the source of power, water still held its own against steam over wide areas. Even in the cotton industry, where the new influences were strongest, the majority of mills used water; its superiority was much more marked in silk and wool. It

<sup>1</sup> See pages 186–188.

<sup>2</sup> M. Henri Sée is able to sum up the position in his *Esquisse d'une Histoire Economique et Sociale de la France* (1929, pages 509–10, by saying: "La France . . . est encore avant tout un grand pays agricole, qui peut vivre, en grande partie, sur les productions de son sol, qui n'a pas besoin, comme l'Angleterre, pour assurer sa subsistance journalière, d'écouler les produits de ses usines et de ses manufactures."

<sup>3</sup> The contrast between France and Belgium is very striking. Belgium adopted and developed the new British methods of manufacture. She made marked progress in the metallurgical industries and engineering in the second quarter of the nineteenth century. But she possessed, in addition to her inherited industrial traditions, one of the finest coal-fields in Western Europe.

was in the textiles, however, that France might be expected to compete with Great Britain. The cotton industry, particularly around Mulhouse, made good progress in the 'forties and 'fifties; but in comparison with that of Lancashire the output was very modest. French woollens were mainly of a highly specialized kind, such as delaines, the manufacture of which was felt in England to be either impossible or not worth while attempting by the new factory methods. It was silk which, as has already been mentioned, seemed to threaten to prove superior to English silk.<sup>1</sup> Otherwise, France was not seriously regarded as an actual or potential industrial rival.

It must be remembered that Germany did not achieve political unity until 1870. Her economic life had, however, been gradually consolidated under the influence of the Customs Union (*Zollverein*) initiated by Prussia in 1834 with the object of removing the vexatious restrictions on the internal movement of goods. During the first half of the century the old traditions in town and country were slowly yielding to new influences. The somewhat stereotyped class distinctions between burgher, peasant, and gentleman were breaking down. The gild system in the towns proved particularly rigid. Poverty was also a serious obstacle to industrial development. A survey of the country at the turn of the century would have given the most acute observer no very definite indications of its future. He would certainly have been impressed by

<sup>1</sup> The relative weakness of the English silk industry had often been admitted. In 1820, Lord Liverpool, the Prime Minister, had expressed his regret that it had ever been established in the country; but since capital had been invested in it he felt it had a claim to be safeguarded. Huskisson's reforms raised the same question a few years later. Protection, it was argued, was necessary because the industry was exotic and enjoyed no natural advantages! The Factory Act of 1833, while prohibiting the employment of children under nine in other textile mills, made an exception of silk. As a matter of fact, the industry, with the assistance of machinery, fairly well held its own.

the widespread survival of the pre-industrial methods of production and organization. The important linen industry was still largely carried on by peasants in their own homes. Machinery was making some headway in wool, cotton, and silk, and the tendency towards localization was revealing itself. Coal production, in spite of the fact that the country had great deposits, had made little progress.<sup>1</sup> The metal industries were mostly conducted on a small scale. But if an observer had penetrated below the surface of things, he might have drawn attention to three facts, or sets of facts, which might be expected to exercise considerable influence on the future of the country. There was Germany's position in the centre of Europe which, it might have been anticipated, would become a great advantage when she was adequately provided with railways. Then there was her mineral wealth, particularly in coal and potash, which awaited proper exploitation. To these might have been added a reference to the skill of her people as exhibited in the small metal trades, and to the progress which had been made in practical scientific studies, more especially in chemistry. A report in which these points were stressed would not have seriously disturbed contemporary British manufacturers. They would have replied that, as a matter of fact, Germany was not a competitor at the moment, and speculations about the future did not interest them.

In Great Britain, France, and Germany the process of industrialization was in differing degrees controlled by tradition. The United States was a country in the making. The frontier was a great formative influence. Progress in discovery and settlement long remained slow

<sup>1</sup> The output of coal of what was to be the German Empire (including Luxemburg) was 12,300,000 metric tons in 1860; the comparable figure for Great Britain was 81,300,000. J. H. Clapham: *The Economic Development of France and Germany, 1815-1914* (1921), page 280.

because the problems of transport were almost insuperable. Thomas Jefferson ventured the prophesy in 1803 that it would be a thousand years before even the land east of the Mississippi could be settled. By 1860, however, the westward movement had gained a dominating position. Behind the struggle between North and South in the Civil War was the question whether the economic system of one or the other should be applied to the new regions. Were states to be admitted to the Union as "free" or as "slave"? The Civil War settled that issue. Unity was preserved, and the great task of the American people was resumed. The westward movement had a profound effect on industrial development. While in old countries there was a population which could be recruited for factory work, in America the possibility of moving to the unsettled regions was always present. As industries established themselves, therefore, they had to face the problem of economizing the labour supply. By 1860 the United States had achieved a respectable industrial position, particularly in the north-eastern States, and could exhibit ironworks, textile factories, and engineering shops. These were largely employed in supplying the requirements of the home market. America was a potential, rather than an actual, competitor of Great Britain in world markets. Trained observers detected directions in which this competition might prove formidable. They saw the tendency, which was encouraged by the shortage of labour, to resort to machinery, wherever it was possible.<sup>1</sup> The results were a high degree of inventiveness, standardization of products, and a comparatively small reliance on skilled workers. These methods were exhibited in furniture-making, shoe-making, and the manufacture of

<sup>1</sup> For the opinions of British visitors to America, including Joseph Whitworth, see D. L. Burn: "The Genesis of American Engineering Competition, 1850-70," in *Economic History*, a Supplement of the *Economic Journal*, January, 1931.

machines, which were themselves designed to abridge labour. The American sewing-machine found a wide market abroad, the North is said to have won the Civil War by means of the reaper,<sup>1</sup> and the names of Singer and McCormick won universal recognition. It was clear that the country had a great industrial future. Her resources were enormous and her position assured, when capital, labour, and transport were available for their exploitation. She attracted investments, and from time to time suffered from the disasters which attend undue speculation; but she did not experience a serious set-back. She also attracted men, and her population increased from seventeen millions in 1840 to thirty-one millions in 1860. She was destined to illustrate on a vast scale the fact that the railway was capable of integrating a great continental area. In 1860 America was relatively far away. She was still largely preoccupied with her own problems. But far-seeing men might have anticipated that the United States of America would ultimately challenge the industrial leadership of Great Britain.

<sup>1</sup> By means of the reaping-machine it was possible to extend the area under cultivation despite the absence of men at the war.

## SECTION 37

### THE REVOLUTION IN TRANSPORT

"The greater part of the investment in a country in course of development is applied to the means of transport."—R. G. HAWTREY: *The Economic Problem* (1926).

THERE is no need to insist upon the intimate connection between the improvement of the means of transport and the development of industry. It is obvious that, unless the products of specialized effort can be disposed of, no such effort will be forthcoming; or, at any rate, it will not be persisted in over a period. As it becomes easier to move commodities rapidly from one place to another, at comparatively small cost and without deterioration of quality, the amount and variety of goods which can enter into long-distance trade will steadily increase. In the second half of the nineteenth century, transport facilities reached a pitch of efficiency hitherto undreamt of. The result was that the restrictions which cost of carriage had imposed were to a considerable degree eliminated, and the area most favourable for the growth or manufacture of a particular commodity tended to gain a world market for it. Countries insensibly fitted themselves into a scheme of things in which fundamental economic factors determined their respective positions. Such a degree of interdependence was established that it may be said that the general character of the third phase of industrialization was that of a growing world economy. It is true, and tragic, that men continued to think in terms of national advantage and were, for the most part, blind to the fact that all countries were becoming parts of a whole, no part of which could be damaged without every other part feeling some of the consequences. From the working out of economic forces during this phase there emerged three

highly industrialized communities—Great Britain, Germany, and the United States of America. In a sense they were competitors in the world's markets; but in a deeper sense they were complementary to one another. They were bound together by bonds, financial and commercial, which could only be torn asunder at the cost of incalculable loss to each of them.

The contraction of the world which created this system was the result of the revolution in transport. We have already examined the pioneer work of Great Britain in the development of her own internal means of communication. It was carried out in special circumstances. When other countries tried to follow her example, it became clear how exceptional the conditions had been. Great Britain was a relatively small country with no point more than sixty miles or so from the sea. Industrialization had already gone a good way, and was demanding better means of transport. It was possible to raise the capital necessary to build the railways without resort to governmental assistance. In fact, private enterprise had triumphed over official inertia and the heavy exactions of the landed interest. Elsewhere it was different. To provide a country of the extent of Germany with a network of railways was a more difficult task. But this was comparatively simple compared with the problem of linking together the Atlantic and Pacific coasts of the United States. Germany was a settled country; in the United States the railway had to precede settlement over a vast area. In both Germany and the United States the railway was not called for so much by existing industrial facts, but as an essential preliminary to economic integration. So, while the British example proved a great stimulus, and the solutions offered of such technical questions as those of railway construction and steam locomotion were invaluable, other countries had to face issues

which had not arisen here. They owed much to Belgium. In 1834 she took the great step of deciding to equip herself, at the public expense, with a carefully planned railway system. The scheme was virtually completed in the following ten years. It was justified by the great increase in the transit trade for which Belgium was so well placed. Opinion was keenly divided in France on the question of construction by the State as against private enterprise. At last a compromise was reached in 1842, when a national railway programme was adopted. Railways were to radiate in every direction from Paris. The State was prepared to provide the land and construct the road-bed, together with the bridges and tunnels. Companies were invited to undertake the rest of the work, including the laying-down of the rails and the building of the stations. They were also to find their own rolling stock. Naturally, the lines which promised to prove remunerative attracted private enterprise; the others, if they were to be completed, had to be built and operated by the State. The result was not satisfactory. Most of the companies got into financial difficulties and were relieved by the favourite device of State guarantee of interest. The merit of the French plan was that a definite scheme of trunk lines was conceived at the outset; it was completed by 1860.

German railway policy varied from State to State. In the west and south the Belgian example was largely followed, and State railways were the rule. Prussia encouraged private enterprise by guaranteeing interest payments on the capital raised by constructing companies. She had about 3,500 miles of railway by 1860, and was already beginning to afford an illustration of how a continental area can be developed when adequate transport is provided. Railways so quickened the pace of economic life in Germany that her complete industrialization was effected in a generation. So long as she had depended on



slow and expensive land carriage, and her main outlets were her northern ports, she had remained in comparative isolation. Now her position in Central Europe became a great asset. Goods for neighbouring countries could be taken across her for export, and expanding markets for her manufacturers could be found in southern and eastern Europe. The construction of railways in the German plain presented little engineering difficulty and consequently was relatively cheap. The cost of hauling goods traffic over long distances without break of bulk is always low, and so German railways could offer favourable rates both for transit traffic and for the carriage of minerals, such as iron and coal, which were now brought into profitable relation within her own borders. The expansion of her metallurgical industries was particularly striking.

The United States of America has been called the child of the railway. When the westward movement began it was very soon apparent that it was conditioned and limited by the problem of transport. The distances were so great that the pioneers were unable to maintain effective lines of communication. Roads, however good, did not supply what was wanted because they could not carry a sufficient weight of traffic, and movement on them was necessarily slow. The natural waterways did not facilitate that carriage from west to east which the situation of the chief Atlantic ports—Boston, New York, and Philadelphia—demanded. When settlers began to fill up the great area drained by the Mississippi, goods were floated down on rafts to New Orleans, and, after the invention of the steam-boat,<sup>1</sup> return cargoes could more

<sup>1</sup> The problem of applying steam to the propulsion of boats had occupied the attention of American inventors for some years before Robert Fulton produced the *Clermont* in 1807. He then demonstrated on the Hudson River that the steamboat was practicable. This naturally had an important effect on river and lake traffic.

easily be obtained. But this was a diversion of trade in itself highly inconvenient and naturally unwelcome to the trading centres of New England. The first important attempt to develop an east and west route was the construction of the Erie Canal which joined the Hudson River to Lake Erie and thus provided a connection between New York and the Great Lakes. It was completed in 1825. The canal proved a great success; the reduction in the cost of carriage caused an expansion of the market for the manufactured goods of the eastern States, and the position of New York as a great emporium was assured.

Other States wished to follow the example of New York, and in the next twelve years heavy loans were raised, particularly in Great Britain, to finance transport schemes, road, canal, and railway. The total indebtedness of the States amounted to nearly one hundred and ten million dollars. A crash came in 1837 when several of the States had to repudiate their debts. There was a great revulsion of feeling which expressed itself in a prohibition of the use of State funds or credit for internal improvements. So, when railway construction was resumed in earnest it had to be undertaken by private enterprise. By 1860 30,635 miles of railway had been laid down. After the conclusion of the Civil War the progress was remarkable. In twenty years the mileage had been increased threefold. It had been realized, however, that private companies could not be expected to build a railway across the whole continent. So Congress decided to give them substantial assistance. They were offered ten (later increased to twenty) square miles of free land for every mile of line constructed as well as loans on favourable terms. The first transcontinental route was completed on 10th May, 1869, when the Union Pacific and the Central Pacific were joined up at Ogden,

Utah.<sup>1</sup> The chief result of the great development of railways was that the grain, produced on a large scale and at low costs in the north-western States, found access through the Atlantic ports to the markets of the world with important repercussions in Europe and more particularly in Great Britain.

In the pre-railway age sea-borne trade was carried on between islands or ports which had a comparatively small hinterland, for the costs of land carriage were so high that the goods could not bear them. Even when the port stood at the terminus of caravan routes or in the estuary of a great river system only articles of considerable value in relation to their bulk in the one case, and not likely to deteriorate in slow transit in the other, were suitable for long-distance trade. The East India Company in the seventeenth century developed trade with the Spice Islands and at points along the mainland of India. In the eighteenth century the trade across the Atlantic was largely confined to the sugar islands of the West Indies and the colonies stretched along the American seaboard. The coming of the railway changed all this. It now became possible for goods of a bulky or perishable nature to enter world trade. The revolution effected by the railway was therefore a twofold one. It gave a new unity to great continental areas, and it also contributed to the expansion and diversity of ocean transport. Until the middle of the nineteenth century the carrying trade was still conducted by the old methods. There was an increase in total tonnage, but no fundamental change. Ships were, for the most part, built of wood and almost

<sup>1</sup> The history of railways in Canada is very similar. In 1860 Canada had only 2,065 miles; this had increased to 7,194 miles by 1880. The Dominion Government had to finance the larger schemes, particularly when British Columbia entered the Confederation on the condition that a transcontinental railway should be constructed. The Canadian Pacific Railway was opened for through traffic on 28th June, 1886. For a summary account of railway development in Canada, see W. T. Jackson: *Economics of Transportation* (1926), Chapter I.

entirely dependent on sails. Experiments had been made with iron hulls and vessels had crossed the Atlantic under steam; but the use of iron was debatable and the future of steam doubtful. That iron was serviceable in the construction of canal barges, and that steamships could ply on rivers, or carry passengers and mails for short crossings, were admitted facts.<sup>1</sup> But was it practicable to construct an iron ship which, when sufficient space for boilers, machinery, and coal necessary for a long voyage had been allotted, had enough room left to carry a profitable cargo? In 1850 the most optimistic expert could only point to what had been achieved in the last twenty years, and express his confidence that the remaining difficulties would in time be surmounted. In 1838 the *Great Western* and the *Sirius* had steamed across the Atlantic to New York, the one in eighteen and the other in fifteen days.<sup>2</sup> The Cunard Company had opened a regular service in 1840 and employed four steamships in it. They were built of wood and propelled by paddles.<sup>3</sup> An important new development was the *Great Britain*, which was constructed of iron and driven by a screw propeller. She crossed the Atlantic in 1845. The wooden sailing ships, however, easily held their own until the middle 'sixties. America, which had the advantage of cheap timber supplies and had developed new designs in clippers, had a mercantile marine in 1860 which rivalled that of Great Britain.<sup>4</sup> The Civil War, coming at the moment when the

<sup>1</sup> Steamships were used in the Irish and French passenger trade. The first experiments between Holyhead and Dublin were made in 1819. In 1821 the General Post Office began to carry the Irish mails in steam packets, A. H. Dodd: *The Industrial Revolution in North Wales* (1933), page 129.

<sup>2</sup> The first boat to cross the Atlantic under steam was the Canadian *Royal William*. She took twenty days from Nova Scotia to London in August, 1833.

<sup>3</sup> The *Britannia*, which instituted the new service, was a wooden paddle steamer, 207 ft. long, and of 1,154 tons gross.

<sup>4</sup> America's total tonnage amounted to 5,299,751; 2,752,938 was employed on the Great Lakes and the remainder in foreign trade. The British total was 4,658,687 tons.

iron steamship was being perfected, completely changed the situation. Great Britain, with her metallurgical and engineering industries in fairly close proximity to tidal water—and her great resources in coal—now gained undisputed leadership. In 1865 the amount of steam tonnage added to Lloyd's Register exceeded that of sail for the first time. Five years later the steam tonnage added was three times greater than the sail. The opening of the Suez Canal in 1869<sup>1</sup> was a heavy blow to the sailing ship because it gave the steamship a shorter route to the East.

The advantages of the new steamships were that they offered speed and regularity of service combined with low freights.<sup>2</sup> They were divided broadly into liners and tramps. The liners had definite routes and scheduled sailings; the tramps were free to go anywhere and take such cargoes as offered reasonable profits. The liners provided for the quick movement of persons and the goods which required speedy transit. The tramps carried British coal, or American wheat, or Australian wool; in fact any bulk cargoes for which a market could be found. The enormous increase in the movement of men and goods exercised a profound influence on economic structure. In Great Britain, for instance, it accentuated the dependence on imported raw materials and foodstuffs. The annual importation of wheat and flour was virtually doubled between 1860 and 1880, when the United States had become the chief source of supply. By that date, too, the problem of transporting meat had also been solved, and the relative prosperity which the stock-raiser had enjoyed was threatened. The *Strathleven*, equipped with

<sup>1</sup> The same year, it will be noticed, as that in which the first trans-continental railway was opened in America, page 252.

<sup>2</sup> The speed of *communication* outpaced that of *transport*. The *Great Eastern* completed the laying of the Atlantic cable in 1866. It marked the end of an experimental period. In 1870 the cable from England to India was opened.

a refrigerating plant, arrived in London from Australia in February, 1880, with 500 sheep carcasses in a sound condition. This opened up new possibilities, for hitherto the sheep had been reared for the value of their fleeces; Australia now had a joint-product with the consequent effect on the prices at which wool and mutton could be offered for sale. While freezing was suited for the preservation of mutton, it was discovered that it caused a marked deterioration in beef. It was not until towards the end of the 'nineties that the adoption of "chilling"<sup>1</sup> removed this difficulty. The Argentine Republic soon became the chief source of the British imports of beef.

<sup>1</sup> I.e. thorough disinfection of the carcasses and the maintenance of a constant temperature in the storing chambers, not low enough to cause freezing.

## SECTION 38

### THE AGE OF STEEL

SAM: . . . I fully admit I was wrong about iron. But even *you* won't prophesy that steel's going to take the place of iron for ships!

JOHN: I don't think it is in *my* works. But as for prophesying—I don't prophesy.—ARNOLD BENNETT and EDWARD KNOB-LOCK: *Milestones*.

THE history of steel provides an excellent illustration of the fact that in the modern world rapid and unforeseen consequences may result from a series of technical inventions. In 1860 the metallurgical position of Great Britain seemed unassailable. It was based on the large-scale production of iron by the processes which had been introduced towards the end of the eighteenth century, and subsequently improved in detail rather than fundamentally changed. The size of the furnaces had steadily increased, until a height of 80 feet and a capacity of 20,000 cubic feet had been reached. The adoption of the hot-blast, and the use of the gases, which had formerly been allowed to escape from the top of the furnaces, as an aid to produce it,<sup>1</sup> had effected economies in fuel. But pig-iron was still reduced to malleable iron by the method of puddling, with the heavy physical labour that it involved. Attempts to devise some mechanical means of removing the carbon and other impurities had not met with any success. Reference has already been made to the demand exercised by railway construction and equipment, by the mechanization of industry, and by ship-building. The output of iron rose year by year. Changes also took place in the relative importance of the producing centres. In South Wales and Staffordshire, the effects of

<sup>1</sup> This device is said to have been first used in this country by Budd of Ystalyfera in 1845.

the local shortage of iron ore were beginning to be felt. The West of Scotland, where such a notable advance had been made after 1830, was still holding its own. A new large contributor to the national output had come into being through the association of the excellent coking coal of Durham with the iron deposits of the Cleveland district. Middlesbrough, taking advantage of experience elsewhere, adopted the most modern methods. Great Britain as a whole continued to increase the output of malleable iron until it reached 2,800,000 tons in 1882; then it began to decline.

Malleable iron had in fact been superseded. No one could have anticipated in 1860 that steel would challenge the supremacy of iron within the next twenty years. Still less could it have been foreseen that, when the United States and Germany were ready for a great extension of their metallurgical industries, means of producing cheap steel would be at their disposal. It is true that steel had long been known. In the eighteenth century, the cutlers of Sheffield and the sword-makers of Birmingham had used steel made by the cementation process from high-grade Swedish bar iron. Benjamin Huntsman had improved on this by producing a cast or crucible steel, which was much harder.<sup>1</sup> This was suitable for tools with a sharp edge and was also used for watch springs and many other small articles. But to make steel in such quantities and at a price that it could take the place of iron in structural uses seemed quite out of the question. As a matter of fact, however, a discovery had already been made which was destined to effect a revolution. Henry Bessemer, a man of high inventive genius, had had his attention drawn to the fact that, for some purposes, iron of a better quality than that normally made was desirable.

<sup>1</sup> Huntsman, a Doncaster clockmaker, settled near Sheffield about 1740 and built up a considerable business there.



He happened to notice that, at a high temperature, carbon was removed from pig-iron, and he conceived the idea of destroying both the carbon and the silicon by inducing internal combustion when the metal was in a molten state. For this purpose he constructed his "converter," a vessel in which a sufficiently powerful blast was driven through the metal to attain his purpose. A much purer malleable iron was thus produced than that made by the puddling method. When he had purified the iron he turned it into steel by adding quantities of carbon and manganese in a form in which they could be precisely measured. He set up in business in Sheffield in 1858. He also sold licences which allowed other firms to employ his invention. Among these it is interesting to find Messrs. Krupp of Essen. The new cast steel soon came to take the place of wrought iron as the material of which axles, cranks, propeller shafts, and tyres for the wheels of railway rolling-stock were made. The London and North Western Railway began experimenting with steel rails in 1862. When their greater durability had been demonstrated and the price of steel had fallen they came to be generally adopted.

Bessemer had stated the general principles of his new process in a paper which he read before the British Association in 1856. The interest of ironmasters had been immediately aroused, and many of them had sought the right to use his method. They were disappointed with the result. The presence of phosphorus, it was discovered, was fatal. Bessemer had himself used the best quality pig-iron. Most British ores, except the Cumberland hematite, had traces of phosphorus. Consequently, the new development meant a demand for non-phosphoric or "Bessemer" ores, supplies of which were already reaching South Wales from Spain. The problem of how to deal with phosphoric ores seemed to defy

solution. For twenty years steel was made either by means of the Bessemer converter or by an alternative method perfected by William Siemens in 1866 and known as "open hearth." The essential point about this process is the regenerative gas furnace in which the temperature can be accurately controlled and the combustion stopped when sufficient carbon has been destroyed. Although simpler than the Bessemer converter, it also was only suitable for non-phosphoric ores. Siemens established a pioneer works at Landore, near Swansea, and within a few years the enterprise had built blast furnaces and purchased collieries. In 1880 there was a total output of one million tons of "Bessemer" steel and rather more than a quarter of a million tons of "open hearth." The dependence on foreign supplies of ore or pig-iron—mainly from Spain and Sweden—was accentuated as the demand for steel increased. In 1878 a young chemist, Sidney Gilchrist Thomas, who was employed as a clerk in a London police court, announced that he had discovered a method of eliminating phosphorus in a Bessemer converter. His solution was that of providing a basic lining for the converter so that the phosphorus should not remain with the iron, but be deposited with the slag.<sup>1</sup> Experiments were made at Blaenavon, where Percy Gilchrist, a cousin of the inventor, was employed as works chemist, and the method was finally proved to be practicable at Middlesbrough in 1879.

The steps by which the iron ores of the world, whether phosphoric or not, were made available for the production of steel inaugurated what may almost be described as a second industrial revolution. At any rate, steel production now came to dominate a phase in which Great Britain, Germany, and the United States were the great

<sup>1</sup> The by-product, basic slag, soon came to be extensively used in agriculture as a fertilizer.

protagonists of industrialism. Scientists in this country<sup>1</sup> had initiated and perfected the new inventions, but Great Britain gained no special advantage from their work. The ironmasters who had laid out their capital in equipment for the production of iron were naturally somewhat loath to see it scrapped. To turn from the making of malleable iron by the puddling method to the making of steel by one of the new processes meant such a reconstruction of the industry that it was not remarkable that only pressure from foreign competition compelled some of them to undertake it. Had Great Britain been able to maintain her semi-monopolistic position it is obvious that the change would have been much more gradual than it actually was. The rapid growth of shipbuilding for a time did much to compensate the iron industry for the loss of orders from the railways, which went over to steel with complete unanimity. But it was merely a postponement; by the middle of the 'eighties marine boilers were generally made of steel, and the day of the steel hull was at hand. The position of Germany was quite different. Her iron industry had made considerable progress in the later 'sixties and the 'seventies, but it was unable to stand against British competition even in its home market. Since German ores were mostly phosphoric, her manufacturers were unable to make much use of the Bessemer and Siemens processes in the 'seventies; for she was not so well placed as Great Britain for the importation of foreign supplies of suitable ore. The invention of Sidney Gilchrist Thomas was therefore a great turning-point in her industrial history. Her advantages were now obvious. She had excellent coking coal in the Ruhr. As the result of the war with France she had annexed Lorraine with its great deposits of

<sup>1</sup> A Frenchman, M. Martin of Sireuil, invented a furnace for making steel by the "open hearth" method and consequently it is sometimes known as the Martin-Siemens principle.

phosphoric ores. Her railway system had now solved the problem of cheap transport. She could call upon the services of a large number of university-trained industrial chemists. Her Government was prepared to foster and protect her growing industries. During the 'eighties, when British manufacturers were feeling the strain of the depression, and were consequently unable to undertake extensive reorganization of their plants, the German metallurgical industries were making notable progress. The British output of steel in 1880 was two and half times that of Germany (including Luxemburg); by 1900 the output of the United Kingdom was 5,981,000 metric tons, and that of Germany (including Luxemburg) had risen to 7,372,000 metric tons. Germany entered upon the twentieth century as the greatest producer of pig-iron and steel in Europe. In the year before the Great War her output of pig-iron was nearly twice, and her output of steel was rather more than twice, that of the United Kingdom.

But the remarkable achievements of Germany were eclipsed by those of the United States of America. In the decade which followed the conclusion of the Civil War she seized the opportunity then offered her to exploit her abundant natural resources. The deposits of iron ore near the shores of Lake Superior seemed almost inexhaustible. It was free from phosphorus and therefore suited to the "Bessemer" and "open hearth" processes. The production of "Bessemer" steel, which began modestly enough in 1867, had reached an output of 1,203,100 metric tons by 1880. The construction of railways had both created a demand for steel products and had made it possible to convey the ore to the coalfields of Pennsylvania. By 1890 the United States had overtaken Great Britain in the output of pig-iron, and by 1902 her production exceeded that of Great Britain and Germany

combined. Each year a greater proportion of the pig-iron was converted into steel until practically all of it was used for this purpose, the "open hearth" process having become much more general than the "Bessemer." In 1913 the United States was contributing over one-third of the total world production of steel. Her manufacturers were the pioneers in the multiplication of the structural uses of steel. Andrew Carnegie foresaw the supersession of wood and iron in the building of bridges, and introduced steel in standard parts for the purpose. A generation of engineer-architects applied themselves to study the problems and popularize the application of steel to buildings of every description.

As it grew, the steel industry exhibited features of organization which were significant of the new phase of economic development. There was a marked tendency towards concentration; that is, the units of production increased in size rather than multiplied in number. The most economical furnace was a large one, and to ensure a continuous output a number of such furnaces had to be erected. The weight of the material to be moved about demanded an elaborate mechanical equipment. Conservation of heat between one process and another meant a considerable reduction in costs; consequently it was worth while, for instance, to bring furnaces, converters, and rolling-mills into close proximity. A composite plant of this kind had internal economies against which scattered units could not compete. But all this involved such a capital outlay that the number of large plants was limited. Concentration inevitably led to integration, that is the bringing of a number of stages of production under a unified control. To make certain of a regular and adequate supply of raw materials, a steelworks would acquire its own ore deposits and coal mines. To gain some hold on the market it would endeavour to secure

an interest in the manufacture of finished products. Large enterprises would naturally be conscious of their heavy financial commitments, and would consequently be chary about indulging in keen competition with one another. They would in self-protection tend to enter into mutual agreements for the maintenance of prices or the sharing of markets. In the United States the objective was a "trust" under centralized direction. There, two great concerns came ultimately to dominate the situation, the Carnegie Company and the Federal Steel Company. Through the influence of a powerful financial group they were combined in 1901 as the United States Steel Corporation. It still retains the leadership of the industry. In Germany the organization of a "cartel," designed to control the output and marketing of heavy steel products, was achieved in 1904. This Steelworks Union has proved to be less efficient and comprehensive than the United States Steel Corporation, but it has gained some advantage from the greater degree of autonomy which is enjoyed by its constituent elements. In Great Britain the general movement here outlined, a movement through concentration and integration towards monopoly, has not been so clearly marked. Individual steelworks have had access to ample supplies of coal and of ore or pig-iron at reasonable prices either at home or abroad. They were not under the same compulsion to safeguard their supplies as were the American and German enterprises which were working behind a tariff wall. Possibly, too, British manufacturers were slow to realize the importance of large-scale production. It was alleged by critics<sup>1</sup> of the industry that it did not keep up to date; the furnaces were not large enough, the works were not well placed, and processes were not sufficiently concentrated in large composite

<sup>1</sup> E.g. by witnesses before the Committee on Iron and Steel appointed by the Board of Trade during the War.

plants. But the same general tendencies as those which characterized development in America and Germany were certainly present, though to a much less degree. Notable combinations of firms took place in all sections of the industry.

The great aggregations in the respective countries attempted to preserve their home markets for their own products, either by exercising their influence in favour of a high protective tariff or by securing the same end by coming to an agreement with their foreign competitors. The first example of such an international arrangement was the steel rail syndicate formed in 1883 by the manufacturers of Great Britain, Germany, and Belgium. After breaking down several times, it was extended in 1904 to include French and American firms. Each group had exclusive enjoyment of its own market and shared the total trade with other countries on an agreed percentage basis. It was remarked in 1907 that, although the difference between the price of steel rails in Great Britain and the United States was greater than that which had led to importation a few years before, no British importation now took place.<sup>1</sup>

<sup>1</sup> Hermann Levy: *Monopolies, Cartels, and Trusts in British Industry* (1927 edition), page 268.

## SECTION 39

### INDUSTRIAL INSTABILITY

"The curse of industrial life is insecurity."—LORD MORLEY:  
*Notes on Politics and History* (1913).

REFERENCES have been made incidentally to the crises which occurred from time to time in the course of the nineteenth century.<sup>1</sup> The dates—1825, 1836-39, 1847, 1857, and 1866—naturally suggest that a breakdown in the economic machine came with remarkable regularity. Much ingenuity, indeed, has been spent in endeavouring to discover a cause of the supposed periodicity, either in a natural cycle of good and bad harvests or in an inevitable sequence of events inherent in the industrial system itself. These attempts have often been so highly analytical that there has been a danger of losing sight of historical development. While crises may have some aspects in common, each one has features peculiar to itself. The economic *milieu* is constantly changing. The earlier crises had dominantly commercial characteristics. Merchants who had speculated on the chance of selling large quantities of goods found that they had them on their hands. The banks which had advanced loans by issuing notes were unable to cash them when they were presented. Consequently, a crisis was marked by bankruptcy of merchants and the suspension of payments by a large number of small private banks. The losses were speedily liquidated, and the disaster, though serious to those directly concerned, did not necessarily have widespread social repercussions. Changes in banking law and practice had, by the middle of the nineteenth century, gone far to ensure that a crisis would not take this course. The amalgamation of banks, the limitations on the

<sup>1</sup> See pages 208-209.



right of note issue, and the control exercised by the manipulation of the bank rate contributed, with other causes, to change the situation. Crises, however, continued to occur. They lost something of their short-period intensity, but gained much in their extent and severity. In fact the sudden crisis itself became less important than the long period of depression by which it was followed. The explanation of this is to be found in changes in the financial and industrial structure. Movements of gold between the central banking institutions of different countries relieved the strain at a particular point, and assistance given by the banks to private individuals and companies prevented immediate and ruinous liquidations. To an increasing degree, too, the original trouble arose from the fact that capital had been expended in enterprises, such as railways, of early profitable returns from which investors had taken too optimistic a view. With consumption goods—stocks of foodstuffs, textiles, etc.—it may be wise, and indeed necessary, to cut losses by selling at whatever prices can be got; but when investments are tied up in capital equipment such a course may not be possible or desirable.

The problem of achieving equilibrium in a dynamic society may defy solution. It involves an adjustment between supply and demand in capital, products, and services. In the nineteenth century this adjustment was left to economic forces, and these were so powerfully set towards increased production that striking progress was made if the period be taken as a whole. The setbacks which occurred from time to time may be regarded as a consequence of too much haste and a condition of subsequent advance. But they were none the more tolerable on that account. By one means or another the calamities of industrial depression had to be mitigated if the economic system was to retain the allegiance of the masses. There

was a significant change in the attitude towards social legislation in the third quarter of the nineteenth century. It came to be generally recognized that the doctrine of *laissez faire* was no longer satisfactory. The watershed was the depression which began in 1873 and continued with temporary alleviations until the middle 'nineties. It was so prolonged and widespread that it seemed to contemporaries to merit the description of "the great depression." Probably no economic phenomenon ever attracted so much attention and evoked from inquirers so many conflicting explanations. It was due to a remarkable concurrence of circumstances. Several causes which contributed to disturb equilibrium have already been mentioned. The transition from iron to steel, with its effect on the relative positions of Great Britain, Germany, and the United States as producers of heavy products, occurred in these years. In shipping there was an enormous increase in the available tonnage arising not only from the improvements in the steamship, which made it possible to carry larger cargoes at greater speed, but also from the opening of the Suez Canal, which so greatly reduced the distance from Great Britain to India that the same ship could make more voyages in a given time. Cheap freights made it possible to transport across the Atlantic the wheat which was carried by the railways from the newly-developed prairie lands to the eastern ports of the United States, and to offer it at prices which seemed to threaten to ruin European farmers. Apart from any other causes of economic disturbance, it is obvious that the consequences of the vast increase in the output of steel, of the existence of excess tonnage, and of the great extension of wheat production in the United States introduced elements which it would have taken time to fit into a more or less stable system.

Technical progress is always tending to create a situation

in which there is an apparent over-production, or an excess capacity for production, of some particular commodity. The result is a fall in its price which soon expresses itself in diminishing profits and then in reduced wages or unemployment, or in both reduced wages and unemployment. In the long run adjustments take place. Production is concentrated on the plants, and in the countries, where it can be carried on profitably either naturally or with a subsidy, direct or indirect. In the special circumstances under consideration, the excess production of steel and wheat and the surplus shipping would ultimately have been eliminated. The world as a whole, indeed, would obviously be better off if the apparent excess was absorbed so that there would be a permanent addition to its resources, whatever effect this would have on particular interests in one country or another. But "the great depression" was by no means merely a question of accommodation to the new advance in technical equipment. There were elements present which were non-industrial. The explanation of why the crisis came in 1873 and why it was so prolonged raises other issues. The historical setting is of special importance. The Franco-German war of 1870-71 may be said to have precipitated matters. It caused the usual expansion of demand which is associated with war, and was followed by a sudden contraction which meant that the capacity for production was in excess of immediate requirements. It also had far-reaching effects on the money market. At first money poured into London from the Continent and was so abundant that the bank rate fell to 2 per cent. It was lent freely for new enterprises; but careful observers were aware that there was a risk of heavy withdrawals as soon as the war was over.<sup>1</sup> As is well known,

<sup>1</sup> E.g. in the *Economist* Walter Bagehot was constantly stressing the danger that the Bank would not be able to retain the gold on the possession of which its policy had been based.

Germany demanded in the terms of peace a heavy indemnity from France equivalent to £200,000,000 sterling. This France determined to pay as expeditiously as possible. Consequently, the money market was subjected to a severe strain. It was so disorganized that the results of the slowing-down of industry and the poor harvest of 1872 were greatly accentuated. By November, 1872, the Bank of England had raised the bank rate to 7 per cent in a vain attempt to conserve its gold, for London had to bear the brunt of the transfer of balances from Paris to Berlin. Germany, for her part, had decided to place her currency on a gold basis and was accumulating the precious metal for this purpose.

The immediate effects of the Franco-German war sufficiently explain the collapse of 1873. The long continuance of the depression—for it lasted, with some temporary improvements (which we may choose to regard as indications of the periodicity of the trade cycle), from 1873 to 1896—must be ascribed to the fact that it was a period of falling prices. In these years the general level of wholesale prices fell some 40 per cent. Reasons have already been given for the fall in relative prices, e.g. of steel, wheat, freights; but the cause of the fall in the general level must be sought in monetary conditions. The gold position had completely changed from what it had been in the 'fifties when the new supplies from California and Australia had served to raise prices and stimulate industrial activity. In the 'seventies there was a sharp fall in the amount of new gold which annually came into the market. This decrease in the world's output coincided with an increased demand for gold. Germany, as has been mentioned, adopted the gold standard for her currency. The United States made the Government bank-notes, issued during the Civil War, convertible into gold, and generally the volume of transactions for which

gold was required as a backing was much greater than it had been. So the price of gold rose, or, in other words, the prices of all commodities expressed in gold fell. When prices are falling, fixed contractual payments become heavier for the debtor to bear. New enterprise is discouraged because the prospect of making profits becomes doubtful. There is, therefore, a fall in production, or, at any rate, a slowing-down of the pace at which it has been advancing.

The long period of depression, with the industrial unemployment and the agricultural distress at the more critical moments of the process, stimulated criticism of the economic system. It powerfully contributed to that reaction against the principles of *laissez-faire* to which reference has already been made. Public opinion was changing at a time when the extension of the franchise in 1867 and 1884 had secured for the artisans of the boroughs and the agricultural labourers of the counties in turn a more direct means of exerting influence on the course of events. The situation was very different from what it had been in the 'forties when Chartism seemed to be threatening to undermine the foundations of law and order. In the 'fifties and 'sixties the skilled workmen had gradually built up a trade-union organization which was constitutional in outlook and under capable leadership. The Amalgamated Society of Engineers (founded in 1850) offered a "new model" which was generally adopted by similar groups of workmen. It combined friendly-society benefits with trade activities and had strong centralized control over policy. The movement had made such headway that when the Government, in view of outrages which occurred at Sheffield, appointed a Royal Commission in 1867 "to inquire and report on the organization and rules of trades and other associations," it was able to take up the challenge. The violence

of members of the local trade clubs at Sheffield was shown not to be typical of trade-union action. By skilful presentation of their case the leaders of the movement impressed the Commissioners. Their Reports<sup>1</sup> encouraged the trade unionists to agitate for legislation which would place them in a more favourable legal position. The chief results were the Trade Union Act of 1871 and the Conspiracy and Protection of Property Act of 1875; a trade union, although in restraint of trade, was no longer illegal on that ground; and no act was punishable, if committed in combination, unless it was criminal if committed by an individual acting alone, that is peaceful picketing was allowed.<sup>2</sup> The powers thus gained by trade unions marked a great advance on the legislation of 1824-25,<sup>3</sup> which had governed their activities during the middle years of the nineteenth century. It must not be supposed, however, that workmen immediately took advantage of their new privileges. The leaders were cautious, and political action was regarded with some suspicion by the rank and file; a period of depression is in any event not favourable for an active policy. But new ideas, fostered by experience of industrial insecurity, were making headway against what had hitherto been accepted as orthodox economic teaching. Organized labour offered the most promising field for such propaganda. The attack on the land monopoly was renewed under the influence of Henry George's *Progress and Poverty* (published in 1879), the very title of which suggested a paradox. More significant in the long run were the results

<sup>1</sup> There were two reports—a majority and a minority; the latter became the programme of the trade unionists. See S. and B. Webb: *History of Trade Unionism*, Chapter V.

<sup>2</sup> The Act, passed by Gladstone's Government in 1871, was accompanied by a Criminal Law Amendment Act which virtually made picketing impossible. This was repealed by Disraeli's Government, and the Conspiracy and Protection of Property Act of 1875 gave wide discretion to pickets in the conduct of a trade dispute.

<sup>3</sup> See pages 203-204.

of the popular presentation of the Marxian analysis, particularly by H. M. Hyndman, for it gave an impetus to a definitely socialist movement. Pure Marxism made little headway in Great Britain; but the controversies aroused by the Social Democratic Federation and the Socialist League, and still more the facts and figures marshalled by the Fabian Society, were sowing the seeds of the future political labour movement. The general concern about housing conditions, sweating in certain trades, and the problem of unemployment, revealed the emergence of a new social conscience in all classes of the community. Many influences, therefore, combined to provide a solvent of *laissez-faire* ideas. During a temporary revival of trade in the years 1889-91 the aims of the younger men in the trade-union movement were advertised by the London Dock Strike of which John Burns, Tom Mann, and Ben Tillett were the leaders. The success of this effort in organizing the resistance of unskilled and casual labour was largely due to the widespread public sympathy which was evoked.

A programme of social reform was evolved step by step as the desire to improve general conditions, and to establish some degree of protection against the ravages of industrialism, grew stronger. Many, including the leaders of the London Dock Strike, threw their energies into "municipal socialism," a striking example of what could be done in this field having been given by Joseph Chamberlain while Mayor of Birmingham. The municipalization of the public utilities—water, gas, tramways, etc.—slum clearance and the provision of open spaces, libraries, and art galleries, seemed to offer practical methods of social amelioration. Stages in the general movement can only be indicated in the broadest outline. In the new atmosphere the question of dealing with unemployment came to appear one which could not properly be left to the

Poor Law. Joseph Chamberlain was again the pioneer. As President of the Local Government Board he declared in 1886 that "it was not desirable that the working class should be familiarized with Poor Law Relief." He contended that persons normally in regular employment should be given work at wages by the municipal authorities. Under his scheme, the Boards of Guardians were to send on to such authorities those whom it was undesirable, owing to their previous record, to treat as paupers. In 1905 the Unemployed Workmen Act legalized the method of relief by local distress committees charged with the duty of dealing with unemployment, and drawing their expenses from the rates. These experiments were not altogether satisfactory—all applicants, whether skilled or not, had usually to be treated as unskilled owing to the nature of the work provided at times of abnormal unemployment. Applicants were so numerous that each had to be taken on for a short period, and then the difficulty arose that the normally under-employed would find the conditions congenial, and deserving men would be crowded out. A new approach was made to the problem in what may be called the second group of social legal enactments—those which followed the great Liberal victory of 1906. An attempt was made to promote the greater mobility of labour by setting up Labour (now Employment) Exchanges throughout the country under an Act of 1909.<sup>1</sup> Two years later the principle of compulsory unemployment insurance was introduced for certain trades. This was subsequently greatly extended.<sup>2</sup>

Unemployment is only one of the risks of industrial life. There is always the danger of accident and subsequent disablement. The code of factory legislation

<sup>1</sup> For the case for Labour Exchanges see Sir William H. Beveridge: *Unemployment, a Problem of Industry* (1909), Chapter IX.

<sup>2</sup> A survey of the whole subject will be found in the 1930 edition of Sir William H. Beveridge's *Unemployment*, Part II, Chapter XIII.



elaborated during the period paid special attention to safety provisions; but no matter how detailed and how carefully administered such legislation may be it cannot prevent accidents from occurring. The change in attitude towards this problem is an excellent illustration of the growth of opinion. Prior to any statute on the subject, a worker had the right under common law to sue his employer for compensation if he received an injury while at his work; but he had to prove negligence on the part of the employer, and the claim could be successfully resisted if the workman himself was shown to be guilty of contributory negligence. There was no claim at all if the injury was due to the carelessness of a fellow-worker. The Employers' Liability Act of 1880 initiated legislation. It made it possible to claim damages from the employer if the accident was due to the carelessness of a fellow-worker; but the principle of contributory negligence remained. The Workmen's Compensation Act of 1897 marked a new departure. It was recognized that accidents happen even when normal precautions are taken, and that they lead to the destitution of the unfortunate victims. The Act of 1897 was somewhat limited in its application; a subsequent Act of 1906 practically covered all the industrial workers of the country.

The consequences of the departure from the automatic self-adjusting mechanism characteristic of *laissez-faire* are difficult to assess. Some are inclined to argue that they have impaired the industrial system by making it too rigid to adapt itself to new conditions. It cannot, therefore, properly function, and is in danger of breakdown. Certainly it is in process of change. How what has happened could have been avoided, or how correctives may be applied, is not at all obvious. The tendency to eliminate unregulated competition has been a general one. Capitalism has sought to protect itself by means of

understandings ranging from loose "gentlemen's agreements" with respect to prices to strongly centralized "trusts." Trade unionism has attempted to establish and maintain standard rates of wages, standard hours of work, and standard conditions of labour. The demands of social well-being have resulted in increased educational facilities, more elaborate health services, and a great extension of national and local public activities. On the one hand, it may be contended that the restrictions on free enterprise and the expenses of the social services constitute a burden which industry cannot continue to bear; on the other hand, it may be asked what is the justification for industrialism if it is unable to sustain a tolerable standard of life for the masses. That is the crux of the matter.

## SECTION 40

### THE CATASTROPHE OF WAR

"War leads a nation through tribal solidarity to class conflict."—GEORGE UNWIN: *Some Economic Factors in General History in The New Past* (1924).

THE question may well be raised why the high degree of economic interdependence did not prove to be a guarantee of world peace; for it ought to have been quite obvious that one industrialized community could not injure another without inflicting damage on itself in the process. To take an example, Great Britain and Germany had developed specialized industries, and the best foreign customers for the products of these were to be found in one another's territories. They were, it is true, competitors in other parts of the world. But the mutual advantage of the exchange of goods between two densely populated countries with a relatively high standard of living should easily have overcome any differences arising from their rivalry in seeking access to less important markets. The balance of economic advantage, however, is not necessarily consistently reflected in policy. At times it is not a question of the maximum welfare to be gained by co-operation but of the relative power of the individual countries. It may appear that national interest dictates protection of the home market and the securing of the supply of raw materials by getting some control over undeveloped areas. Such a policy is likely to exercise an influence entirely out of proportion to its importance, because those who are behind it can insinuate that the prestige of their country is involved in its prosecution. The main cause of the friction between Great Britain and Germany arose in this way. In Germany there was deep

resentment that her overseas possessions were so few, and it was widely felt that every effort to extend them was countered by the other Powers.<sup>1</sup> Germany's colonial ambitions, on the other hand, were regarded with growing suspicion in this country. After the arrangement of the *Entente* with France in 1904—in itself a momentous diplomatic revolution—German opinion was prepared to believe that Great Britain stood behind France, particularly in Morocco, and that there was a definite intention to prevent Germany from extending her commercial influence, e.g. in Turkey and the Near East.

The consequences of the misunderstanding between Great Britain and Germany were serious enough, but there was no ground for expecting that a solution of the difficulties could be found by resorting to war. It was, indeed, bound to do irreparable damage to the economic structure of both countries. The plea that war was inevitable may be summarily dismissed. At several moments, particularly in 1911 at the time of the Agadir incident, it had actually been avoided. But there was another element present in the European situation, and it was one which was not restrained by economic considerations—the national aspirations of the Balkan peoples. It had been the singular good fortune of the nineteenth century that national movements had not run counter to economic forces. They had resulted in the foundation of the German Empire and a united Italy, that is, in the formation of larger economic areas.<sup>2</sup> In the twentieth century nationalism meant disruption, particularly of Austria-Hungary and Turkey. This policy was pursued

<sup>1</sup> It is true that Germany entered the colonial field late, but she was in time to take part in the "scramble for Africa." As against the impression that Great Britain had already built up her Empire before 1870—when the German Empire was formed—it is as well to recall that no less than one-third of the present territory of the British Empire has been acquired since that date.

<sup>2</sup> The Civil War had also prevented the disruption of the United States.

without a thought of the possible economic consequences ; in fact, industrialism had made such little headway in the Balkans that economic considerations did not appear to be important. The breaking-up of Austria-Hungary into its constituent parts was, for enthusiastic nationalists, an end in itself. So the war was actually precipitated by events in the Balkans. One after another the Great Powers were drawn in because Russia could not see Serbia crushed by Austria-Hungary, Germany was allied with Austria-Hungary, France had an understanding with Russia, and Great Britain was more or less committed to France. A delicate balance of power had been upset, and Europe was launched upon a struggle which was, on a wide view of its implications, virtually a civil war. Had it been possible in July–August, 1914, to arrest the rapid sequence of events and dispassionately consider the possible results of war, informed opinion might have asserted itself. At any rate, the economic bonds between Great Britain and Germany were severed, not because they were in themselves irksome, but because their significance was for the moment obscured by other issues. The estrangement between the two countries in the years preceding the war was in part due to the colonial question. It had contributed towards the grouping of the chief states of Europe in two armed camps. And the colonial question was essentially an economic one ; but it was certainly not one for which it was worth while to risk the destruction of all that industrial progress had achieved. A general war meant no less.

The declaration of war was followed by a complete breakdown of the elaborate financial mechanism which had facilitated the international exchange of goods. The pressure on the London money market was particularly severe because the bill on London was so generally used as a means of payment. The seller of goods in one

part of the world was normally able to get payment before delivery by securing the "acceptance" of the purchaser's promise to pay by a London Accepting House, and then presenting it to a bank which would discount it, that is, advance ready money on it. According to one estimate, when war broke out there were bills of exchange for the value of over £3,000,000,000 due to mature under this kind of arrangement within the next few months. Foreign customers now found it impossible to remit funds to the Accepting Houses; they, for their part, could not meet their obligations out of their own resources. The banks could lend no assistance, for their depositors were making imperious demands on them and their assets were frozen. The continental Bourses had closed one after another, and on 31st July the London Stock Exchange, flooded with selling orders from abroad, also closed. The only possible solution was a *moratorium*, or rather a series of *moratoria*, which for the time postponed the obligation to meet liabilities in cash. The internal demand for currency was met by a Treasury issue of notes for one pound and ten shillings.<sup>1</sup> Gradually, with the assistance of the State, the machinery of exchange was again set in motion within the limits which the conditions of war permitted.

The shock to foreign trade was immediately reflected in a general dislocation of industry, accompanied by a considerable volume of unemployment. It soon became apparent, however, that this was a temporary condition. Modern warfare, it was revealed, makes such demands for munitions and equipment in general that the organization of the civil population is as important as the recruitment of the fighting forces. Soon, indeed, it was clear that the situation was dominated by shortage of skilled

<sup>1</sup> These were nominally convertible into gold at the Bank of England; but gold could not be sent abroad. For all practical purposes the country was off the gold standard.

labour and of necessary materials. Reserves of labour, such as that of women, were called into action; trade-union conditions were abrogated by consent, schemes for the dilution of labour, payment by results, and scientific management were adopted as time went on—all with a view to maximizing output. The demands of the Government were practically insatiable. Consequently, a complete reorganization of industry was effected. Under the stimulus industries which directly supplied the requirements of the moment, particularly the engineering, ship-building, and metallurgical industries, rapidly expanded. The development was essentially abnormal; it was dictated by one great customer—the State—and was in its very nature temporary. At first there was a disposition to refrain from tampering with the principles on which the pre-war industrial system was based. The State continued to employ the old method of inviting tenders from and giving contracts to private firms, e.g. for military uniforms. There was also a great reluctance to interfere with the movement of prices. But this attitude could not be maintained. Prices tended to rise for two reasons: scarcity of this or that commodity became more marked as the months passed, and the issue of Treasury notes was not limited by convertibility into gold; consequently there was a rise in particular prices and also in the general level. As early as February, 1915, the railwaymen succeeded in getting a war bonus in view of the rise in the cost of living. This principle was very generally, though not uniformly, adopted as the rise of prices continued; in fact, the granting of bonuses helped to stimulate the rise. More and more the regulating of the economic system came under the control of the State. From the outset such control had been exercised over the railways. In 1916, the whole of the Australian and home wool-clips were purchased, and a control board was entrusted with

the duty of deciding what proportions of them should be ascribed to the uses of the fighting forces and civilians. By a careful system of rationing of wool and yarn the board was able to adjust employment between spinners and weavers more evenly than had ever been done by private enterprise. Similarly, the Cotton Control Board assumed responsibility for the great Lancashire industry, which was faced with the shortage of raw cotton. Limits were set to the amount of machinery to be worked. Since the shortage was in American cotton, spinners of Egyptian cotton were allowed to exceed the limits, provided they paid a levy on the excess number of spindles employed. In the same way a levy was imposed on manufacturers who used more than 60 per cent of their looms. These levies were drawn upon for unemployment payment to those who, under the restrictions, were compulsorily idle. In 1917 there was an acute shortage of tonnage, and a strict control was established over allied shipping. There was also collective purchase of sugar, wheat, meat, and oils and fats. The general principles of costing and price-fixing were widely adopted; certain foods were carefully rationed to the consumers. Had prices remained competitive, shortage would certainly have driven them up to unprecedented heights; for in the circumstances higher prices could not call forth a greater supply, and to confine the use of commodities to those who could afford to pay high prices for them would have provoked a serious revolt. As it was, there was widespread unrest in some industrial areas.

As the war proceeded, and State control so largely superseded the normal operation of economic forces, two questions naturally occurred to thoughtful persons. The first was that of the heavy expenditure and the manner in which the necessary funds were raised. It was obvious that the State was assuming tremendous obligations



which it would be difficult to meet in the future. The second was that of the reversion to peace and the strains and stresses it would involve. Since the post-war period has been so much dominated by these two issues—debt and reconstruction—they deserve special notice. The problem of conducting war (or, for that matter, of maintaining a reasonable standard of life for the people in time of peace) is not at bottom one of getting money but of getting control of the supply and arranging the distribution of the requisite goods and services. Money is merely a convenient instrument for effecting this purpose. The State had, therefore, to acquire the purchasing power it needed, unless it was prepared to seize goods and enforce services without compensation. The methods open to it were well known and had often been discussed. It could raise revenue by taxation or by borrowing.<sup>1</sup> Financial purists (such as Gladstone) have always insisted that in war-time taxation should be raised to the highest possible point, and Chancellors of the Exchequer have always seemed in retrospect to have lacked courage. After all, it is argued, the goods and services are used up at the time; the future can make no contribution to them. Why not pay for them out of present income? Borrowing only means the assumption of an obligation for the future which will exercise control over the distribution of the goods and services then available. Posterity may very well feel this interference with the distribution of current production to be intolerable. The debts, indeed, may stand in the way of the resumption of normal conditions of trade. We can now see the force of these contentions. During the war, however, borrowing seemed the easier method, and it was resorted to from the outset; as the expenditure rose devices for raising loans were multiplied

<sup>1</sup> One could hardly expect the Government to advertise the fact that it was resorting to disguised taxation by the excessive printing of paper money.

and by 1919 the annual debt charge, which was less than £25 millions in 1914, had exceeded the figure of £250 millions. Successive Chancellors of the Exchequer missed opportunities of imposing additional taxation, and at the time of greatest strain the public income was raised roughly in the proportion of 75 per cent by loans and 25 per cent by taxation.<sup>1</sup>

During the last year of the war much anxious thought was given to the problem of the return to peace. What would happen when the demand of the State for goods and services suddenly ceased? Much alarm had been aroused in some quarters by the signs of industrial unrest which were fairly definitely marked in 1917. The special conditions of the war period—the virtual abandonment of national trade-union action and the local emergence of the shop-steward movement—had tended to evoke a new leadership. Ideas of the workers' control of industry won a wide acceptance, and a new significance was given to the teaching of the gild socialists who had, before the war, advocated a system of self-government. There was general agreement that the industrial truce, which had been imposed by the exigencies of war, should somehow be maintained during the critical period of the reversion to peace. Otherwise, there might be social chaos. So plans of reconstruction took form. The official scheme is generally described as "Whitleyism" because it was recommended by a sub-committee of the Reconstruction Committee over which Mr. J. H. Whitley presided. It was based on the existing organizations—employers' associations and trade unions. They were to be associated by equal representation in a joint standing industrial council for each industry, which could consider its general

<sup>1</sup> The position was complicated by the fact that the British Government, after the entry of the United States into the war, borrowed directly from the United States Government. Great Britain, on her part, advanced large sums to the allied Governments.

problems and advise the Government on such questions as demobilization, suspended apprenticeships, restoration of trade-union conditions, etc. The Ministry of Labour undertook to facilitate the establishing of such joint standing industrial councils wherever conditions were suitable, that is, where employers and employed were organized. Since the councils were voluntary the work of the Ministry was necessarily of a delicate nature; each side had its extremists. There were employers who feared that the councils would seek some control over, or, at least, would demand some knowledge of, finance. There were workmen who insisted that the scheme, while professing to aim at promoting better relations between employers and employed, was really designed to perpetuate capitalism, which they were out to destroy. Still, the coming emergency cast its shadow before, and good progress was made in setting up councils. The full plan was that there should be district councils where questions peculiar to a region required them, and that the joint machinery should find expression in individual works by the formation of works committees. The constitution of each industrial council was to define its functions and that of all subordinate bodies. As a matter of fact the complete organization which was contemplated was never achieved.

Since the establishment of a Whitley Council depended on a high degree of organization within an industry, it followed that the scheme could not be applied to unorganized or imperfectly organized industries. For these the Whitley Committee recommended that the machinery of the Trade Boards Act should be adopted. The original Act of 1909 contemplated unduly low rates of remuneration as the justification for the setting up of a trade board; the lack of adequate organization was the principle laid down by the Act of 1918. Trade Boards, differ

in important respects from Whitley Councils. They are statutory bodies on which a number of impartial members, nominated by the Ministry of Labour, hold the balance between representatives of employers and work-people. Their primary function is to determine minimum rates of wages, and once their findings are confirmed they have the force of law. There were many who believed that the Trade Board model offered a better solution of the problem of reconstruction than did the purely voluntary Whitley Councils. But, whatever may be said in favour of the legal enforcement of joint agreements, it was a principle which neither the employers' associations nor the trade unions would accept.

The idea of reconstruction enjoyed a great vogue. It became almost impossible to keep abreast of the books and pamphlets which poured from the press on the subject. Some people saw in it an opportunity for rebuilding the social fabric on new lines; others were anxious to set up some barrier against revolution. Obviously, there could be no reconstruction without some unanimity as to the plan to be adopted. The Tower of Babel (we are told) made no progress after the confusion of tongues; it could never have been started had there been an initial confusion of purpose. The widespread interest in reconstruction is to be explained by the general feeling of apprehension as to what would follow the conclusion of the war, and by a genuine desire on the part of many to seize the opportunity to carry out the reforms they thought necessary, ranging from social revolution to modest schemes of amelioration; and the politicians, consciously or unconsciously, popularized the idea by painting bright pictures of the post-war society in order to maintain the *morale* of the people during the final stages of the war.

## SECTION 41

### THE PROJECT OF RECONSTRUCTION

"There will be no war or rumours of war to disturb or distract. We can build up, we can reconstruct, we can till, we can cultivate and enrich, and the burden and terror and waste of war will have gone. . . ."—DAVID LLOYD GEORGE (speech in support of Victory Loan, 1918).

THE ten years which followed the Armistice put the ideas of reconstruction to severe test. Three main phases can be distinguished. At first, after much temporary dislocation, a boom developed, and for two years it gave a misleading impression of rapid recovery from the consequences of the war. It was succeeded by three years of acute depression, during which most of the hopes encouraged during the first period were shattered. Then came a gradual improvement of trade and a growing confidence which again received a rude shock in 1929. The world as a whole then plunged into the worst economic depression it has ever experienced. It is still in the doldrums and the outlook is uncertain.

The first two years (1919-20) were highly abnormal; how abnormal they were becomes clearer in retrospect. At the time so much was happening at home and abroad that no one could tell what would be the immediate results of the disturbances which were passing over Europe. Russia had experienced a revolution even before the war was over, and Communism was making a supreme effort to establish itself there. In Germany the political revolution of November, 1918, had still to run its course; it was doubtful whether the Majority Socialists, who were constitutional, would be able to maintain their position in the face of the attacks from extreme sections which were influenced by the

example of Russia. The internal problems of each country were in themselves so bewildering that little consideration was given to the larger economic problems of Europe. At Versailles those who were charged with the duty of making a settlement entertained the most ludicrous ideas of the possibilities of the future. Still obsessed by the war spirit, the representatives of the victorious Allies were drawing new political frontiers which were to dismember pre-war States, such as Austria-Hungary, and were arranging to saddle Germany with a burden of debt which she could not possibly bear. The consequences of their work, time alone could expose. For the moment each country had to stagger back to peace conditions as best it could.

Immediately after the Armistice there was an almost complete industrial dislocation in all countries. In Great Britain it soon became clear that the process of demobilization would have to be more rapid than had been intended. The absorption of the men into industry necessarily took time even in the most favourable circumstances. For some months, therefore, the return to peace (like the outbreak of war in 1914) involved a serious amount of unemployment. As far as the fighting forces were concerned this was met by the simple device of giving to each non-commissioned member a free unemployment insurance policy which entitled him to benefit while he was seeking work. No steps had been taken to provide for the displacement of munition workers and other civilians when the war demand ceased. A similar scheme, therefore, had to be hurriedly improvised to cover them.<sup>1</sup> The mass of unemployment was not allowed to depress the wage rates of those who continued

<sup>1</sup> Ultimately in 1920 the original unemployment insurance provision of the Act of 1911 (see page 274) was extended and made applicable to practically all classes of manual workers, with the exception of those employed in agriculture and domestic service.

in work; for the Wages (Temporary Regulation) Act, passed on 21st November, 1918, stabilized the wages then in force, making the minimum rates enforceable by law. These emergency measures did much to tide over the worst months of dislocation and unemployment in the winter of 1918-19.

A National Industrial Conference was summoned by the Government at the end of February, 1919, and the Prime Minister appealed to it to assist to preserve national unity in the face of the task of reconstruction. It nominated a joint committee of thirty employers and thirty trade unionists to draw up a report for presentation to a subsequent meeting. Their recommendations, which were unanimous, indicate the strength of the reconstruction movement at this juncture. They advised the establishment by law of a maximum working week of forty-eight hours and of minimum time-rates of wages. They also wished to see a wider extension to industry of the principle of Trade Boards. To co-ordinate existing machinery for dealing with industrial questions, they suggested the creation of a permanent National Industrial Council which the Government should consult on all relevant matters. The Minister of Labour (Sir Robert Horne) described this report, when it was submitted to the second meeting of the conference on 4th April, as "the most momentous document which had been presented to the country for a long number of years." It was understood that the Government would give the recommendations its immediate and sympathetic attention.

Meanwhile, the formation of Whitley Councils and Trade Boards went on steadily during 1919<sup>1</sup> and much confidence was placed in the efficacy of the principle of co-operation between employers and employed. Two

<sup>1</sup> By the end of the year there were 47 Whitley Councils, covering about 3,250,000 workers, and 17 Trade Boards, covering about 800,000 workers.

large and important groups stood outside the Whitley scheme—the miners and the railwaymen. It is significant that in the course of the year their inclusion was advocated as a means of preserving good relations. The whole question of the future of the coal industry (a problem which continued to dominate all other industrial issues during the period) was considered by a statutory commission under the chairmanship of Mr. Justice (now Lord) Sankey. A reference to the evidence taken by this commission will illustrate what fundamental questions were thought to be debatable in 1919; the commissioners by a majority of one recommended the State ownership of the mines, and they all concurred in recommending the State acquisition of mining royalties. Here, however, it is interesting to notice that they wished in some way to associate the miners with the management by the institution of District and Pit Committees.<sup>1</sup> And, again, as a result of the dispute on the railways, which led to the strike at the end of September, 1919, the suggestion that joint machinery on the Whitley model should be set up was made.<sup>2</sup>

The wider aspects of this "conciliar movement" (if it may be so described) are worthy of notice. It has already been mentioned that before the war such phrases as "Self-government in industry" and "Control of industry" had become fairly familiar. They had been used with a variety of meanings, ranging from revolutionary ideas of superseding the capitalist altogether, to some form of friendly understanding in which the point of view of the worker was considered. During the war, works committees

<sup>1</sup> The Government included a scheme for a Joint National Mining Board with area, district, and pit councils under it in the Mining Industries Act, 1920. The Miners' Federation wanted nationalization and did not consider mere "Whitleyism" worth having; the owners had no enthusiasm for it. Part II of the Act, which provided for the hierarchy of Joint Councils, was never put into operation.

<sup>2</sup> The Railways Act, 1921, provided for the establishment of consultative councils representative of the management and men.



were often found to be essential, since there were so many questions of dilution, time-keeping, piece rates, etc., which could only be dealt with by such bodies. Workers' councils, however, took on a new meaning when they became the driving force of the Russian Revolution. The seizure of works by such councils (which occurred in Germany and Italy as well as in Russia) seemed to be the most extreme expression of the revolutionary movement. The case of Germany is particularly interesting. There, the Russian example exercised great influence. Revolutionary councils of workmen were strong in the industrial regions immediately after the war. The movement forced the inclusion in the Constitution of Weimar (article 165) of the statement that "for the purpose of safeguarding their social and economic interests the wage-earning and salaried employees are entitled to be represented on Workers' Councils for each establishment, as well as in Regional Workers' Councils organized for each industrial area and in a Federal Workers' Council." To give practical effect to this declaration a Works Council Act was passed, after much controversy, in February, 1920. It was a very modest expression of the hopes of the previous year. The establishment of a council was made obligatory in all works with more than twenty employees. Unlike those under the Whitley scheme the councils were to consist of workers only. In all large businesses the Act required that the balance sheet and profit and loss account should be submitted for the information of the works council. The Act also gave the right of appeal to special labour courts in cases of alleged wrongful dismissal.<sup>1</sup>

<sup>1</sup> The working of the Act from 1920 to 1926 is carefully analysed in C. W. Guillebaud: *The Works Council, A German Experiment in Industrial Democracy* (1928). The "conciliatory movement" reached the United States in the form of "employee representation." Its general adoption was recommended in a report drawn up by a section of those who attended an Industrial Conference called by President Wilson in 1919.

The reaction to the demand for "self-government in industry" is a very good indication of the strength of revolutionary thought in different countries. There is no doubt that the edge was taken off the movement in Great Britain by the apparent prosperity of 1919-20. After the first few months of uncertainty the industrial position greatly improved. There was a reduction in unemployment, and prices (with wages) began to rise to levels which had not been reached during the war itself. At bottom it was essentially a price boom, due to the sudden swing over of purchasing power to a civilian demand for a great variety of goods and services which people had done without during the war. The demand was so great and sudden that it encountered a shortage; just as a shortage of munitions had been encountered in the early stages of the war. There was a consequent rise in prices and a feverish attempt to re-equip industries which had necessarily reduced production in the war years. A good example of this is the cotton industry of Lancashire, which now indulged in such a capitalization in anticipation of future demand that it has been crippled ever since. It is one thing for a Government to fashion production to its requirements by lavish expenditure during a war, another for private enterprise to raise capital to produce commodities, which, after a short period, may not find a market. Both will be overburdened with debt; but the industrialist will find that his commitments will hamper his future trade. For the moment, however, the prospects seemed good, and the dangers were overlooked. A period of rising prices is always exhilarating. That the demand may be satiated or restricted when high prices are reached is not considered.

The break of the boom came in 1921. The consequences of the damage done by the war now became more apparent. What had been profoundly affected was not productive

power—material losses could be speedily repaired—but the whole economic balance of countries. When the belligerents were engaged in fighting, neutral nations were learning how to supply their own wants. Russia had practically retired from the international market. The new independent States of Central Europe were aiming at self-efficiency. Agricultural communities everywhere were unable to purchase the high-priced manufactured goods. The obligations placed on Germany, whether she paid reparations in money or in kind, created a position of great difficulty and uncertainty. In two years after the war the world was faced by the problem of abundance relative to the means that existed for disposing of it; hindrances of all kinds, such as tariffs and deranged currencies, prevented the proper exchange of goods. The depression of 1921 was acute in Great Britain. The export of cotton goods fell to the level of the 'sixties of the nineteenth century, and the output of pig-iron was the lowest for seventy years. Ships had to be laid up for lack of freights. Unemployment rose from 691,000 in December, 1920, to 1,934,000 in December, 1921. The Government began to divest itself of embarrassing responsibilities. At the end of March, 1921, it gave up the control of the coal industry which was proving a heavy liability. The subsequent attempt to reduce miners' wages led to a general stoppage for three months when the men were obliged to accept an agreement under which their wages fell. The scheme of "grouping" was applied to the railways, and the last vestiges of war control disappeared. The activities of Whitley Councils became more restricted, and Trade Boards came under severe criticism.<sup>1</sup> The projects of the National Industrial Conference were abandoned.

The slump had the merit of making it clear that recovery

<sup>1</sup> A Committee under the chairmanship of Lord Cave was appointed in September, 1921, to report on the work of Trade Boards.

could not be promoted by separate national action. Great Britain, dependent as she is on foreign trade, came more and more to realize that the industrial rehabilitation of Germany was an essential preliminary to European reconstruction. On this question a sharp divergence of opinion from that of France (which is so much more self-sufficing) developed. At the last of the series of international conferences of this period—that of Genoa—the difference of point of view prevented effective action. In 1923 the position was made worse by the French occupation of the Ruhr. But the force of circumstances was beginning to dispel the illusions of post-war Europe. It was becoming increasingly clear that reparations and inter-ally war debts never would be fully paid. The debtors would be unable to extract enough from the current production of their people to meet the obligations, and, even if they could, the creditors would not be willing to accept payment in the form of goods because of the repercussions on their own economic structure. Under the pressure, indeed, Germany seemed likely to collapse. The depreciation of her currency had reached a point when it was practically valueless. The Conference at Genoa had recommended countries to stabilize their currencies as the means of promoting a revival of foreign trade; for a depreciating currency in one country meant a bonus on exports against which other countries would endeavour to protect themselves by measures to prevent such "dumping." In 1924 the question of German reparations was referred to a body of experts—the Dawes Committee—and the plan which they evolved at last gave Germany a breathing-space. She was able to put an end to inflation and establish her currency on a gold basis. The confidence this produced made it possible for her to raise capital abroad (mostly in the United States) and thus to undertake the re-equipment of her industries.

At last it seemed likely that the worst troubles were over. It was a great step to put an end to the easy but ruinous policy of inflation, and the restored currencies seemed to offer the means for the renewal of normal economic activities. The rise of the pound sterling in relation to the dollar was held to justify the return of Great Britain in 1925 to the gold standard at the old parity. That this country neither had to create a new currency nor devalue the old was regarded as an indication of her sound position. The warning voices which suggested that the cost of the new policy would be heavy were unheeded. Experience was to prove, however, that the basis on which Great Britain returned to gold demanded a subsequent grading-down of all internal money prices. These exhibited a rigidity which meant high costs of production, difficulty to secure foreign orders in competition with other countries, and an increasing volume of unemployment. Still, from 1925 to 1929, international trade in general was improving. In fact, the pre-war output of the world as a whole and of Europe in particular was reached and exceeded; the average standard of living was probably higher than it had ever been. The danger—often, indeed, the actual existence—of the over-production of this or that commodity attracted attention from time to time and steps were taken to attempt to restrict output. Events were shaping for another economic crisis; one which was to be world-wide in extent and prolonged in duration.

## SECTION 42

### WORLD ECONOMIC DEPRESSION

"Everywhere men fly to new tariffs and restrictions, to nationalist policies, domestic currencies, parochial purchasing and personal hoarding—like frightened rabbits each scurrying to his own burrow. Surely it is for the moment only."—SIR ARTHUR SALTER: *Recovery* (1932).

THE comparative prosperity of the years 1925–29 is a remarkable example of economic resiliency. It was due in part to the new confidence inspired by the restoration of currencies, which seemed to promise the resumption of international trade on a normal basis, and in part to the feeling that the Dawes Plan of 1924 had, for the time at any rate, settled the vexed question of German reparations. There was also a new cult. "Rationalization" now succeeded to "reconstruction." Efficiency, it was contended, required the concentration of the manufacture of a particular commodity in the factory best equipped for the purpose and such a degree of standardization and simplification of types that full advantage could be taken of large-scale and continuous operation.<sup>1</sup> Concentration of this nature demanded unified control, for obviously its objects could not be attained under a system of unregulated competition. In Germany there was nothing novel in these conceptions, for they had been applied in the pre-war cartels. They now served as a guide in that rapid re-equipment of her industries which she was able to undertake with the assistance of foreign capital. The United States also had a presumption in favour of mass production, and had already entered upon a phase which was to prove one of unprecedented industrial expansion.

<sup>1</sup> By standardization is meant the adoption of definite specifications in production, while simplification means a reduction in the number of such standard specifications.

In Great Britain the ideas fell on less congenial soil. A distinction may be drawn between the chemical and electrical industries, on the one hand, and the coal and cotton industries, on the other. The former group found organization relatively easy; the latter group encountered almost insuperable difficulties. In spite of the falling-off in foreign demand and the consequent pressure to adopt a new policy, the individualist tradition in coal and cotton was resistant to rationalization. The suggestion that the Government should impose compulsory schemes was resented, and voluntary efforts were largely unsuccessful.

Surveying the whole field of production—of foodstuffs, raw materials, and manufactures—the progress made between 1925 and 1929 was amazing. Technical advances made it possible not only greatly to increase production but to do so at the expenditure of less human effort. Even with the boom in trade there was still a large volume of unemployment. It is asserted, for instance, that employment reached its highest point in the United States in 1918 and that the enormous increase in physical production up to 1929 was effected while employment was actually falling.<sup>1</sup> Mechanization was not confined to manufactures; it achieved even more notable results in agriculture. The grain production of the Argentine, Canada, and Australia outran the requirements of the market, the demand for the staple foods being inelastic; in fact, the rate of production was actually greater than that of the increase in population, while the consumption per head tends to fall as the standard of living rises. There were, it must be admitted, many grounds for misgivings. The social and economic consequences of the

<sup>1</sup> The exponents of Technocracy state that displacement of labour by machines was a marked feature of the period of expansion up to 1929, that while the United States increased its manufacturing production by 36 per cent the number employed in factories declined by 6 per cent.

displacement of men by machines, and of the virtual bankruptcy of raw material producing countries, could not be ultimately evaded.

The advantages of having the chief national currencies tied to gold (which are considerable) were somewhat offset by the fact that gold was appreciating in value, or, in other words, that there was a steady fall in the world level of prices as measured in gold. This fact demanded within each country a constant revision of prices, including, of course, incomes from salaries and wages and interest rates on loans; for, otherwise, there was a risk that costs would become so high that production would cease to be profitable. Costs were reduced by the technical improvements and by the greater efficiency of labour. But there are limits to this process. In Great Britain the difficulties were specially acute. Dependent on the maintenance of foreign trade, relatively high costs of production are a heavy handicap. It was significant that while the volume of the trade of the world as a whole was growing, Great Britain's share of it was diminishing.<sup>1</sup> For the time the United States seemed to be immune from the dangers which attend a great boom in trade. Many observers failed to see any reason why her abounding prosperity should reach a limit. There were some who pointed to the persistence of a certain amount of unemployment and to the fact that the farmers of the west were in difficulties. But, generally, implicit faith was placed in the virtues of large-scale production and in the doctrine of the economy of high wages. So the

<sup>1</sup> The causes were many. A careful analysis of them will be found in the Introduction to the *Survey of Overseas Markets*, the first report of the Committee on Industry and Trade. This is valuable because it was published in 1925 before the consequences of the return to the gold standard further complicated the situation. Most of the causes enumerated continued to operate. Consult also the Presidential Address to Section F of the British Association (1932) by Professor R. B. Forrester. It is printed in the *Economic Journal* for December, 1932.



optimistic view of the future profits from business continued to stimulate speculation. In Germany, with her new industrial equipment, there was a similar, though less spectacular, expansion of industry; for every effort had to be exerted to produce an export surplus which would enable her to meet her commitments abroad. The increase in the value of Germany's exports was one of the most notable features of international trade, but it was attained at the expense of the home consumers, who had to pay high prices in order that goods should be sold cheaply abroad. The rigour of this system contrasted sharply with the high average standard of real income enjoyed by the citizens of the United States. The German position was precarious; it was bound up with prosperity in the United States, for Germany was literally paying her way by borrowing the means to do so.

The fact that the actual productivity (not to mention the potential) was resulting in gluts of one commodity after another indicated that there was serious friction which prevented adjustments in international trade. This was due to causes not in themselves economic, notably the attempt to exact one-way payments in discharge of both reparations and inter-ally war debts. Normally, payments of one country to another are made by the direct or indirect export of goods made in excess of the home requirements. To impose such an obligation is, as we have seen, to stimulate an effort to discharge it. But if creditor countries accept heavy payments in goods, their own industrial organization is bound to suffer dislocation. The absurd position arises in which debtor countries are required to pay while creditor countries try to protect themselves against the consequences by erecting tariff barriers. The increase in world production between 1925 and 1929 was accompanied by a steady rise in the level of tariffs. This had the twofold effect of

artificially promoting home production and of congesting the foreign market with goods offered for sale at ruinously low rates. The difficulty which Great Britain had in selling her manufactures abroad (owing in part to her relatively high costs of production) while an abundance of cheap goods were attracted to her free ports was driving even her towards the economic nationalism which was threatening to precipitate a crisis.

The collapse came in 1929. In the United States the prosperity culminated in an orgy of speculation. Infatuated by an unreasoning belief in the prospects of future profits, investors borrowed money at high rates in order to buy stock. American credit was absorbed in this way, and lending overseas was practically suspended. In fact, European investors were also attacked by the fever, for the attempts of the Federal Reserve Bank to check the credit inflation by raising the discount rate had the unfortunate effect of attracting funds from all over the world. Stock exchanged hands at highly inflated values. The Wall Street panic of September, 1929, was a rude awakening. Holders of paper suddenly found themselves much poorer than they supposed they were; expansion was followed by contraction, and the United States entered upon a slump in trade which had serious consequences for it. The disaster had world-wide repercussions. Germany, despite the great increase in her exports, had really been effecting a balance of international payments by heavy borrowing from America and elsewhere, so that she had been accumulating new private debts to foreign investors in addition to the old external public debt. The boom in the United States in 1928 had cut off this source of supply, and the collapse of 1929 meant that there was no possibility of renewed assistance from that direction. In this dilemma, Germany was driven to seek short-term accommodation from European banks, chiefly British,

Dutch, and Swiss; this was expensive and uncertain, for American investors were withdrawing what money they could from Europe, and all countries were beginning to feel the strain. Germany staggered on under an impossible burden during 1930. She strictly limited her imports and used every endeavour still more to expand the volume of her exports. But the world market was contracting, and it was increasingly difficult to keep her new industrial plant fully employed. Complete disaster was averted by President Hoover's proposal of a year's moratorium of reparations and war debts. This was followed by an agreement among the bankers, who had made short-term advances to Germany, to accept a "standstill" arrangement by which they were renewed until the end of February, 1932.

The break in the United States trade boom revealed the flaws in the international economic situation which had been somewhat obscured between 1925 and 1929. Reference has already been made to the steady elaboration of trade restrictions which hindered the exchange of goods. The appreciation of gold had also exercised considerable influence. It would, in any case, have brought about a fall in the general price level. But had the gold standard been allowed to work freely the price levels in different countries would not have diverged from one another, because they would have been automatically corrected. Reparations or war debts, or indeed any trade balances, paid in gold—and since goods were not acceptable such payments had to be made—would tend to lower the level of prices in the country which paid and to raise the level in the country which received them. This would tend to stimulate the export trade of the one country and restrict that of the other; so in the end prices would be equalized and each country would have the amount of gold it required. This is a summary

statement of the theory of the international operation of the gold standard. As a matter of fact, it was not working in this manner during these years. Steps were taken by the creditor countries—chiefly the United States and France—to neutralize the effect of their receipt of gold. There was a consequent maldistribution of gold, that is, gold movements were taking place which were not tending to produce an equilibrium of international prices. The sterilization of gold was really equivalent to a reduction in its amount, which meant that it further accelerated the fall in the world level of prices. This fall became catastrophic in 1930 and greatly accentuated the trade depression. Producers all over the world had stocks on hand which, with the assistance of Government credits on the banks, they attempted to keep off the market to avoid heavy losses; but these efforts failed to arrest the fall. The financial crisis of 1931, precipitated by the situation of the Credit-Anstalt of Vienna, led to still more extensive withdrawals of American credits from Europe, and this in turn contributed to a further fall in prices. The gap between debtor and creditor countries became wider, for the appreciation of gold had added to the burdens of the debtor nations, while the creditor nations ceased to provide the credit facilities which might have assisted them to pay. The financial crisis, supervening on the trade depression, extended its ravages and prolonged its duration. The instinct of each country was to attempt to save itself. Financial stringency spread with the greatest rapidity. Great Britain which had come to the help of Germany by making short-term advances was, under the "standstill" arrangement, unable to withdraw them. The London money market found itself called upon by foreign depositors to return their money while it had some £80,000,000 on loan and "frozen" in Germany. It was

in the position of a banker who has assets in excess of liabilities but cannot realize them. Doubt began to be entertained, indeed, as to whether the financial situation of the country was sound. It was well known that the British share of foreign trade was falling and that the surplus on the annual balance of payments was diminishing. The internal situation was also represented as critical, because the world depression had so increased unemployment that the burden of it could not be met out of annual revenue. An attempt was made to meet the withdrawal of funds from London by allowing the Bank of England to borrow from Paris and New York under Government guarantee. This course, undertaken to maintain the gold standard, proved an impossible one to pursue. On 21st September, 1931, Great Britain abandoned the gold standard.

The suspension of the gold standard eased the situation, for the purchasing power of the pound was no longer controlled by the factors which influenced the value of gold. Since sterling fell heavily in relation to other currencies the position with respect to imports and exports was completely changed; for the relative fall in value amounted to a limitation on imports and a bounty on exports. This advantage, however, was temporary and proved to be largely illusory. Other countries also abandoned the gold standard; and, in any case, with the volume of world trade still contracting, there was little opportunity for increasing exports. Each country resorted to such devices as tariffs, quotas, exchange restrictions, etc., to protect itself against the repercussions of the world crisis; the value of international trade shrank to about one-third of what it had been in 1929. Great Britain herself contributed to the contraction by her efforts to correct her adverse balance of trade. First by emergency measures, and then by the adoption of a general tariff, she reversed

her free-trade policy. The instinct of self-preservation seemed to justify an appeal for the use of exceptional powers. Governments can most easily secure these by arousing national enthusiasm; but the more successful they are in doing so, the more hampered they are when they begin to realize that the remedies are international. The economic plight of the world may well be made worse by the emergence of dictatorships, frustrated by their own programmes, and embarrassed by their own supporters; for, as to what ought to be done, there is a growing consensus of opinion. The fall in the world level of prices ought to be arrested, if it cannot actually be reversed. There ought to be a return to a stable currency which will function satisfactorily. The vast burden of debts ought to be scaled down, if not extensively written off. Hindrances to the exchange of services and commodities ought to be reduced, if not removed. All these problems are closely interlocked, and only with the co-operation of the leading governments can the beginnings of solutions be found. Whether such co-operation is possible the next few months will tell. Without the answer to that question we lack an important clue to the possible economic development of the twentieth century.

An historical survey, no matter how extensive, provides no key to the future. Its purpose is so to exhibit what has happened in the past that one can ask intelligent questions of the present. Peoples who have no history are doomed to repeat it; those who have it have the opportunity of improving on it. Against the background of economic development our present distresses, serious as they are, gain a new perspective. Mankind's achievements in every sphere have been stupendous. Nature has been subdued to such an extent that her

niggardliness, which haunted men in the past, has been turned into an abundance, which now almost encumbers them. The primeval curse of heavy toil has been lifted by a myriad of mechanical devices. Distance, which so long separated men, has been annihilated. For the moment we stand bewildered and hardly know how to use what we find to our hands. We complain of overproduction in a world where the standard of living over wide areas, and among the poor everywhere, is still deplorably low. We speak of machinery displacing men rather than of the leisure we have won. We refuse to make full use of our facilities for the movement of men and things. Are there fatal flaws in the structure we have built which will inevitably bring about its collapse and decay? Who can say? The historian must be content with the remark that human progress, though it has suffered many serious setbacks, can be demonstrated to be a real thing. There is a strong presumption that it has not yet reached its limit.

## A GUIDE TO FURTHER READING

*JOURNALS.* (NOTE. The date given in brackets is not necessarily that of the original publication of a book. Later editions are often revised and enlarged and therefore should be consulted.)

THE student of Economic History can best keep abreast of the subject by reading the *Economic History Review* (1927- ), two numbers of which are now published annually. In addition to valuable articles, memoranda, and reviews, it contains a section on bibliography. Select bibliographies of the economic history of France, Germany, India, Wales, Scotland, and Ireland, have already appeared. These are kept up to date by means of lists in subsequent volumes. Most of the books which are mentioned in the course of these notes have special bibliographies of their own. For reviews of recent books reference should also be made to the *English Historical Review*, *History*, the *Economic Journal*, and the *Journal of Economic and Business History*,<sup>1</sup> and special articles of importance will be found in these and in the annual supplement of the *Economic Journal*, which is now called *Economic History*.

### PART I: INTRODUCTORY

Readers who would like to pursue in more detail matters briefly alluded to in the first Part will find it worth while to secure R. G. Collingwood: *The Philosophy of History* (1930), a pamphlet published by the Historical Association. If they wish to study the subject of how historians have actually written history they will find much that is interesting and suggestive in J. B. Black: *The Art of History* (1926). Professor Black takes as his examples the eighteenth-century writers, Voltaire, Hume, Robertson, and Gibbon. A comprehensive view of the following century is supplied by G. P. Gooch: *History and Historians of the Nineteenth Century* (1913). A brief and critical introduction to the economic interpretation of history, which may be strongly recommended to those who are beginning the study of that subject, is Henri Sée: *Matérialisme historique et interprétation économique de l'histoire* (1927). The second chapter of H. J. Laski: *Communism* (1927) in the Home University Library discusses

<sup>1</sup> Published in the United States of America.



the views of Karl Marx on the interpretation of history. For the influence of natural conditions on human society, H. T. Buckle: *History of Civilization* (1857), is still well worth reading; a very vigorous defence of his work, which gives a lucid account of the issues involved, is J. M. Robertson: *Buckle and his Critics* (1895). The late Professor Sir Patrick Geddes did much in his teaching at the Outlook Tower, Edinburgh, and in his writings to correlate anthropology, geography, and history in a sociological interpretation. Perhaps *Cities in Evolution* (1914) provides the most systematic exposition of his views. The influence of geography on the social group is fascinatingly discussed in Edmond Demolins: *Comment la route crée le type social*, two vols. Some idea of his method may be gathered from Chapter I of J. L. Myres: *The Dawn of History* in the Home University Library. For a general view of ancient civilization M. L. W. Laistner: *A Survey of Ancient History* (1929) may be recommended. The books from which a detailed account of the economic conditions of the Greek and Roman world may best be derived are perhaps A. E. Zimmern: *The Greek Commonwealth* (1924); W. E. Heitland: *Agricola, a Survey of Agriculture and Rustic Life in the Greco-Roman World* (1921); M. P. Charlesworth: *Trade-routes and Commerce of the Roman Empire* (1924); M. Rostovtzeff: *Social and Economic History of the Roman Empire* (1926); and T. Frank: *Economic History of Rome* (1927). But some of these are only suitable for the specialist in ancient history. An excellent summary of the archaeological evidence for man's settlements and activities in the British Isles in the prehistoric period will be found in Cyril Fox: *The Personality of Britain: its Influence on Inhabitant and Invader in Prehistoric and Early Historic Times* (1932).<sup>1</sup> The influence of the Roman invasion and settlement is authoritatively discussed in F. Haverfield: *The Romanization of Roman Britain* (1923) and R. G. Collingwood: *Roman Britain* (1932). The student may be wise to avoid the question of the origin of the manor; for here he will be in danger of being in wandering mazes lost. But the risk should not deter him from reading the early chapters of F. Seebohm: *The English Village Community* (1883), since it was the first book which made the field arrangements of the Middle Ages intelligible. Seebohm presented the case for the unfree origin of the English village at a time when the Teutonic School, with its insistence on original freedom, was in the ascendant. A brilliant attempt to penetrate the obscure places of the Old English period is F. W. Maitland: *Domesday Book and Beyond* (1897). Maitland's presumption in favour of the view that individualism played an important part

<sup>1</sup> Published by the National Museum of Wales.

in settlement and organization may be contrasted with Sir Paul Vinogradoff: *The Growth of the Manor* (1905) which places much more stress on communal elements. Reviews of a number of books, English and foreign, on the origin of agrarian systems will be found collected in Sir William Ashley's *Surveys, Historic and Economic* (1900), and his introduction to the translation of Fustel de Coulanges: *Origin of Property in Land* (1891) states the issues as far as England is concerned with great clarity.

## PART II: THE MIDDLE AGES

For a general survey of the economic background of medieval Europe, P. Boissonnade: *Life and Work in Medieval Europe* (1927); M. M. Knight: *Economic History of Europe to the End of the Middle Ages* (1927) and Josef Kulischer: *Allgemeine Wirtschaftsgeschichte des Mittelalters und der Neuzeit: Des Mittelalters* (1928) may be recommended. The study of England in particular is best begun by reading one of the standard accounts, or, still better, by reading two or three and comparing and contrasting the approach to and treatment of the subject. The student may work, for instance, through E. Lipson: *An Introduction to the Economic History of England* (1915) and follow this up by consulting W. Cunningham: *The Growth of English Industry and Commerce During the Early and Middle Ages* (1910) and Sir William Ashley: *An Introduction to English Economic History and Theory* (1906), two vols. If he wishes to pursue his study of agrarian history he will have to pay special attention to the books by Seebohm, Maitland, and Vinogradoff, already mentioned, and add to these P. Vinogradoff: *Villeinage in England* (1892) and the same author's *English Society in the Eleventh Century* (1908). He will find a useful account of Domesday Book in A. Ballard: *The Domesday Inquest* (1906), and if he is interested in local history he should consult the volumes of the *Victoria County History* where (when the County has been dealt with) the evidence of Domesday Book is discussed. On the actual methods of farming there are many details in R. E. Prothero (Lord Ernle): *English Farming Past and Present* (1912), and the geographical distribution of the different methods of cultivation are carefully analysed in H. L. Gray: *English Field Systems* (1915). Much curious information drawn from a wide area is contained in G. G. Coulton: *The Medieval Village* (1925). A good introduction to the question of the origins of towns is Sir W. Ashley's essay "The Beginnings of Town Life in the Middle Ages" and the reviews which follow it in *Surveys, Historic and Economic*. A more recent discussion by a great authority is Henri Pirenne: *Les villes du moyen âge* (1927). Carl Stephenson: *Borough and Town*,

*a Study of Urban Origins in England* (1933) reviews the whole subject. An interesting contribution to the town history of a region is Conrad Gill: *Studies in Midland History* (1930), which contrasts the city of Coventry, the small industrial town of Birmingham, and the rural manor of Handsworth, in the Middle Ages. The modern study of guilds may be said to have been started in England by the late Lujo Brentano who wrote an introduction to Toulmin Smith: *English Guilds* so long ago as 1870. His views were corrected by Charles Gross: *Gild Merchant* (1890), though one gathers from the veteran's *Eine Geschichte der Wirtschaftlichen Entwicklung Englands*, vol. I (1927) that he was by no means prepared to retract what he had written.<sup>1</sup> For a general account of guilds and their functions reference may be made to Georges Renard: *Gilds in the Middle Ages* (1918) which is an English translation of a French book on the subject. On English guilds S. Kramer: *The English Craft Guilds: Studies in their Progress and Decline* (1927) should be consulted. There is much that is illuminating in George Unwin: *Gilds and Companies of London* (1908). The most serviceable book on industry is L. F. Salzman: *English Industries of the Middle Ages* (1913). The same author discusses trade and commerce in *English Trade of the Middle Ages* (1931). On this subject G. Schanz: *Englische Handelspolitik gegen Ende des Mittelalters* (1881) and the recent M. Postan and E. Power: *English Trade in the Fifteenth Century* (1932) throw much light. For complementary aspects of the economic life—agrarian and burghal—of medieval Wales, William Rees: *South Wales and the March, 1284-1415* (1924) and E. A. Lewis: *The Medieval Boroughs of Snowdonia* (1912) are invaluable. An excellent pioneer work on Scotland is I. F. Grant: *The Social and Economic Development of Scotland before 1603* (1930).

### PART III: THE AGE OF TRANSITION

The general economic history of Europe during this period is dealt with in G. Renard and G. Weulersse: *Life and Work in Modern Europe: Fifteenth to Eighteenth Centuries* (1926); H. E. Barnes and Felix Flügel: *Economic History of Europe in Modern Times* (1929); and Josef Kulischer: *Allgemeine Wirtschaftsgeschichte des Mittelalters und der Neuzeit: Die Neuzeit* (1929). As an introduction to English economic history W. Cunningham: *Growth of English Industry and Commerce in Modern Times* (Part I, *The Mercantile System*); and the more recent and remarkably comprehensive E. Lipson: *The Economic History of England:*

<sup>1</sup> See article on "General Economic History" in *History*, New Series, vol. xv (October, 1930), page 221.

*The Age of Mercantilism*, two vols. (1931) may be recommended. For a special study of agriculture, in addition to R. E. Prothero, already mentioned, reference should be made to R. H. Tawney: *The Agrarian Problem in the Sixteenth Century* (1912); E. C. K. Gonner: *Common Land and Inclosure* (1912); and W. H. R. Curtler: *The Enclosure and Redistribution of our Land* (1920). Industrial organization and policy may be studied in G. Unwin: *Industrial Organization in the Sixteenth and Seventeenth Centuries* (1904); H. Hyde Price: *The English Patents of Monopoly* (1906); W. R. Scott: *The Constitution and Finance of English, Scottish, and Irish Joint Stock Companies to 1720*, three vols. (1910, 1912); and Hermann Levy: *Monopolies, Cartels, and Trusts in British Industry* (1927). To the history of overseas adventure and trade excellent introductions are J. A. Williamson: *Maritime Enterprise, 1485-1558* (1913); and Sir William Foster: *England's Quest of Eastern Trade* (1933). The chapters in the first volume of *The Cambridge History of the British Empire; The Old Empire to 1783* and the bibliography should also be consulted. The lectures of the late Professor G. Unwin on "The Merchant Adventurers' Company in the Reign of Elizabeth," now printed in his collected papers under the general title of *Studies in Economic History* (1927), present an interesting point of view. There is much detailed information about trade with Europe in Astrid Friis: *Alderman Cockayne's Project and the Cloth Trade: The Commercial Policy of England in its Main Aspects, 1603-1625* (1927). The trade of local ports is illustrated by E. A. Lewis: *The Welsh Port Books, 1550-1603* (1926); and A. K. Longfield: *Anglo-Irish Trade in the Sixteenth Century* (1929).

It is only possible to give some brief indication of where information on special aspects of the history of the period may be found. The student of public finance can discover what taxes were actually imposed from Stephen Dowell: *History of Taxation and Taxes in England*, four vols. (1888); and there is an illuminating discussion of policy and opinion on the subject in William Kennedy: *English Taxation, 1640-1709* (1913); but this is a subject which has been relatively neglected. Banking has attracted more attention. There is an outline account of the rise of the Bank of England in A. Andréadès: *History of the Bank of England* (1909) which is amplified in some important respects by W. R. Bisschop: *The Rise of the London Money Market, 1640-1826* (1910). To these we may now add R. D. Richards: *The Early History of Banking in England* (1929) which covers the ground in more detail and is based on an examination of much original material. The documents printed in the appendices and the very full bibliography deserve particular notice.

The general growth of economic opinion is discussed in Kennedy, already mentioned, and other aspects of it are dealt with in Hermann Levy: *Economic Liberalism* (1913); M. James: *Social Problems and Policy During the Puritan Revolution, 1640-1660* (1930); E. S. Furniss: *The Position of the Laborer in a System of Nationalism: a Study in the Labor Theories of the Later English Mercantilists* (1920); and E. M. Leonard: *The Early History of English Poor Relief* (1900). But students would be well advised to read some of the contemporary pamphlets on economic matters. A short representative selection is *A Discourse of the Common Weal of this Realm of England* (1581)<sup>1</sup> of which there is an excellent edition by E. Lamond (new impression, 1929); *A Treatise of Commerce* (1601) by John Wheeler, which has been edited with an introduction and notes by G. B. Hotchkiss and published by the New York University Press (1931); *England's Treasure by Forraign Trade* (1664),<sup>1</sup> by Thomas Mun, the most celebrated of the seventeenth-century writings on Mercantilism, which was reprinted for the Economic History Society in 1928; *A New Discourse of Trade* (1694), by Josiah Child, Governor of the East India Company, and the tracts contained in *The Economic Writings of Sir William Petty*, edited by C. H. Hull (1899), two vols. An excellent collection of excerpts from contemporary sources to illustrate the economic and social history of Tudor England is R. H. Tawney and E. Power: *Tudor Economic Documents* (1924), three vols.

#### PART IV: THE INDUSTRIAL AGE—THE FIRST PHASE

(For the period covered by the first and second phase of this Part there are a short bibliography prepared for the Economic History Society by Professor Eileen Power: *The Industrial Revolution, 1750-1850* (1927); and a much more elaborate work compiled by Miss Judith Blow Williams: *A Guide to the Painted Materials for English, Social, and Economic History, 1750-1850* (1926), two vols.)

The publication in 1884 of Arnold Toynbee's *Lectures on the Industrial Revolution of the Eighteenth Century in England* exercised a powerful influence on the treatment of economic history for the following twenty-five or thirty years. In fact, it was not until after the Great War that the view that a "revolution" had occurred roughly between 1760 and 1840 was seriously challenged. Toynbee had drawn attention to an important series of facts, the significance of which had been previously overlooked, and his premature death prevented him from reconsidering his provisional

<sup>1</sup> Dates of first publication. The *Discourse* was probably written about 1549 and *England's Treasure* about 1630.

conclusions.<sup>1</sup> Cunningham and Ashley were largely preoccupied with the study of earlier periods. Popular textbooks, mostly based on Cunningham, Ashley, and Toynbee, tended to give the impression that there was a violent break between the non-industrial and the industrial age. The reaction against this interpretation of the facts has gone so far that Unwin asked in 1924 whether "the term Industrial Revolution, though useful enough when it was first adopted, has not by this time served its turn?"<sup>2</sup> Professor J. H. Clapham in his *Economic History of Modern Britain*, vol. i (1926), carefully avoids it. Still, all authorities would agree that the student should read what Toynbee has to say. He should follow this up by studying Paul Mantoux: *La Révolution Industrielle au XVIII<sup>e</sup> siècle* (1906);<sup>3</sup> and for a wider historical setting J. L. and B. Hammond: *The Rise of Modern Industry* (1925). He will then have a good general knowledge of the "revolution." His next aim should be to examine the books which have contributed to a modification of the older view. They fall into two categories: those which show that each industry has its special history and that therefore generalizations, based for instance on the cotton industry, are not tenable, and those which show that each region has its special history and that therefore generalizations, based for instance on Lancashire, are not tenable. In the first class the more important are G. I. H. Lloyd: *The Cutlery Trades* (1913); G. W. Daniels: *The Early English Cotton Industry* (1920), and the more recent A. P. Wadsworth and J. de L. Mann: *The Cotton Trade and Industrial Lancashire, 1600-1780* (1931); H. Heaton: *The Yorkshire Woollen and Worsted Industries from the Earliest Times up to the Industrial Revolution* (1920); T. S. Ashton: *Iron and Steel in the Industrial Revolution* (1924); H. Hamilton: *The English Brass and Copper Industries to 1800* (1926); T. S. Ashton and J. Sykes: *The Coal Industry of the Eighteenth Century* (1929), and J. U. Nef: *The Rise of the English Coal Industry* (1932). In the second class mention may be made of L. W. Moffit: *England on the Eve of the Industrial Revolution with special Reference to Lancashire* (1925); G. H. Tupling: *The Economic History of Rossendale* (1927); H. Hamilton: *The Industrial Revolution in Scotland* (1932); J. D. Chambers: *Nottinghamshire in the Eighteenth Century* (1932); and A. H. Dodd: *The Industrial Revolution in North Wales* (1933). The nature and extent of capitalist organization in the first part of the eighteenth century are illustrated in R. B. Westerfield:

<sup>1</sup> The *Lectures* were compiled after his death from students' notes. Ashley was a member of the class and assisted in preparing the book.

<sup>2</sup> G. Unwin: *Studies in Economic History*, page 15.

<sup>3</sup> An English translation by Marjorie Vernon was published in 1928 under the title of *The Industrial Revolution in the Eighteenth Century*.

*Middlemen in English Business, particularly between 1660 and 1760* (1913), and industrial organization is treated briefly in J. Lord: *Capital and Steam Power, 1750-1800* (1923), and much more comprehensively in E. Roll: *An Early Experiment in Industrial Organization, being a History of the Firm of Boulton and Watt, 1775-1805* (1830). The social background of economic changes is illuminated by J. L. and B. Hammond's three books: *The Village Labourer, 1760-1832* (1912); *The Town Labourer, 1760-1832* (1917); and *The Skilled Labourer, 1760-1832* (1919). Various aspects of the population question are dealt with in S. T. Griffith: *Population Problems of the Age of Malthus* (1926); M. C. Buer: *Health, Wealth, and Population in the Early Days of the Industrial Revolution* (1926); and A. Redford: *Labour Migration in England, 1800-1850* (1926).

#### PART IV: THE INDUSTRIAL AGE—THE SECOND PHASE

For the European background in addition to Barnes and Flügel and Kulischer, already mentioned, J. H. Clapham: *The Economic Development of France and Germany, 1815-1914* (1921), and A. Birnie: *An Economic History of Europe, 1760-1930* (1930), are most valuable surveys. Most of the books recommended in the previous section also deal with the first thirty or forty years of the nineteenth century. In the majority of cases the title is a sufficient indication of the period they cover. Two books which have a wider range are G. M. Trevelyan: *British History in the Nineteenth Century, 1782-1901* (1922), and C. R. Fay: *Great Britain from Adam Smith to the Present Day* (1928); both may be called social, but the former is mainly occupied with the political, and the latter with the economic setting. To them may be added A. Redford: *The Economic History of England, 1760-1860* (1931), which, within a comparatively brief compass, incorporates the results of the research of the last quarter of a century in a well-balanced statement. The period since Waterloo is dealt with in G. Slater: *The Growth of Modern England* (1932); C. R. Fay: *Life and Labour in the Nineteenth Century* (1920); L. C. A. Knowles: *The Industrial and Commercial Revolutions in Great Britain during the Nineteenth Century* (1922); and J. F. Rees: *A Social and Industrial History of England, 1815-1918* (1932). On a much more comprehensive scale is J. H. Clapham: *An Economic History of Modern Britain: The Early Railway Age, 1820-1850* (1926). Mrs. Knowles's book is particularly suggestive in its treatment of the revolution in transport. A detailed account of the growth of transport facilities will be found in W. T. Jackman: *Development of Transportation in Modern England*, two vols. (1916).

The history of public finance is sketched in J. F. Rees: *A Short*

*Fiscal and Financial History of England (1815-1918)* (1921) and special attention may be drawn to the list of books in the appendix. Other aspects of the subject are discussed in A. W. Acworth: *Financial Reconstruction in England, 1815-1822* (1925), and E. L. Hargreaves: *The National Debt* (1930). The history of prices is summarized in Sir W. T. Layton: *Introduction to the Study of Prices* (1920), and reference should also be made to Tooke and Newmarch: *History of Prices and of the State of the Circulation from 1792 to 1856*, of which a new edition, with an introduction by T. E. Gregory, was published in 1928. For an outline of the development of foreign trade A. L. Bowley: *England's Foreign Trade in the Nineteenth Century* (1893) is useful. The subject is re-examined in G. D. H. Cole: *British Trade and Industry: Past and Future* (1931). Capital investment abroad is the subject of L. N. Jenks: *The Migration of British Capital to 1875* (1927).

On trade unionism the standard work is S. and B. Webb: *History of Trade Unionism* (1920). There is a convenient introduction to the subject by C. M. Lloyd: *Trade Unionism* (new edition, 1929); and E. Welbourne: *The Miner's Unions of Northumberland and Durham* (1923); and W. Warburton: *The History of Trade Union Organization in the North Staffordshire Potteries* (1931) are valuable studies. Of the Chartist Movement, Edouard Dolléans: *Le Chartisme, 1830-1848* (1912); Mark Hovell: *The Chartist Movement* (1918); and Julius West: *A History of the Chartist Movement* (1920) give accounts which have a different approach and are therefore largely complementary to one another. For the subsequent history of working-class movements F. E. Gillespie: *Labor and Politics in England, 1850-1867* (1927) should be read. For the Poor Law there is a mass of information in S. and B. Webb: *English Poor Law History*, Part I, *The Old Poor Law* (1927), and Part II, *The Last Hundred Years*, two vols. (1929). An outline of the Factory Acts is given in B. L. Hutchins and A. Harrison: *History of Factory Legislation* (1926).

The general reader who may prefer to study the period by reading biographies may be recommended G. D. H. Cole: *The Life of William Cobbett* (1924); Graham Wallas: *Life of Francis Place* (1918); G. D. H. Cole: *Robert Owen* (1925); J. L. and B. Hammond: *Lord Shaftesbury* (1923); A. A. W. Ramsay: *Sir Robert Peel* (1928); Lord Morley: *Life of Richard Cobden* (1881); and G. M. Trevelyan: *The Life of John Bright* (1913). Anyone who wishes to study the treatment of the social question in contemporary novels will find Louis Cazamian: *Le Roman Social en Angleterre* (1904) an excellent critical introduction to the subject.



Contemporary discussion of economic questions is summarized from the Parliamentary debates and other sources in William Smart: *Economic Annals of the Nineteenth Century*, vol. i, 1801-1820 (1910) and vol. ii, 1821-1830 (1917). The same method is employed in less detail over a wider period and almost entirely with respect to the Parliamentary debates in William Page: *Commerce and Industry*, vol. i (1919). The second volume contains a useful selection of statistics. Two contemporary reports still well worth reading are those of the Bullion Committee of 1810, which has been reprinted with an introduction by Professor Cannan under the title of *The Paper Pound of 1797-1821* (1919), and the *Poor Law Commissioners Report of 1834*, which was reprinted by H. M. Stationery Office in 1905.

#### PART IV: THE INDUSTRIAL AGE—THE THIRD PHASE

While comparison between the economic history of one country and another is at any period of their development illuminating, it is usually possible to study each separately. After the middle of the nineteenth century, however, such separation becomes impossible. The chief industrial countries, at any rate, must all be taken into consideration. The student would do well to acquaint himself with the outlines of the economic history of France, Germany, and the United States before approaching this phase. For France Henri Sée: *Esquisse d'une histoire économique et sociale de la France depuis les origines jusqu'à la guerre mondiale* (1929) is an excellent introduction to the subject. W. H. Dawson: *Evolution of Modern Germany* (1919) and one of the standard textbooks of American economic history; E. L. Bogart: *The Economic History of the United States* (1929); H. U. Faulkner: *American Economic History* (1924); or T. W. Van Metre: *Economic History of the United States* (1925) will serve very well for Germany and the United States respectively. The books by Barnes and Flügel, Clapham, and Birnie, already mentioned, continue to be invaluable guides to the second part of the nineteenth century.

The reaction of world changes on the structure of Great Britain as a whole may be examined in J. H. Clapham: *An Economic History of Modern Britain: Free Trade and Steel, 1850-1886* (1932); and on a particular region in G. C. Allen: *The Industrial Development of Birmingham and the Black Country, 1860-1927* (1929). Many penetrating comparisons of the evolution of industrial organization in Great Britain, France, Germany, and the United States will be found in A. Marshall: *Industry and Trade* (1923). A short introduction to the nature of industrial fluctuations is F. Lavington: *The Trade Cycle* (1922); a list of recent books and a useful discussion of the subject will be found in

Sir W. H. Beveridge: *Unemployment: A Problem of Industry* (new edition, 1930, Chapter XV). Industrial legislation is dealt with in F. Tillyard: *The Worker and the State* (1923), and the more recent developments of the Factory Acts in H. A. Mess: *Factory Legislation and its Administration, 1891-1924* (1926). There is a mine of information on the war period in the various series of the Economic and Social History of the World War published by the Carnegie Endowment for International Peace. Reference may be made to the following in the British Series, M. E. Buckley: *Bibliographical Survey of Contemporary Sources for the Economic and Social History of the War* (1922). Sir J. A. Salter: *Allied Shipping Control: An Experiment in International Administration* (1921); H. D. Henderson: *The Cotton Control Board* (1922); Sir R. A. S. Redmayne: *The British Coal-mining Industry during the War*; A. L. Bowley: *Prices and Wages in the United Kingdom, 1914-1920* (1921). The *Manchester Guardian* Commercial Supplement on *Reconstruction in Europe* (Section XII, 4th January, 1923) contained an interesting survey of the literature of reconstruction with lists of publications. Reference should also be made to D. Sells: *The British Trade Boards System* (1923); J. B. Seymour: *The Whitley Councils Scheme* (1932), and for "employee representation," the American counterpart of the "conciliar movement," to the *Report of Delegation appointed to study Industrial Conditions in Canada and the United States* (H.M. Stationery Office, 1927) and H. B. Butler: *Industrial Relations in the United States* (International Labour Office, Geneva, 1927). The genesis of the present world depression may be studied in J. M. Keynes: *The Economic Consequence of the Peace* (1920), and in the selection from his post-war books and articles entitled *Essays in Persuasion* (1931). To these may be added A. Loveday: *Britain and World Trade* (1931); Sir J. A. Salter: *Recovery: The Second Effort* (1933); G. D. H. Cole: *The Intelligent Man's Guide Through World Chaos* (1932); and D. Graham Hutton: *Nations and the Economic Crisis* (1932). The consequences of depression on the regions most heavily hit in this country are carefully analysed in a series of *Industrial Surveys* (East Coast Area; Lancashire Area; Merseyside; South Wales; and South West Scotland) prepared for the Board of Trade by the local Universities and University Colleges and published by H.M. Stationery Office in 1932.

# INDEX

**ABINGDON**, 174  
**Abyssinia**, 12  
**Acheen (Sumatra)**, 116  
**Acre (Syria)**, 61  
**Acts or Statutes—**  
     **Arbitration (1800)**, 198  
     **Artificers (or Apprentices)**, 99-100; 101-102, 197, 198, 212  
     **Bank Charter (1844)**, 210  
     **Combination (See "Combination Laws")**  
     **Conspiracy and Protection of Property (1875)**, 272, 272n2  
     **Corn (See "Corn Laws")**  
     **Criminal Law Amendment (1871)**, 272n2  
     **Customs Regulations (1825 and 1833)**, 228  
     **Enclosure**, 182  
     **Factory (1819)** 213, (1833) 214, 244n, (1844) 214, (1856) 214  
     **Health and Morals of Apprentices (1802)**, 212  
     **Mines**, 214  
     **Municipal Corporations (1835)**, 205  
     **Navigation (See "Navigation Laws")**  
     **Poor Law Amendment (1834)**, 205, 208  
     **River Improvement**, 175  
     **Sir Richard Sutton's (1773)**, 179  
     **Turnpike**, 174  
**Adriatic Sea**, 61  
**Africa**, 73  
     —, "scramble for," 278n1  
**African company**, 153  
**Agadir incident**, 278  
**Agra**, 78, 117  
**Agricola, Julius**, 27  
**Agriculture**, 43-49, 87-93, 179-184, 230-238  
**Akbar**, 78  
**Aldeburgh**, 111  
**Aleppo**, 77n  
**Allen, G. C.**, 224n  
**Allowance system (See "Wages Relief in aid of")**  
*Alton Locke*, 191n  
**Amalgamated Society of Engineers**, 271

**Amazon**, 10  
**Amboyna, massacre of**, 119, 133  
**America**, 74, 81, 121, 122, 141  
     (See also "United States of America")  
**American Civil War**, 238, 246, 247, 252, 254, 262, 270, 278n2  
     — **Colonies**, 156, 163, 193 (See also "Northern Colonies," "Southern Colonies," and "West Indies")  
**Amsterdam**, 129, 142  
     —, **Bank of**, 128, 138-139, 140  
**Angles**, 28, 32, 33  
**Anti-Corn Law League**, 211, 234, 235  
**Antilles**, 74  
**Antwerp**, 62, 65, 110  
**Apprenticeship**, 55, 96, 99, 100, 285  
**Archangel**, 75, 76  
**Argentine**, 221, 256, 297  
**Aristotle**, 17  
**Arkwright, Sir Richard**, 155, 157, 158, 167, 172, 186, 191  
**Arte della Lana**, 68  
**Arte di Calimala**, 68  
**Ashley, Sir William James**, 59n  
**Ashton, T. S.** 193n  
**Assessment of Wages (See "Wages, Assessment of")**  
**Athelstan**, 56  
**Athens**, 18  
**Attica**, 18  
**Attila**, 14  
**Attwood, Thomas**, 202n  
**Augsburg**, 82  
**Australia**, 238, 242, 256, 270, 297  
**Austria-Hungary**, 278, 279, 288  
  
**BACON, SIR FRANCIS**, 105  
**Baffin, William**, 77  
**Bagehot, Walter**, 269n  
**Baghdad**, 77  
**Bakewell, Robert**, 181  
**Balance of trade**, 118, 124, 141, 143  
**Balkans**, 73, 278, 279  
**Ballot, Charles**, 186n  
**Baltic**, 76, 109, 110, 111, 125, 131, 132, 133, 163, 164, 242

- Baltimore, Lord, 123  
 Bank Charter Act (1844), 210  
 Bank of Amsterdam (*See* "Amsterdam, Bank of")  
 Bank of England—  
     foundation of, 139-140, 142  
     resumes cash payments (1821),  
         201-202, 209-210, 269*n*,  
         270, 280*n*, 303  
     suspends cash payments (1797),  
         195  
 Bantam (Java), 116  
 Barbados, 122, 123, 144  
 Barnes, D. G., 201*n*  
 Bede, The Venerable, 33  
 Belgium, 243*n*  
     —, railway system in, 250, 265  
 Belper (Derbyshire), 157  
 Bengal, 227  
 Bentham, Jeremy, 208  
 Bergen, 62  
 Berlin, 270  
 Bersham (near Wrexham), 165,  
     171  
 Bessemer, Sir Henry, 258, 259  
     — converter, 259, 260, 261, 262,  
         263  
     — ores, 259  
 Beveridge, Sir William H., 274*n*1  
     and 2  
 Bilston (Staffs), 165  
 Birkacre (Lancs), 157  
 Birmingham, 170, 175, 200, 204,  
     218, 219, 258, 273  
 Birnie, Arthur, 26*n*  
 Blackburn, 156  
 Black Country, 176, 216, 224  
     — Sea, 15  
 Blackwell, Edward, 138  
     — Hall, 70, 152  
 Blaenavon (Monmouthshire),  
     260  
 Blenkinsop, John, 178, 217  
 Board of Agriculture, 236*n*  
     — of Trade, 203, 220, 228  
 Boards of Guardians, 208, 274  
 Bodin, Jean, 83, 83*n*  
 Bokhara, 76  
 Bolton, 155  
 Bombay, 118  
 Bo'ness (Linlithgowshire), 170  
 Bossuet, Jacques, Bishop of  
     Meaux, 2, 3  
 Boston (Mass.), 251  
 Boulton and Watt, 170, 171, 172,  
     173  
 Boulton, Matthew, 170, 172, 191  
 Bowley, A. L., 241*n*2, 242*n*3  
 Boyle, Richard, Earl of Cork, 163  
 Brabant, 64, 68, 110  
 Bradford, 150, 151  
 Bradley (Staffs), 165  
 Brassey, Thomas, 221  
 Brazil, 159  
 Bremner, David, 224*n*  
 Bridgewater, Duke of, 176  
 Bright, John, 211  
 Brindley, James, 176  
 Bristol, 74, 165, 171, 174  
 Britain, 23, 27, 29, 50  
*Britannia*, 254*n*3  
 British Association (1856), 259,  
     (1932), 298*n*  
     — Columbia, 253  
 Britons, ancient, 24, 27, 28  
 Bromsgrove, 95  
 Brontë, Charlotte, 194*n*  
 Broseley (Salop), 165, 166, 171,  
     172  
 Bruges, 61, 62, 64, 65, 69  
 Buckle, H. T., 11, 11*n*, 307  
 Budd of Ystalyfera, 257*n*  
 Bullion, export of, 115, 118  
 Burma, 78  
 Burn, D. L., 246*n*  
 Burns, John, 273  
 Burrough, Stephen, 76  
  
 CABOT, JOHN, 74  
 Caerwent, 27  
 Caesar, Julius, 23, 24  
 Caird, James, 237-238  
 Calcutta, 118  
 Calicut, 74  
 California, 238, 270  
     —, Gulf of, 79  
 Cambay, 116  
 Cambridge, 59  
*Camulodunum*, 27  
 Canada, 126, 145, 221, 253*n*,  
     297  
 Canadian Pacific Railway, 253*n*  
 Canals, 175-177, 216, 216*n*  
     — in U.S.A., 252  
 Cape of Good Hope, 74, 75, 78, 79,  
     115  
 Capet, House of, 30  
 Capital, export of, 240, 241  
 Cardiff, 216*n*  
 Carlyle, Thomas, 191*n*  
 Carnegie, Andrew, 263  
     — Company, 264

- Carolina, 125  
 Carron Works, 165, 166, 169, 170, 171  
 Cartage, 16  
 Cartels in Germany, 264, 296  
 Cash payments—  
     resumption of (1821), 201-202, 233-234  
     suspension of (1797), 195  
 Caspian Sea, 76  
 Castlereagh, Lord, 196n  
 Catherine of Braganza, 118  
 Caxton, William, 64  
 Cecil, Robert, 91  
 Celts, 24-26, 27  
 Central Pacific Railway, 252  
 Ceylon, 227  
 Chamberlain, Joseph, 273, 274  
 Champagne, fairs of, 58, 60  
 Chancellor, Richard, 75, 76, 111  
 Charles the Great, 30  
     — I, 105-106, 133, 136  
     — II, 118, 119, 123, 138  
     — V, Emperor of Spain, 77, 82  
 Chartism and Chartist Movement, 204, 206, 207, 271  
 Chester, 94  
*Chevage*, 39, 40  
 Child, Sir Josiah, 122, 124, 128, 133, 138  
 China, 76, 227  
 Church, 30  
     — and usury, 59  
 Clapham, J. H., 245, 312  
*Clermont*, 251n  
 Cleveland, 258  
 Clothiers, 70-71, 96, 151, 152  
 Cloth Industry, 67-69 (*See also* "Woollen Industry" and "Worsted Industry")  
 Clothworkers Company, 77, 98  
 Coal industry, 72, 166, 188, 222-223  
     — — in France, 243  
     — — in Germany, 245, 245n  
 Coalbrookdale (Salop), 165, 168, 171  
 Coatbridge, 224  
 Cobden, Richard, 210, 211, 227  
 Cockayne, Alderman Sir William, 132  
 Coinage—  
     debasement of, 83-84  
     reduction in weight of, 81  
     restoration of (1560), 84  
 Coke, Roger, 122  
     —, Thomas William, Earl of Leicester, 181  
 Colbert, 144  
 Colchester, 27, 150  
*Colonia*, 27  
 Colonial system, 125  
 Colonization (or Plantation), 121-123  
 Columbus, Christopher, 74  
 Columella, Junius Moderatus, 20  
 Combination laws, 197, 203-204  
 Commercial treaty (Cobden) with France (1860), 227-228  
     — — (Methuen) with Portugal (1703), 149, 160  
 Commission on Coal Industry (1919), 290  
     — on Poor Laws (1832-4), 205  
     — on Trade Unions (1867), 271-272  
 Committee on Import Duties (1840), 210  
     — on Industry and Trade (1923), 298n  
     — on Iron and Steel Industry, 264n  
     — on Reconstruction, 284  
 Common, rights of, 45, 47, 90, 180, 182  
 Commonwealth, The, 119, 133  
 Communism (in Russia), 287  
 Commutation, 40, 48, 87  
 Companies, joint-stock, 104, 112, 241, 241n  
     — regulated, 112  
     —, trading, case for and against, 112-114, 130-132  
 "Conciliar Movement" (*See* "Employee Representation," "Trade Boards" "Whitley Councils," and "Whitleyism,")  
 Conspiracy and Protection of Property Act (1875), 272, 272n2  
 Constantinople, 50, 61, 73  
 Constitution of Weimar, 291  
 "Control of Industry," 290  
 Copper mines (Cornish), 167, 171, 172  
 Copyhold, 49, 92  
 Corn Laws (1815), 201, (1822), 233, (1828), 234, (1842), 235  
     — —, repeal of (1846), 190, 211, 231

- Cornwall, 171, 176, 178  
 Cort, Henry, 166  
 Cotton Control Board, 282  
 ——— industry, 154-160, 172, 225-226, 282, 292  
 Cotton-gin, 160  
 Courts of piepowder, 57*n*  
 ———, royal, 39, 40, 49  
 ———, seigneurial, 35, 37, 43, 44, 45  
 Craft Gilds (See "Gilds")  
 Crawshays of Cyfarthfa, 166, 224  
 Credit-Anstalt (Vienna), 302  
 Crimea War, 238  
 Criminal Law Amendment Act (1871), 272*n*  
 Crisis, economic, of 1825-6, 203, 208-209; of 1836-9, 209; of 1873, 268-271; of 1914, 279-280; of 1921, 293; of 1929, 300-301; of 1931, 302-303  
 ———, recurrence of, 266-267,  
 Cromford (Derbyshire), 157, 167, 186  
 Crompton, Samuel, 158  
 Cromwell, Oliver, 119  
 ———, Thomas, 89  
 Cumberland, 103, 259  
 Cunard Company, 254  
 Curtler, W. H. R., 232*n*  
 Cyfarthfa (Glamorgan), 166, 224, 224*n*  
  
 DALE, DAVID, 159, 167, 190  
*damnum emergens*, 59*n*  
 Danegeld, 34  
 Darby, Abraham, 165, 166  
 Davenport, F. G., 40*n*  
 Davies, Sir John, 26*n*  
 Davis, John, 76-77  
 Dawes Committee, 294  
 ——— Plan, 296  
 Debasement of the coinage, 83-84  
 Decay of tillage, 88, 90, 92, 99  
 ——— of towns, 94, 95  
 Defoe, Daniel, 149, 150, 151  
 De l'Isle and Dudley MSS., 162*n*  
 Depopulation, 22, 88, 92  
 Deptford, 117, 236  
 Derby, 157, 219  
*D'Ewes Journal*, 91*n*  
 Diaz, Bartholomew, 74  
 Dickens, Charles, 191*n*  
 Digges, Sir Dudley, 117  
*Discourse of the Common Weal of this Realm of England* (1581), 84, 89, 96, 311  
 Disraeli, Benjamin, 189, 191*n*, 272*n*  
 Dissolution of the monasteries (See "Monasteries, the Dissolution of")  
 Dodd, A. H., 254*n*  
 Domesday Book, 37, 38  
 Domestic (or putting-out) system, 68, 71, 97, 150-151, 153-156, 157, 159, 162  
*dominium maris*, 129  
 Dowlais (Glamorgan), 166, 224, 224*n*  
 Drake, Sir Francis, 78, 79  
 Drapers, 70, 152  
 ——— Company, 70  
 Drinkwater, Peter, 172  
 Dublin, 174, 254*n*  
 Dudley, Dud, 164  
 Dundee, 227  
 Durham, 223, 258  
 Dutch banking, 138  
 ——— capture Russian trade, 111-112  
 ——— carrying trade, 131-134, 142-143  
 ——— economic advantages, 128-129  
 ——— essentially commercial, 143, 165, 173, 185  
 ——— fishing industry, 129-130  
 ——— trade with East Indies, 79, 115, 117  
 (See also "Holland")  
 ——— war, the First, 119  
*Duty of a Steward* (1727), 184  
  
 EAST Anglia and Eastern Counties, 70, 149, 150, 151, 152, 193  
 East India Company, end of trading monopoly (1834), 227, 253  
 ———, foundation of, 79, 115-120  
 ———, imports of textiles, 154  
 ———, rivalry with the Dutch, 132-133, 142, 144

- Easterlings, 63 (*See also* "Hanseatic League")
- Eastland Company, 111-112, 131, 131*n*
- Eburacum*, 27
- Edinburgh, 54, 159
- Edward III, 69
- IV, 66
- VI, 83, 85
- Egbert, 30
- Egypt and Egyptians, 12, 13, 14
- Elbing, 111
- Elizabeth and monopolies, 102-103, 104
- and trading companies, 109-111, 150, 163
- invests in African voyage, 78
- Emden, 110
- Employers' Liability Act (1880), 275
- "Employee Representation," 291*n*, 316
- Enclosure movement, sixteenth century, 90-93, 99, 148, 181-162, 184
- —, eighteenth century, 179-180
- Entente*, Anglo-French, 278
- Erie Canal, 252
- Essex, Earl of, 104
- Etruria, 19
- Euphrates, 13, 16
- Exchequer, 52, 127
- , Stop of (1672) 138
- Exeter, 65
- FABIAN Society, 273
- Factory Legislation (*See* "Acts, Factory")
- reformers, 213
- Fairs, 57-60
- Federal Reserve Bank, 300
- Steel Company, 264
- Feudal system, 34, 36-42
- firma burgi*, 52
- Fishing, Council and Commonalty of (1630), 129-130
- industry, 122
- — and shipping, 129-130, 129*n*
- —, Dutch, pre-eminence in, 132
- Fitch, Ralph, 77, 78
- Fitzherbert, 91
- Flanders (and Flemings), fairs of, 58, 59
- , cloth industry in, 68-69
- , English merchants in, 64
- , immigrants to England, 69
- , Merchant Adventurers of England in, 110, 185
- , trade with Venice, 62 (*See also* "Low Countries")
- Florence, cloth industry in, 68
- , moneylenders in, 60
- "Fly boats," 177
- "Flying coach," 175
- Fly-shuttle, Kay's, 153, 156
- Fong, H. D., 226*n*
- Forest of Dean, 72*n*, 163
- Forncett, manor of, 40*n*
- Forrester, R. B., 298*n*
- Fox, Cyril, 23*n*, 307
- France and French, 30, 68
- commercial treaty with Great Britain, (1860), 227-228
- Colbert's policy, 144
- comparison with economic position of Great Britain in eighteenth century, 186-188
- with Great Britain in middle of nineteenth century, 242-244
- Entente* with Great Britain, 278
- hoarding of gold, 302
- invasion of Ruhr (1923), 294
- knowledge of English textile inventions, 186, 186*n*
- payment of indemnity to Germany, 270
- provision of railways, 221, 250
- Revolutionary and Napoleonic Wars, 183
- rise of prices in sixteenth century, 83
- survival of peasant proprietorship, 183-184
- West Indies, 126-127, 144-145
- Francis I of France, 77
- Franco-German War, 261, 269, 270
- Freeman, Edward Augustus, 32
- Free Trade (seventeenth century), 106, 109-113; (nineteenth century), 212, 227-228, 232, 235, 242, 303-304
- Frobisher, Martin, 76
- Fuchs, C. J. 228*n*

- Fuggers of Augsburg, 82  
 Fulton, Robert, 251<sup>n</sup>
- GALPIN, W. F., 194<sup>n</sup>  
 Gaskell, Mrs., 191<sup>n</sup>  
 Gaul, 24, 25, 27  
 Genoa, Bank of St. George of, 138  
 — Conference (1923), 294  
 George, David Lloyd (Prime Minister), 289  
 —, Henry, 272  
 Georgia, 123  
 German metal prospectors in England, 103-104, 162  
 — tribes, 32-33  
 Germany—  
   adopts gold standard, 270  
   and reparations, 293  
   and World War, 279  
   cartel organization, 264  
   colonial ambitions of, 277-278, 278<sup>n1</sup>  
   compared with Great Britain in middle of nineteenth century, 244-245  
   Dawes Plan for, 296  
   depreciation of the mark in, 294  
   equipment of industry, 299  
   feudalism in, 37  
   financial collapse of, 300  
   Hoover moratorium, 301  
   iron industry of, 261  
   provision of railways in, 249, 250-251  
   rapid expansion of steel industry, 261-262  
   revolution in, 287-288  
   works councils in, 291, 291<sup>n</sup>
- Ghent, 69  
 Giessen (Hessen), 236  
 Gilbert, Sir Humphrey, 76, 122  
 Gilchrist, Percy, 260  
 Guild Socialism, 284  
 Gilds—  
   craft, 53-54  
   disintegration of, 67, 71, 94, 97-99  
   in Germany, 244  
   merchant, 53-54  
   purposes of, 52  
 Gladstone, W. E., 212, 220, 272<sup>n2</sup>, 283  
 Glamorgan, 162, 166  
 — Canal, 216<sup>n1</sup>  
 Glasgow, 159, 169, 224
- Glevum*, 27  
 Gloucester, 27, 171  
 Goa, 77, 116  
 Goldsmiths, 135, 136, 137, 138  
 Gold standard—  
   Great Britain abandons (1931), 303  
   Great Britain's return to (1925), 295  
   operation of, 301-302  
   (See also "Cash Payments")  
 Gosport, 166  
 Gough, J. W., 72<sup>n</sup>  
 Grand Junction Canal, 218  
 — Railway, 219  
 — National Consolidated Trades Union, 204  
 — Trunk Canal, 176  
*Great Britain*, 254  
 Great Depression, 268, 269, 270  
*Great Eastern*, 255<sup>n2</sup>  
 Great Lakes, 252, 254<sup>n4</sup>  
*Great Western*, 254  
 Greece, city-states of, 17-19  
 Greenland, 133  
 Guadeloupe, 126, 144  
 Guests of Dowlais, 166, 224, 224<sup>n</sup>  
 Guillebaud, C. W., 291<sup>n</sup>  
 Guinea, 78
- HABEAS Corpus Act, suspension of, 199  
 Hakluyt, Richard, 75<sup>n</sup>  
 Hales, John, 84<sup>n</sup>  
 Halifax, 150, 151  
 Hamburg, 62, 110  
 Hammond, J. L. and B., 237<sup>n</sup>  
 Hanseatic League, 62-63, 66, 70, 110, 111  
*Hard Times*, 191<sup>n</sup>  
 Hargreaves, E. L., 142<sup>n</sup>  
 —, James, 156, 157  
 Hawkins, Sir John, 78, 116  
 —, William, 116-117  
 Hedley, William, 217  
 Henry the Navigator, 73  
 — VII, 64, 74  
 — VIII, 75, 83, 89  
 Hochstetter, Daniel, 103  
 Holker, John, 186  
 Holland—  
   banking in, 138-139  
   claims of, in the East, 115  
   commercial resources of, 142-143



Holland—*contd.*

- economic position of, 128-129
- English merchants in, 64
- Navigation Acts aimed against, 133
- (See also "Dutch")
- Holyhead, 254<sup>n</sup>
- Hoover moratorium (1929), 301
- Horne, Sir Robert, 289
- Hot-blast, invention of, 224, 257
- Houtman, 79
- Huddersfield, 150
- Hudson, George, 219
- , Henry, 77
- Hull, 65
- Hume, Joseph, 203-204
- Huntsman, Benjamin, 258, 258<sup>n</sup>
- Huskisson, William, 203, 211, 228, 234, 244<sup>n</sup>
- Hyndman, H. M., 273

## INCOME TAX, 195, 200, 211

Inderwick, F. A., 113<sup>n</sup>

## India—

- cable opened from England to (1870), 255<sup>n2</sup>
- discovery of sea route to, 73-74, 141
- effect of the opening of the Suez Canal on, 268
- English begin to trade with, 116-117
- settlements in, 118-119
- struggle with Portuguese in, 118
- exports of, 227, 242
- position of East India Company in, 144
- trade by overland routes, 77-78
- (See also "East India Company")
- Indians (American), 9, 121, 145
- Industrial Revolution, 185, 311-312
- Interlopers, 109, 120
- Ireland—
  - charcoal smelting in, 163
  - failure of potato crop in, 235
  - Northmen found towns in, 5
  - restriction of woollen industry in, 149
  - tribal system in, 25
- Irish famine (1846), 211
- laws, 26
- Iron industry, 72, 161-166, 193, 223-224, 257-258

## Italy—

- cloth industry in, 19, 42, 68
- town development in, 50
- trade with England, 65

JACKMAN, W. T., 253

Jahangir, 117, 118

Jamaica, 123

James I and East India Company, 117-118

— — — monopolies, 104-105

— — — the Dutch, 133

— II, 139

Jamestown (Virginia), 123

Jefferson, Thomas, 246

Jenkinson, Anthony, 76, 77

Jessop, William, 178

Jevons, William Stanley, 190

Joint Standing Industrial Councils (See "Whitley Councils")

Joint-stock. (See "Companies, joint-stock")

*Journal of the Royal Agricultural Society*, 236

KAY, John, 153, 156

Kayll, Robert, 117<sup>n</sup>

Kempe, John, 69

Ket, Robert, 92, 93

Kholmagori (Archangel), 75

Kidderminster, 95, 175

Killingworth, 217

Kilsby Tunnel, 218

King, Gregory, 148

Kingsley, Charles, 191<sup>n</sup>

Kinneil House (near Linlithgow), 169

Knight-service, 38

Krupp of Essen, 259

LABOUR (now Employment) Exchanges, 274, 274<sup>n1</sup>

—, Ministry of, 258, 286

*Laissez-faire*, 191, 191<sup>n</sup>, 207-214, 268, 271, 273, 275

Lake Superior, 262

## Lancashire—

- Arkwright returns to, 157
- beginnings of cotton industry in, 155-156
- effect of Great War on cotton industry in, 282
- localization of cotton industry in confirmed, 160
- machinery employed in, 226

Lancashire—*contd.*

- mule spinning in, 158-159
- output of coal in, 223
- over-capitalization of cotton industry in, 292
- steam-power adopted in, 172
- Lancaster, James, 79, 116
- Land Bank, Dr. Chamberlayne's project of, 140
- Landore (near Swansea), 260
- Lapland, 75
- latifundia*, 20
- Latin principalities in the East, 61
- Latium and Latins, 19
- Laurence, Edward, 184
- Law merchant, 57
- Lawes, Sir John Bennett, 236
- "Laws of Ethelbert," 33
- Leeds, 150
- Leeward Islands, 123, 144
- Leicestershire, 91, 181
- Leland, John, 91
- Levant, 50, 61, 73, 77, 79, 116, 154
- (or Turkey) Company—
  - form of, 112
  - monopoly of, 153
  - origin of, 77
  - relation of, to East India Company, 115
- Levy, Hermann, 265*n*
- Liebig, Justus von, 236
- Lincoln, 27
- Lindum*, 27
- Lisbon, 3, 74
- List, Friedrich, 227, 240*n*
- Liverpool, 160, 176, 217, 218
- and Manchester Railway, 215, 219
- , Lord, 244*n*
- Livery, gild, 97, 99
- Lloyd's Register, 255
- Londinium*, 27
- London—
  - and Birmingham Railway, 219
  - and North Western Railway, 219, 259
  - apprenticeship rule, 100
  - coal from Newcastle, 173
  - Company, 122-123
  - continuity of town life in, 50
  - Dock Strike (1889), 273
  - dominates local markets, 96, 97
  - drapers of, 70, 152
  - goldsmiths of, 137, 138
  - Merchant Adventurers of, 65

London—*contd.*

- merchants and direct trade route to India, 78, 79, 115-116
- money market, centre of railway financing, 220-221
- foundations of, 140
- strain on (1872), 270, (1914), 280, (1931), 303
- railways, 218, 219
- stage-coaches, 175
- Steelyard in, 62, 63
- Stock Exchange, 280
- Lorraine, 261
- Lothians, farming in the, 238
- Loughborough, 178
- Louis XIV, 139, 144
- Louisiana, 126, 145
- Low Countries—
  - burghal risings in, 42
  - cloth towns of, 68-69
  - English merchants in, 64, 110
  - undressed cloth exported to, 132
  - immigration of weavers from, 150
  - intense struggles in towns of, 54
  - new silver reaches, 83
  - trading centre at Bruges, 62
  - (*See also* "Flanders" and "Holland")
- Loyd, S. J. (Lord Overstone), 210
- Lübeck, 62
- lucrum cessans*, 59*n*
- Lynn, 111
- McADAM, John Loudon, 175
- Macbeth*, 77*n*
- McCormick, Cyrus H., 247
- Machinery, export of, 186, 186*n*, 228-229, 239
- Madras, 118
- Magellan, Ferdinand, 74
- , Straits of, 79, 115
- Malacca, 78
- Malmesbury Abbey, 71
- Manchester—
  - Arkwright builds mill in, 157
  - with Newcomen engine, 172
  - Bridgewater Canal, 176
  - canal to Mersey, 176
  - coach from London, 175
  - cotton industry localized in and around, 155
  - enfranchised in 1832, 204

- Manchester—*contd.*  
 merchants' petition, 202  
 Peterloo incident in, 199, 199*n*  
 railway to Liverpool, 217  
 "Manchester Act," 155  
 Manor, 32, 38, 40, 43-49  
 Manorial features of towns, 51, 52  
 Markets, 56-57  
 Martinique, 126, 144, 145  
 Martin-Siemens process, 261  
 Marx, Karl, 5, 6, 7  
 Marxian analysis, 273  
*Mary Barton*, 191*n*  
 Maryland, 123, 124, 146  
 Massilia (Marseilles), 23  
 Maudslay, Henry, 225  
 Mediterranean civilization, 13, 15-21  
 Mellor (Lancashire), 158  
 Mendips, 72*n*  
 Mercantilism, 108-109, 121, 123, 129, 141, 144, 146, 147, 149, 189, 193, 226  
 Merchant Adventurers of England, attacks on monopolistic practices of (1604), 112  
 charter annulled in favour of Cockayne's Project, 132  
 charter of (1564), 110  
 origin of, 64-65, 70  
 — middlemen, 152, 156, 158  
 Merchants of the Staple, 63-64  
 Merchants' petition (1820), 202  
*Merchet*, 39  
 Mersey and Irwell navigation, 176  
 Merthyr Tydfil, 216*n*  
 Mesopotamia, 13  
*Metallum Martis*, 164  
 Methuen Treaty (1703), 149, 160  
 Mexico, 78, 81, 62, 121, 141  
 Middelburg, 64, 110  
 Middlesbrough, 258, 260  
 Middleton, Henry, 117  
 Midland Railway Company, 219  
 Midlands, 116, 176, 179  
 Miners' Federation, 290*n*  
 Mines Act, 214  
 — Royal, company of the, 104  
 Misselden, Edward, 106*n*  
 Molasses Act (1733), 126, 127, 145  
 Monasteries, the dissolution of, 85, 90, 161  
 Monmouthshire, 216, 216*n*  
 Monopolies (See "Patents of Monopoly")  
 Montcalm, 145  
 More, Sir Thomas, 88  
 Morocco, 278  
 Morris, William, 191*n*  
 "Mule," 158  
 Mulhouse, 244  
 Mun, Thomas, 118, 128  
 Municipal Corporations Act (1835), 205  
 — Socialism, 273  
 Murdock, William, 178, 216  
 Muscovy (or Russia) Company, access to Baltic, 109, 111-112, 131*n*, 153  
 — — —, origin of, 75-76  
 Muslin wheel, 158  
 NARVA, 109, 111  
 Nasmyth, James, 225  
 National Industrial Conference, 289, 293  
*National System of Political Economy*, 227  
 Navigation Laws, 129, 131; (1651), 133; (1660), 124, 143  
 — — — revised by Huskisson, 203  
 — — —, Sir Josiah Child's opinion of, 133  
 Neilson, James Beaumont, 224  
 New draperies, 150  
 — England colonies, 122, 123, 124, 145 (See also "Northern Colonies")  
*New Horse Hoeing Husbandry* (1731), 180  
 New Lanark, 159, 167, 190, 213  
 — Leicester sheep, 181  
 — Orleans, 251  
 — Stone Age, 23  
 — York, 251, 252, 254, 303  
 Newbery, John, 77  
 Newcastle—  
 coal trade of, 166, 173  
 hostmen of, 102-103  
 merchant adventurers of, 65  
 Newcomen engine, 168, 169, 171, 172  
 Newfoundland, 122  
 Newton, Sir Isaac, 2  
 Nile, 12, 13  
 Norfolk, 92, 150, 181

Norfolk rotation, 181  
 Northampton, 91, 218  
 North-east Passage, 75-76, 111  
 Northern Colonies, 124, 125, 126,  
 146, 252  
 Northmen, 34, 35, 51  
 Northumberland, 223  
 North-west Passage, 76-77  
 Norway, 62, 111  
 Norwich, 65, 69, 150, 151  
 Nottingham, 157  
 Nottinghamshire, 172  
 Novgorod, 62

OASTLER, Richard, 214  
 Ogden (Utah), 252  
 Oldknow, Samuel, 158, 172  
 Old Stone Age, 23  
 Open-field system, 45, 48-49,  
 90-91, 179-180, 181, 182  
 Open-hearth process, 260, 262, 263  
 Orders in Council, 194  
 Orinoco, 10  
 Ormuz, 77  
 Osborne, Edward, 77  
 Ottoman Turks, 73  
 Owen, Robert, 159, 190, 190*n*,  
 200*n*, 204, 213  
 Oxford, 51, 174, 236  
 — Parliament (1258), 69  
 Oxfordshire, 91, 180

PAPPLEWICK (Notts), 172  
 Paris, 250, 270, 303  
 Parker, C. S., 235*n*  
 Patents of monopoly, 101-107  
 Paterson, William, 139  
 Paul, Lewis, 156  
 Peasant proprietorship, 184, 188  
 Peasants' Revolt (1381), 41  
 Peel, Sir Robert (the elder), 213  
 — — — (the younger), 210,  
 212, 235, 237  
 Penn, William, 123  
 Pennsylvania, 123, 262  
 Pensnet (Worcs), 164  
 Pepys, Samuel, 136  
 Peru, 81, 82, 121, 141  
 Peterloo, 199, 199*n*  
 Peto, Samuel Morton, 221  
 Petty, Sir William, 122, 128, 142  
 Philadelphia, 123, 251  
 Philip II of Spain, 79, 82  
 Philippines, 74, 79  
 Phoenicians, 16, 17, 23  
 Picketing, 272, 272*n*2

Pilgrim Fathers, 123  
 Pilgrimage of Grace (1536), 92  
 Pitt, William, 186, 195, 196*n*  
 Place, Francis, 203-204  
 Plantation (*See* "Colonization")  
 Plato, 17  
 Plymouth Company, 122, 123  
 Political economy and State inter-  
 vention, 207-208,  
 219-220  
 — — —, classical or orthodox,  
 196, 196*n*  
 — — — decline of, 272  
 Poor Law Amendment Act (1834),  
 205, 208  
 — — — Commission (1832-  
 1834), 205  
 — — — Laws and children, 159, 212  
 — — — and unemployed, 274  
 — — —, origin of, 93

Population—  
 mercantilists and, 122  
 of Ancient Rome, 19  
 of Great Britain and France  
 compared, 186, 186*n*  
 Portugal (and Portuguese), explor-  
 ers, 73-75, 185  
 and the East, 77-79  
 —, Methuen, treaty with (1703),  
 149, 159-160  
 —, struggles with English in  
 India, 117-118

Potosi, mines of, 82

Prices—  
 falling, after Waterloo, 201-202,  
 236  
 1873, 270-271  
 1925, 301-302  
 medieval, stability of, 81  
 rise of in sixteenth century, 81-  
 86, 121  
 rising, after Armistice, 292  
 after gold discoveries in  
 middle of nineteenth century,  
 238  
 in 1915, 281

Protection, 212, 231-232, 234-235,  
 237  
 — of "infant industries," 240  
 Puddling process, 166, 257, 259,  
 261  
 Pytheas, 23

QUANTITY Theory of Money, 83

RADCLIFFE, William, 158

- Railways, 178, 215-221  
 Act (1921), 290n2  
 American, 251-253  
 Belgian, 250  
 capital investment abroad in,  
 221, 241  
 control of, during war, 281  
 French, 250  
 German, 250-251  
 grouping of, 293  
 Rainhill trials, 217  
 Raleigh, Sir Walter, 122  
 Ramsey Abbey, 58  
 Rationalization, 276  
 Recoinage of 1560, 84  
 Redford, Arthur, 202n  
 Rees, J. F., 192n, 219n  
*Relation of Organic Chemistry to  
 Agriculture and Physiology*  
 (1840), 236  
 Roads, Roman, 27-28  
 —, eighteenth-century English,  
 174-175  
 Robertsbridge Abbey, 161  
 Robinson, J. F., 202  
*Rochet*, 217-218  
 Roe, Sir Thomas, 118  
 Roebuck, Dr. John, 165-166, 169-  
 170  
 Roman Britain, 27-28, 32  
 — Empire, 14, 19, 20-21, 22,  
 23, 27, 28-29  
 — occupation of Britain, 27-  
 28, 29  
 Romanization, 27-28  
 Romans, 3, 16, 24, 28  
 Rome, 19, 50  
 Romulus, 19  
 Rotation of crops, 180  
 Rothamstead, 236  
 Royal Agricultural Society, 236  
 — Exchanges, 136  
 — Mint, 135  
*Royal William*, 254n2  
 Ruhr, 261, 294  
 Runcorn, 176  
 Runrig, 26  
 Ruskin, John, 191n  
 Russia, 62  
 and Great War, 279  
 beginnings of English trade  
 with, 76  
 reaches Baltic, 111, 133  
 revolution in, 287-288, 291,  
 293  
 wheat supplies for, 238, 242
- SABINES, 19  
 Sadler, Michael Thomas, 214  
 St. Giles (Winchester) Fair, 59  
 St. Gotthard Pass, 61  
 St. Ives Fair, 58, 59  
 San Juan d'Ulua (Mexico), 78  
 Sankey, Lord, 290  
 Savery, Thomas, 167  
 Saxons, 28, 32, 33  
 Scandinavia, 75  
 Schmoller, Gustav, 192  
 Scotland, 25  
 burghs of, 54-55  
 cotton-spinning in, 158  
 iron industry in, 165, 166, 224,  
 258  
 Sée, Henri, 243n2  
 Seebohm, Frederic, 33, 33n, 307  
 Seeley, Sir John R., 192  
 "Self-Government in Industry,"  
 290, 291  
 Selsey, 33  
 Serbia, 279  
 Seven Years' War (1756-1763),  
 126, 145, 193  
 Shaftesbury, Lord, 214  
 Shannon, H. A., 241n  
 Sheffield, 258, 258n, 259, 271, 272  
 Shelburne, Lord, 144  
 Shetlands, 130  
 Shipping—  
 Dutch, 129, 131, 173  
 excess of tonnage, 268-269,  
 293  
 from sail to steam, 253-254  
 national importance, of, 117,  
 143, 163  
*Shirley*, 194n  
 Shop-steward movement, 284  
 Shropshire, 163, 172, 199  
 Sidney, Sir Henry, 162  
 —, Sir William, 161  
 Sidon, 16  
 Siemens, William, 260, 261  
 Silk industry, 242, 244, 244n  
 Singer, 247  
 "Six Acts" (1819), 199  
 Slavery (and slave trade)—  
 abolition of, in British Empire,  
 213, 213n  
 ancient, 12-13, 18  
 and American westward expan-  
 sion, 246  
 medieval, 37  
 negro, 78, 123-124, 143, 160  
 Smith, Adam, 106, 138, 189, 212

- Smith, James, of Deanston, 236  
 —, William, 84*n*  
 Smithfield (Bartholomew Fair), 59  
 Snow Hill (Birmingham), 170  
 Soap monopoly, 106  
 Social Democratic Federation, 273  
 Socialist League, 273  
 Socmen, 37  
 Soho (Birmingham), 170, 171, 178  
 Somerset, Protector, 88*n*  
 South American republics, 209  
 Southampton, 70  
 South Staffordshire, 163  
 South Wales—  
   coal-mining in, 166, 174, 223  
   depression of iron industry after Waterloo, 199–200  
   ironmasters of, 224, 224*n*3, 257–258  
   steel industry in, 259  
 Southern colonies of America, 143, 146 (See "Georgia," "Maryland," and "Virginia")  
 Southern States of America, 160  
 Spain (and Spaniards), exploitation of New World, 81–83, 121, 142  
   explorers, 74–75, 78, 185  
   iron ore imported from, 259–260  
 Sparta, 17, 18  
 Spartacus, 20  
 Speenhamland system, 183, 196, 197–198, 232  
 Spice Islands, 79, 116, 117, 118, 132, 133, 142, 253  
 Spinning-jenny, 156  
 Stade, 110  
 Stafford, William, 84*n*  
 Staple, 63 (See also "Merchants of the Staple")  
 Statute of Artificers (See "Acts")  
 Steel industry, 259–265  
   — rail syndicate, 265  
 Steelworks Union, 264  
 Stephenson, George, 178, 217  
 Stockton and Darlington Railway, 178, 215, 217  
 Stourbridge Fair (near Cambridge), 59  
 Stourport, 171, 175  
 Strabo, 24  
 Strathleven, 255  
 Sturtevant, Simon, 164  
 Sudbury (Suffolk), 150  
 Suez Canal, 255, 268  
 Sugar Islands (See "West Indies")  
   — trade, 144–145, 146  
 Sumatra, 116  
 Surat, 116, 117, 118  
 Sussex, 161, 163  
 Sutton, Sir Richard, 179  
 Swally Roads, 118  
 Sweden, 111, 164, 260  
 Sybil, 191*n*  
 Syria, 16, 77  
 TACITUS, Cornelius, 27  
 Tallage, 39  
 Tawney, R. H. and Power, E., 95*n*, 104*n*  
   —, R. H., Bland, Brown and, 91*n*, 190*n*, 198*n*  
 Technocracy, 297*n*  
 Telford, Thomas, 175  
 Thomas, Sidney Gilchrist, 260, 261  
 Thorne, Robert, 75  
 Three-field system, 46, 90–91  
 Tigris, 13, 16  
 Tillett, Ben, 273  
 Tower of London, 135  
 Towns—  
   decay of, 94–95  
   medieval, 41–42, 52–55  
   origins of, 50–51, 56  
   Roman, 27  
 Townshend, Lord, 181  
 Trade Boards, 285–286, 289, 289*n*, 293, 293*n*  
   — Boards Acts (1909), 285; (1918), 285  
   — Union Act (1871), 272  
   — — conditions, 281  
   — unions, 197, 203–204, 271–272, 273, 276, 284 (See also "Combination Laws")  
 Trades Increase (pamphlet), 117  
   — — (ship), 117, 117*n*  
 Trevithick, Richard, 178, 217  
 Tripoli, 77  
 Tull, Jethro, 180, 181  
 Turkestan, 76  
 Turkey Company (See "Levant Company")  
 Turks (and Turkey), 73, 77, 278  
 Turnpike trusts, 174, 177, 218  
 Tusser, Thomas, 91  
 Tyre, 16, 61  
 UNEMPLOYED Workman Act (1905), 274

- Unemployment, a Problem of Industry*, 274<sup>n</sup>1 and 2  
 — insurance, 274, 288, 288<sup>n</sup>  
 Union Pacific Railway, 252  
 United States of America, 147  
 cheap wheat from, 255, 268  
 cotton growing in, 160, 226  
 "employee representation" in, 291<sup>n</sup>  
 financial crisis in, 209  
 (1929), 300-301  
 growth of steel industry in, 262-263  
 industrialization of, 245-247  
 prosperity (1925-1929), 297, 298  
 provision of railways in, 249, 251-253  
 rise of trusts in, 264  
 (See also "American Civil War")  
 Unwin, George, 98<sup>n</sup>  
 Usury, 59, 137  
*Utopia*, 88<sup>n</sup>  
 Utrecht, Treaty of (1713), 144
- VANE, Sir Harry (the younger), 113  
 Vasco da Gama, 74  
 Venice—  
 bank of, 138  
 commercial greatness of, in Middle Ages, 13, 50, 61-62  
 struggle with Turks, 73  
 trade with England, 62, 65  
*Venta Silurum*, 27  
 Versailles, Treaty of, 288  
*Villa*, 28, 32, 33  
 Villein and villeinage—  
 commutation of dues, 48-49  
 influence of Domesday Book on, 37-38  
 tests of villeinage, 39-41  
 typical holding of, 45-47  
 Viner, Robert, 138  
 Virginia, 122, 123, 124, 143  
*Viroconium*, 27  
 Voltaire, 2
- WAGES, assessment of, 86, 99-110, 197-198  
 —, relief in aid of (See "Speenhamland System")  
 — (Temporary Regulation) Act (1918), 289  
 Waigatz, Strait of, 76  
 Wakefield, 150
- Wales, tribal system in, 25 (See also "South Wales")  
 Wall Street panic (1929), 300  
 Walter of Henley, 44  
 Water-frame, 157  
 Water power, 159, 167, 187  
 Watt, James, 168-169, 170, 171-172, 178, 225  
*Wealth of Nations* (1776), 138, 189, 196<sup>n</sup>  
 Webb S. and B., 272<sup>n</sup>  
 Wedgwood, Josiah, 176, 191  
 Welsh laws, 26  
 West Africa, 78, 126, 143  
 — country, 149, 151, 188, 193  
 — Indies—  
 cotton from, 159  
 English possessions in, 13, 123  
 in three-cornered trade, 143  
 John Hawkins' voyage to (1562) 78  
 Martinique and Guadeloupe restored to France, 145  
 sugar plantations in, 142  
 trade of Continental colonies with, 126  
 — Indian influence in British politics, 143-145  
 — Riding of Yorkshire—  
 clothiers of, 151-152  
 development in Industrial Revolution, 188, 193  
 power and machinery in, 226, 226<sup>n</sup>  
 woollen industry of, 149-150  
 Wheeler, John, 64-65, 109  
 Whitehaven, 174  
 White Sea, 75  
 Whitley, J. H., 284  
 — Councils, 284-285, 286, 289, 289<sup>n</sup>, 293  
 "Whitleyism," 284, 285, 290<sup>n</sup>, 291  
 Whitney, Eli, 160  
 Whitworth, Joseph, 225, 246<sup>n</sup>  
 Willfred, 33  
 Wilkinson, John, 165, 172  
 William I, 37  
 — III, 139  
 Willoughby, Hugh, 75, 111  
 Wilson, President Woodrow, 291<sup>n</sup>  
 Winchcombe, John, 71  
 Winchester, 59, 65  
 Wishaw, 224  
 Wood, William, 143<sup>n</sup>

- Woolen industry—**  
 eighteenth century, 148-153.  
     154-155, 156  
 in American colonies, 146  
 medieval, 67-72  
 nineteenth century, 226  
 sixteenth century, 94-96  
 (*See also* "Cloth Industry,"  
     "East Anglia," "West  
     Country," and "West Rid-  
     ing of Yorkshire")  
**Workers' Councils, 291**  
**Workmen's Compensation Act**  
 (1897), 275; (1906), *ibid.*  
**Works Councils Act, German**  
 (1920), 291  
**Worsted industry, 69, 148<sup>n</sup>, 150,**  
     152, 226<sup>n</sup>  
**Wrekin, 165**
- Wrexham, 165  
 Wroxeter, 27  
 Wyatt, John, 156
- YARDLAND, 34, 35**  
 Yarmouth, 130  
 Yarranton, Andrew, 175  
 Yeomanry of gilds, 97-99  
 York, 27, 64, 65  
 Yorkshire, West Riding of (*See*  
     "West Riding of Yorkshire")  
 Young, Arthur, 180, 181  
     236<sup>n</sup>  
 Ypres, 69  
 Ystalyfera, 257<sup>n</sup>
- ZEELAND, 64, 110**  
 Zollverein, 244



# PUBLISHED BY PITMAN

## THE ECONOMICS OF PRIVATE ENTERPRISE

By J. HARRY JONES, M.A., *Professor of Economics, and Head of the Commerce Department, University of Leeds.*

Written mainly to meet the needs of first-year University students and of candidates preparing for examinations in connection with Banking, Accountancy, and other business professions. It is divided into four books: Preliminary Survey; Economic Organization; Economic Valuation; Employment and the Standard of Living.

In demy 8vo, cloth gilt, 453 pp. 7s. 6d. net.

## ECONOMICS OF THE INDUSTRIAL SYSTEM

By H. A. SILVERMAN, B.A., *Director of Extramural Studies, University College, Leicester.*

This work comprises a comprehensive treatment of economic theory, specially intended for the use of advanced economics classes and of students of adult tutorial organizations.

In demy 8vo, cloth gilt, 348 pp. 7s. 6d. net.

## BUSINESS FORECASTING

**And Its Practical Application.**

By WILLIAM WALLACE, M.Com. (Lond.), with a Foreword by W. T. LAYTON, C.H., *Editor of "The Economist."*

Explains for manufacturers and traders the most practical methods of forecasting business conditions and of interpreting the cyclical movements of trade.

In demy 8vo, cloth gilt, 140 pp. 7s. 6d. net. Third Edition.

## MODERN FINANCE AND INDUSTRY

**A Plain Account of the British Financial System and of its Functions in Relation to Industry and Commerce.**

By A. S. WADE, *City Editor of the "Evening Standard."*

Power of Finance—Centre of the City—Banks and Banking—Banks and Savings—Money Market Processes—Finance and Trade—Currency and Foreign Exchange—Finance of the State—Treasury's Operations—Stock Exchange—Type of Securities—Commodity Markets—Glossary—Index.

In demy 8vo, cloth gilt, 136 pp. 5s. net. Second Edition.

## THE THEORY AND PRACTICE OF FINANCE

By W. COLLIN BROOKS, *Assistant Editor of the "Financial News."*

A comprehensive textbook of monetary theory and financial practice, specially written for candidates preparing for Accountancy, Banking, Secretarial, Insurance, and other Professional Examinations.

In demy 8vo, cloth gilt, 452 pp. 10s. 6d. net. Second Edition.

## INDUSTRIAL COMBINATION IN ENGLAND

By PATRICK FITZGERALD, D.Sc. (Econ.).

Recommended to economic students as a supplementary textbook fully covering one phase of economic history in recent times.

In demy 8vo, cloth gilt, 248 pp. 10s. 6d. Second Edition.

- FUNDAMENTALS OF PROCESS COST ACCOUNTING, THE.** By L. A. WIGHT, A.C.W.A. In demy 8vo, cloth gilt, 112 pp 7s. 6d. net
- DOCUMENTS OF COMMERCE.** By F. A. WILLMAN, Cert. A.I.B. In demy 8vo, cloth gilt, 288 pp. 7s. 6d. net.
- COSTS FOR MANUFACTURERS.** By C. SMITH. In demy 8vo, cloth gilt, 100 pp. 5s. net.
- STANDARD COSTS.** By H. E. KEARSEY, A.C.W.A., A.M.I.A.E. In demy 8vo, cloth gilt, 188 pp. 7s. 6d. net.
- PRIMER OF COSTING.** By R. J. H. RYALL. In demy 8vo, cloth, 115 pp. 5s. net.
- DICTIONARY OF COSTING.** By R. J. H. RYALL. In demy 8vo, cloth gilt, 390 pp. 10s. 6d. net.
- THEORY AND PRACTICE OF COSTING.** By E. W. NEWMAN, F.C.A. In demy 8vo, cloth gilt, 203 pp. 8s. 6d. net.
- COSTING AND PRICE FIXING.** By J. M. SCOTT MAXWELL, B.Sc., F.C.W.A. In demy 8vo, cloth gilt, 223 pp. 6s. net. Second Edition.
- ESTIMATING.** By T. H. HARGRAVE. Second Edition. In demy 8vo, cloth gilt, 128 pp. 7s. 6d. net.
- COSTING ORGANIZATION FOR ENGINEERS.** By E. W. WORKMAN, F.L.A.A., A.C.W.A. Second Edition. In demy 8vo, cloth, 96 pp. 3s. 6d. net.
- MANUAL OF COST ACCOUNTS.** By JULIUS LUNT, F.C.A. (Hons.), F.C.I.S., F.C.W.A. and ARTHUR H. RIPLEY, F.C.W.A. Sixth Edition. In demy 8vo, cloth gilt, 238 pp. 8s. 6d. net.
- MANUFACTURING BOOK-KEEPING AND COSTS.** By GEORGE JOHNSON, F.C.I.S. In demy 8vo, cloth gilt, 120 pp. 3s. 6d. net.
- COMPANY ACCOUNTS.** By ARTHUR COLES. Fourth Edition. Revised by W. CECIL WOOD, A.C.I.S. In demy 8vo, cloth gilt, 408 pp. 7s. 6d. net.
- HOLDING COMPANIES.** By A. J. SIMONS, A.C.A. (Hons.). In demy 8vo, cloth gilt, 198 pp. 10s. 6d. net.
- DICTIONARY OF BOOK-KEEPING.** By R. J. PORTERS, F.C.R.A. Third Edition. In demy 8vo, 812 pp. 7s. 6d. net.
- INVESTIGATIONS: ACCOUNTANCY AND FINANCIAL.** By J. H. BURTON. In demy 8vo, cloth, 172 pp. 5s. net.
- SECRETARIAL BOOK-KEEPING AND ACCOUNTS.** By H. E. COLESWORTHY, A.S.A.A. In demy 8vo, cloth gilt, 364 pp. 7s. 6d. net.
- THE ACCOUNTANT'S DICTIONARY.** Edited by F. W. PIXLEY, F.C.A., *Barrister-at-Law*. Third Edition. In two vols., crown 4to, half leather, 1100 pp. £3 7s. 6d. net.
- BOOK-KEEPING AND ACCOUNTS.** By E. E. SPICER, F.C.A., and E. C. PEGLER, F.C.A. Eighth Edition. In crown 4to, cloth gilt, 507 pp. 20s. net.
- MODERN METHODS OF STOCK CONTROL.** By N. GERARD SMITH, M.I.P.E. In crown 8vo, 100 pp. 3s. 6d. net.

- THE ACCOUNTS OF EXECUTORS, ADMINISTRATORS, AND TRUSTEES.** By WILLIAM B. PHILLIPS, F.C.A., A.C.I.S. Sixth Edition. In demy 8vo, cloth gilt, 176 pp. 5s. net.
- APPORTIONMENT IN RELATION TO TRUST ACCOUNTS.** By ALAN F. CHICK, *Incorporated Accountant*. In demy 8vo, cloth, 160 pp. 6s. net.
- BUSINESS BALANCE SHEETS.** By F. R. STEAD. In demy 8vo, cloth gilt, 160 pp. 10s. 6d. net.
- BALANCE SHEETS: HOW TO READ AND UNDERSTAND THEM.** By PHILIP TOVEY, F.C.I.S. In demy 8vo, cloth, 110 pp. 3s. 6d. net.
- MODERN METHODS OF BOOK-KEEPING.** By R. H. EPPS, *Chartered Accountant*. In demy 8vo, cloth, 343 pp. 4s. net.
- A COURSE IN BOOK-KEEPING.** By R. W. HOLLAND, O.B.E., M.A., M.Sc., LL.D. In demy 8vo, cloth, 290 pp. 4s. net.
- DEPRECIATION AND WASTING ASSETS, and Their Treatment in Computing Annual Profit and Loss.** By P. D. LEAKE, F.C.A. Fourth Edition. In demy 8vo, cloth gilt, 257 pp. 15s. net.
- COMMERCIAL GOODWILL.** Its History, Value, and Treatment in Accounts. By P. D. LEAKE. Second Edition. In demy 8vo, cloth gilt, 284 pp. 15s. net.
- SINKING FUNDS, RESERVE FUNDS, AND DEPRECIATION.** By J. H. BURTON, *Incorporated Accountant*. Second Edition. In demy 8vo, 140 pp. 3s. 6d. net.
- CONSIGNMENTS, ACCOUNT SALES, AND ACCOUNTS CURRENT.** By E. J. HAMMOND. In demy 8vo, cloth, 160 pp. 5s. net.
- FOREIGN CURRENCIES IN ACCOUNTS.** By A. E. HALLS. In demy 8vo, cloth, 156 pp. 5s. net.
- CURRENCY ACCOUNTS IN STERLING BOOKS.** By C. RALPH CURTIS, *Fellow of the Institute of Bankers*. In demy 8vo, cloth gilt, 120 pp. 5s. net.
- BRANCH ACCOUNTS.** By P. TAGGART, A.S.A.A. In demy 8vo, 87 pp. 3s. net.
- BUILDERS' ACCOUNTS AND COSTS.** By ROBERT G. LEGGE. In demy 8vo, cloth gilt, 130 pp. 3s. 6d. net.
- BUSINESS ACCOUNTS AND FINANCE.** By W. CAMPBELL, *Chartered Secretary*. In foolscap 8vo, leatherette, 64 pp. 1s. net.

## COMMERCE

- THE THEORY AND PRACTICE OF COMMERCE.** Edited by G. K. BUCKNALL, A.C.I.S., assisted by Specialist Contributors. Third Edition. In demy 8vo, cloth gilt, 612 pp. 7s. 6d. net.
- QUESTIONS AND ANSWERS ON BUSINESS PRACTICE.** By E. J. HAMMOND. In demy 8vo, cloth, 140 pp. 5s. net.
- THE PRINCIPLES AND PRACTICE OF COMMERCE.** By JAMES STEPHENSON, M.A., M.Com., D.Sc. In demy 8vo, cloth gilt, 650 pp. 8s. 6d. net.
- THE PRINCIPLES AND PRACTICE OF COMMERCIAL CORRESPONDENCE.** By JAMES STEPHENSON, M.A. M.Com., D.Sc. In demy 8vo, 308 pp. 7s. 6d. net.

- THE PRINCIPLES OF COMMERCIAL HISTORY.** By JAMES STEPHENSON, M.A., M.Com., D.Sc. In demy 8vo, 279 pp. 7s. 6d. net.
- THE PRINCIPLES AND PRACTICE OF COMMERCIAL ARITHMETIC.** By P. W. NORRIS, M.A., B.Sc. (Hons.). Second Edition. In demy 8vo, 440 pp. 7s. 6d. net.
- MODERN BUSINESS AND ITS METHODS.** By W. CAMPBELL, *Chartered Secretary*. In crown 8vo, cloth, 493 pp. 7s. 6d. net.
- THE PRINCIPLES OF BUSINESS.** By C. W. GERSTENBERG, Ph.B., J.D. Fourth Edition. Size 5½ in. by 8 in., cloth, 821 pp. 16s. net.
- WHOLESALE AND RETAIL TRADE.** By WILLIAM CAMPBELL, *Chartered Secretary*. In demy 8vo, cloth gilt, 248 pp. 5s. net.
- THE BEDROCK OF MODERN BUSINESS.** Edited by JAMES STEPHENSON, M.A., M.Com., D.Sc. In medium 8vo, cloth gilt, 840 pp. 7s. 6d. net.

## INSURANCE

- INSURANCE.** By T. E. YOUNG, B.A., F.I.A., F.R.A.S. Fourth Edition, Revised and Enlarged. In demy 8vo, cloth gilt, 460 pp. 10s. 6d. net.
- INSURANCE OFFICE ORGANIZATION AND ROUTINE.** By J. B. WELSON, LL.M., F.C.I.I., F.C.I.S., of *Gray's Inn, Barrister-at-Law*, and F. H. SHERRIFF, F.I.A. Second Edition. In demy 8vo, cloth gilt, 292 pp. 7s. 6d. net.
- THE PRINCIPLES OF COMPOUND INTEREST.** By H. H. EDWARDS, F.I.A. In demy 8vo, cloth gilt, 135 pp. 5s. net.
- THE ELEMENTS OF ACTUARIAL SCIENCE.** By R. E. UNDERWOOD, M.B.E., F.I.A. Second Edition. In crown 8vo, cloth, 164 pp. 5s. net.
- BUILDING CONSTRUCTION, PLAN DRAWING, AND SURVEYING IN RELATION TO FIRE INSURANCE.** By D. W. WOOD, M.B.E. In demy 8vo, cloth gilt, 164 pp. 6s. net.
- AVERAGE CLAUSES AND FIRE-LOSS APPORTIONMENTS.** By E. H. MINNION, F.C.I.I. In demy 8vo, cloth gilt, 236 pp. 8s. 6d. net.
- THE PRINCIPLES AND PRACTICE OF FIRE INSURANCE.** By FRANK GODWIN. Third Edition. In demy 8vo, cloth gilt, 150 pp. 5s. net.
- THE LAW OF FIRE INSURANCE.** By JOHN ROWLATT, B.A., *Barrister-at-Law*. In demy 8vo, cloth gilt, 208 pp. 7s. 6d. net.
- THE COMMON HAZARDS OF FIRE INSURANCE.** By W. G. KUBLER RIDLEY, F.C.I.I. Second Edition. In demy 8vo, cloth gilt, 92 pp. 5s. net.
- FIRE POLICY DRAFTING AND ENDORSEMENTS.** By W. C. H. DARLEY. In demy 8vo, cloth gilt, 204 pp. 7s. 6d. net.
- FIRE EXTINGUISHMENT AND FIRE ALARM SYSTEMS.** By R. NORTHWOOD. In demy 8vo, cloth gilt, 224 pp. 7s. 6d. net.
- DICTIONARY OF FIRE INSURANCE.** Edited by B. C. REMINGTON, F.C.I.I. In crown 4to, half-leather gilt, 480 pp. 30s. net.
- THE LAW AND PRACTICE AS TO FIDELITY GUARANTEES.** By C. EVANS, *Barrister-at-Law*, and F. H. JONES. Second Edition. In demy 8vo, cloth gilt, 167 pp. 6s. net.

- INSURANCE AS A CAREER.** By F. H. SHERRIFF, F.I.A. In crown 8vo, cloth, 196 pp. 3s. 6d. net.
- INSURANCE OF PUBLIC LIABILITY RISKS.** By S. V. KIRKPATRICK, F.C.I.I. Second Edition. In demy 8vo, cloth gilt, 152 pp. 5s. net.
- BURGLARY RISKS.** By E. H. GROUT, B.Sc., A.C.I.I. In demy 8vo, cloth gilt, 326 pp. 10s. 6d. net.
- LAW OF NEGLIGENCE.** By J. B. WELSON, LL.M., F.C.I.I., F.C.I.S. In demy 8vo, cloth, 122 pp. 5s. net.
- WORKMEN'S COMPENSATION INSURANCE.** By C. E. GOLDING, LL.D., F.C.I.I., F.S.S. Second Edition. In demy 8vo, cloth, 112 pp. 5s. net.
- THE MARINE INSURANCE OF GOODS.** By F. W. S. POOLE. Second Edition. In demy 8vo, cloth gilt, 440 pp. 15s. net.
- GUIDE TO MARINE INSURANCE.** By H. KEATE. Seventh Edition. In crown 8vo, cloth, 255 pp. 3s. 6d. net.
- GUIDE TO LIFE ASSURANCE.** By S. G. LEIGH, *Fellow of the Institute of Actuaries*. Third Edition. In crown 8vo, cloth, 192 pp. 5s. net.
- LIFE ASSURANCE FROM PROPOSAL TO POLICY.** By H. HOSKING TAYLER, F.I.A., A.C.I.I., and V. W. TYLER, F.I.A. In demy 8vo, cloth gilt, 198 pp. 6s. net.
- DICTIONARY OF LIFE ASSURANCE.** Edited by G. W. RICHMOND, F.I.A., and F. H. SHERRIFF, F.I.A. In crown 4to, half-leather gilt, 598 pp. 40s. net.
- THE PRINCIPLES AND PRACTICE OF PERSONAL ACCIDENT, DISEASE, AND SICKNESS INSURANCE.** By J. B. WELSON, LL.M. In demy 8vo, cloth gilt, 133 pp. 5s. net.
- DICTIONARY OF ACCIDENT INSURANCE.** Edited by J. B. WELSON, LL.M., F.C.I.I., F.C.I.S. In crown 4to, half-leather gilt, 814 pp. 60s. net.
- THE SURVEYING OF ACCIDENT RISKS.** By J. B. WELSON, F.C.I.I., and FENWICK J. WOODROOF, A.C.I.I. In demy 8vo, cloth gilt, 177 pp. 5s. net.
- LAW OF ACCIDENT AND CONTINGENCY INSURANCE.** By F. H. JONES, *Solicitor*. In demy 8vo, cloth gilt, 290 pp. 7s. 6d. net.
- PHYSIOLOGY AND ANATOMY.** By H. GARDINER, M.S. (Lond.), F.R.C.S. (Eng.). In demy 8vo, cloth gilt, 428 pp. 10s. 6d. net.
- LAW RELATING TO INSURANCE AGENTS AND BROKERS.** By J. B. WELSON, LL.M., F.C.I.I., F.C.I.S. In demy 8vo, cloth gilt, 114 pp. 5s. net.
- TALKS ON INSURANCE LAW.** By Jos. A. WATSON, LL.B., B.Sc. In crown 8vo, cloth, 140 pp. 3s. 6d. net.
- PENSION AND SUPERANNUATION FUNDS. Their Formation and Administration Explained.** By BERNARD ROBERTSON, F.I.A., and H. SAMUELS, *Barrister-at-Law*. Second Edition. In demy 8vo, cloth gilt, 158 pp. 5s. net.
- PENSION, ENDOWMENT, LIFE ASSURANCE, AND OTHER SCHEMES FOR COMMERCIAL COMPANIES.** By HAROLD DOUGHARTY, F.C.I.I. Second Edition. In demy 8vo, cloth gilt, 144 pp. 6s. net.
- COMMERCIAL CREDIT RISKS.** By A. H. SWAIN. In demy 8vo, 148 pp. 5s. net.

- THE PRINCIPLES AND PRACTICE OF ACCIDENT INSURANCE.** By G. E. BANFIELD, A.C.I.I., of the Middle Temple, Barrister-at-Law. In demy 8vo, cloth gilt, 200 pp. 6s. net.
- INSURANCE OF PROFITS.** By A. G. MACKEN. Second Edition. In demy 8vo, cloth gilt, 136 pp. 5s. net.
- THE SUCCESSFUL INSURANCE AGENT.** By J. J. BISGOOD, B.A. In crown 8vo, cloth, 135 pp. 2s. 6d. net. Second Edition.
- THE BUSINESS MAN'S GUIDE TO INSURANCE.** By A. PHILPOTT. In crown 8vo, cloth, 183 pp. 3s. 6d. net.

## ORGANIZATION AND MANAGEMENT

- COMMERCIAL CREDITS AND ACCOUNTS COLLECTION.** By CUTHBERT GREIG. In demy 8vo, cloth gilt, 338 pp. 10s. 6d. net.
- OFFICE ORGANIZATION AND MANAGEMENT.** Including Secretarial Work. By LAWRENCE R. DICKSEE, M.Com., F.C.A., and Sir H. E. BLAIN, C.B.E. Ninth Edition, Revised. In demy 8vo, cloth gilt, 300 pp. 7s. 6d. net.
- FILING SYSTEMS.** By EDWARD A. COPE. In crown 8vo, cloth gilt, 200 pp. 3s. 6d. net.
- HIRE PURCHASE ORGANIZATION AND MANAGEMENT.** By V. R. Fox-Smith, M.C., A.I.S.A. In demy 8vo, cloth gilt, 272 pp. 7s. 6d. net.
- HIRE-PURCHASE TRADING.** By CUNLIFFE L. BOLLING. In demy 8vo, cloth gilt, 276 pp. 10s. 6d. net. Second Edition.
- HIRE PURCHASE.** By HAROLD W. ELEY. With a Section on Hire-Purchase Accounts, by S. HOWARD WITHEY. In foolscap 8vo, leatherette, 64 pp. 1s. net.
- MAIL ORDER AND INSTALMENT TRADING.** By ALBERT E. BULL. In demy 8vo, cloth gilt, 356 pp. 7s. 6d. net.
- MAIL ORDER ORGANIZATION.** By P. E. WILSON. In crown 8vo, cloth gilt, 127 pp. 3s. 6d. net.
- SOLICITOR'S OFFICE ORGANIZATION, MANAGEMENT, AND ACCOUNTS.** By E. A. COPE and H. W. H. ROBINS. In demy 8vo, cloth gilt, 176 pp., with numerous forms. 6s. net.
- GROCERY BUSINESS ORGANIZATION, MANAGEMENT, AND ACCOUNTS.** By C. L. T. BEECHING, O.B.E., F.G.I., *Secretary and Fellow of the Institute of Certificated Grocers.* Fourth Edition. In demy 8vo, cloth gilt, 254 pp. 7s. 6d. net.
- BUSINESS LEADERSHIP.** Edited by HENRY C. METCALF, Ph.D. In demy 8vo, cloth gilt, 368 pp. 10s. 6d. net.
- COMMERCIAL MANAGEMENT.** By CUNLIFFE L. BOLLING. Second Edition. In demy 8vo, cloth gilt, 435 pp. 10s. 6d. net.
- BUSINESS MANAGEMENT.** By PERCIVAL WHITE. In demy 8vo, cloth gilt, 740 pp. 15s. net.
- BUILDERS' BUSINESS MANAGEMENT.** By J. H. BENNETTS, A.I.O.B. In demy 8vo, cloth gilt, 240 pp. 10s. 6d. net.
- ORGANIZATION AND MANAGEMENT IN THE FLOUR-MILLING INDUSTRY.** By E. LEIGH PEARSON, M.Sc.(Tech.), A.I.C. In demy 8vo, cloth gilt, 254 pp. 12s. 6d. net.

- ORGANIZATION, MANAGEMENT, AND TECHNOLOGY IN THE MANUFACTURE OF MEN'S CLOTHING.** By MARTIN E. POPKIN. In medium 8vo, cloth gilt, 416 pp. 25s. net.
- BUSINESS ORGANIZATION AND ROUTINE.** By W. CAMPBELL, *Chartered Secretary*. In foolscap 8vo, leatherette, 64 pp. 1s. net.
- HOTEL ORGANIZATION, MANAGEMENT, AND ACCOUNTANCY.** By G. DE BONI and F. F. SHARLES. Second Edition, Revised by F. F. SHARLES. In demy 8vo, cloth gilt, 215 pp. 10s. 6d. net.
- CLUBS AND THEIR MANAGEMENT.** By F. W. PIXLEY. Second Edition. In demy 8vo, cloth. 252 pp. 10s. 6d. net.
- RETAIL SHOP: ITS ORGANIZATION, MANAGEMENT, AND ROUTINE.** By C. L. T. BEECHING, O.B.E., F.G.I. In foolscap 8vo, leatherette, 64 pp. 1s. net.
- THE STOCKBROKER'S OFFICE. Organization, Management, and Accounts.** By JULIUS E. DAY. In demy 8vo, cloth gilt, 250 pp. 7s. 6d. net.
- SELF-ORGANIZATION FOR BUSINESS MEN.** By MORLEY DAINOW, B.Sc. (Hons.). Third Edition. In demy 8vo, cloth gilt, 154 pp. 5s. net.
- THE ORGANIZATION OF A SMALL BUSINESS.** By WM. A. SMITH, A.C.W.A. Second Edition. In crown 8vo, cloth, 120 pp. 2s. 6d. net.
- MULTIPLE SHOP ORGANIZATION.** By A. E. HAMMOND. In demy 8vo, cloth, 152 pp. 6s. net.
- MODERN OFFICE MANAGEMENT.** By H. W. SIMPSON, F.C.I.S. In demy 8vo, cloth gilt, 330 pp. 7s. 6d. net.

## INDUSTRIAL ADMINISTRATION

- THE CAUSES OF ACCIDENTS.** By ERIC FARMER, M.A. In crown 8vo, 96 pp. 3s. 6d. net.
- THE PROBLEM OF INCENTIVES IN INDUSTRY.** By G. H. MILES, D.Sc. In crown 8vo, 60 pp. 3s. 6d. net.
- MUSCULAR WORK, FATIGUE, AND RECOVERY.** By G. P. CROWDEN, M.Sc., M.R.C.S., L.R.C.P. In crown 8vo, 80 pp. 3s. 6d. net.
- BUSINESS RATIONALIZATION.** By CHARLES S. MYERS, C.B.E., M.A., D.Sc., F.R.S. In crown 8vo, cloth, 84 pp. 3s. 6d. net.
- INDUSTRIAL PSYCHOLOGY IN PRACTICE.** By HENRY J. WELCH, and G. H. MILES, D.Sc. In demy 8vo, cloth gilt, 262 pp. 7s. 6d. net.
- THE PHILOSOPHY OF MANAGEMENT.** By OLIVER SHELDON, B.A. In demy 8vo, cloth gilt, 310 pp. 10s. 6d. net.
- PRINCIPLES OF INDUSTRIAL MANAGEMENT.** By E. A. ALLCUT, M.Sc. (Eng.) M.E. In demy 8vo, cloth gilt, 232 pp. 10s. 6d. net.
- LABOUR PROBLEMS.** By GORDON S. WATKINS, Ph.D. In demy 8vo, cloth gilt, 742 pp. 15s. net.
- LABOUR ORGANIZATION.** By J. CUNNISON, M.A. In demy 8vo, cloth gilt, 280 pp. 7s. 6d. net.
- NEW LEADERSHIP IN INDUSTRY.** By SAM. A. LEWISOHN. Second Edition. In demy 8vo, cloth gilt, 224 pp. 7s. 6d. net.

- OUTLINES OF INDUSTRIAL ADMINISTRATION.** By R. O. HERFORD, H. T. HILDAGE, and H. G. JENKINS. In demy 8vo, cloth gilt, 124 pp. 6s. net.
- PRODUCTION PLANNING.** By CLIFTON REYNOLDS. In demy 8vo, cloth gilt, 246 pp. 10s. 6d. net.
- ENGINEERING FACTORY SUPPLIES.** By W. J. HISCOX. In demy 8vo, cloth gilt, 184 pp. 5s. net.
- FACTORY LAY-OUT, PLANNING, AND PROGRESS.** By W. J. HISCOX. In demy 8vo, cloth gilt, 200 pp. 7s. 6d. net.
- FACTORY ADMINISTRATION IN PRACTICE.** By W. J. HISCOX. In demy 8vo, cloth gilt, 224 pp. 8s. 6d. net.
- FACTORY ORGANIZATION.** By C. H. NORTHCOTT, M.A., Ph.D.; O. SHELDON, B.A.; J. W. WARDROPPER, B.Sc., B.Com., A.C.W.A.; and L. URWICK, M.A. In demy 8vo, cloth gilt, 264 pp. 7s. 6d. net.
- MANAGEMENT.** By J. LEE, C.B.E., M.A., M.Com.Sc. In demy 8vo, cloth gilt, 133 pp. 5s. net.
- AN INTRODUCTION TO INDUSTRIAL ADMINISTRATION.** By JOHN LEE, C.B.E., M.A., M.Com.Sc. In demy 8vo, cloth gilt, 200 pp. 5s. net.
- THE PRINCIPLES OF INDUSTRIAL WELFARE.** By JOHN LEE, C.B.E., M.A., M.Com.Sc. In demy 8vo, cloth, 103 pp. 5s. net.
- THE EVOLUTION OF INDUSTRIAL ORGANIZATION.** By B. F. SHIELDS, M.A., *Professor of Commerce and Dean of the Faculty of Commerce, University College, Dublin.* Second Edition. In demy 8vo, cloth gilt, 429 pp. 10s. 6d. net.
- WELFARE WORK IN INDUSTRY.** By members of the Institute of Industrial Welfare Workers. Edited by ELEANOR T. KELLY. In demy 8vo, cloth, 128 pp. 5s. net.
- INTRODUCTION TO THE PRINCIPLES OF INDUSTRIAL ADMINISTRATION.** By A. P. M. FLEMING and H. J. BROCKLEHURST, M.Eng., A.M.I.E.E. In demy 8vo, 140 pp. 3s. 6d. net.
- SHARING PROFITS WITH EMPLOYEES.** By J. A. BOWIE, M.A., D.Litt. Second Edition. In demy 8vo, cloth gilt, 230 pp. 10s. 6d. net.
- RATIONALIZATION.** By J. A. BOWIE. In demy 8vo, 36 pp. 1s. net.
- PRACTICAL ADVICE TO INVENTORS AND PATENTEES.** By C. M. LINLEY. In crown 8vo, cloth, 134 pp. 3s. 6d. net.
- PATENTS FOR INVENTIONS.** By J. EWART WALKER, B.A., *Barrister-at-Law*, and R. BRUCE FOSTER, B.Sc., *Barrister-at-Law.* In demy 8vo, cloth gilt, 390 pp. 21s. net.



## TRANSPORT

- COMMERCIAL MOTOR ROAD TRANSPORT.** By L. M. MEYRICK-JONES. In demy 8vo, cloth gilt, 380 pp. 15s. net.
- PRACTICAL TRANSPORT MANAGEMENT.** By ANDREW HASTIE. In demy 8vo, cloth gilt, 190 pp. 10s. 6d. net.
- INDUSTRIAL TRAFFIC MANAGEMENT.** By GEO. B. LISSENDEN, M.Inst.T. Third Edition. In demy 8vo, cloth gilt, 422 pp. 25s. net.
- COMMERCIAL AIR TRANSPORT.** By LIEUT.-COL. IVO EDWARDS, C.M.G., and F. TYMMS, A.F.R.Ae.S. In demy 8vo, cloth, 178 pp. 7s. 6d. net.
- HOW TO MAKE THE BRITISH RAILWAYS PAY.** By M. F. FARRAR. In demy 8vo, cloth gilt, 96 pp. 2s. 6d. net.
- RAILWAY RATES, PRINCIPLES, AND PROBLEMS.** By PHILIP BURTT, M.Inst.T. In demy 8vo, cloth gilt, 174 pp. 6s. net.
- RAILWAY STATISTICS: THEIR COMPILATION AND USE.** By A. E. KIRKUS, O.B.E., M.Inst.T. In demy 8vo, cloth gilt, 146 pp. 5s. net.
- MODERN RAILWAY OPERATION.** By D. R. LAMB, M.Inst.T. In demy 8vo, cloth gilt, 183 pp. 7s. 6d. net.
- RAILWAY ELECTRIFICATION AND TRAFFIC PROBLEMS.** By PHILIP BURTT, M.Inst.T. In demy 8vo, cloth gilt, 210 pp. 10s. 6d. net.
- THE HISTORY AND DEVELOPMENT OF ROAD TRANSPORT.** By J. PATERSON, M.C., M.Inst.T. In demy 8vo, cloth gilt, 128 pp. 8s. net.
- THE HISTORY AND ECONOMICS OF TRANSPORT.** By ADAM W. KIRKALDY, M.A., B.Litt. (Oxon), M.Com. (B'ham.), and ALFRED DUDLEY EVANS. Fifth Edition. In demy 8vo, cloth gilt, 468 pp. 16s. net.
- THE RIGHTS AND DUTIES OF TRANSPORT UNDERTAKINGS.** By H. BARRS DAVIES, M.A., *Solicitor*, and F. M. LANDAU, LL.B., *Barrister-at-Law*. Second Edition. In demy 8vo, cloth, 306 pp. 10s. 6d. net.
- ROAD MAKING AND ROAD USING.** By T. SALKIELD, M.Inst.C.E., M.Inst.T. In demy 8vo, cloth gilt, 180 pp. 7s. 6d. net.
- PORT ECONOMICS.** By B. CUNNINGHAM, D.Sc., B.E., F.R.S.E., M.Inst.C.E. In demy 8vo, cloth gilt, 144 pp. 6s. net.
- MODERN DOCK OPERATION.** By D. ROSS-JOHNSON, C.B.E., V.D., M.Inst.T. In demy 8vo, cloth gilt, 113 pp., illustrated. 6s. net.
- ROAD TRANSPORT OPERATION—PASSENGER.** By R. STUART PILCHER, F.R.S.E., M.Inst.T. In demy 8vo, cloth gilt, 220 pp. 10s. 6d. net.
- CANALS AND INLAND WATERWAYS.** By GEORGE CADBURY, *Managing Director of Messrs. Cadbury Bros., Ltd., Chairman of the Severn and Canal Carrying Co., Ltd.*; and S. P. DOBBS, B.A. In demy 8vo, cloth gilt, 176 pp. 7s. 6d. net.

## SHIPPING

- SHIPPING OFFICE ORGANIZATION, MANAGEMENT, AND ACCOUNTS** By ALFRED CALVERT. In demy 8vo, cloth gilt, 203 pp. 6s. net.
- THE SHIPPING WORLD, Afloat and Ashore.** Compiled and Edited by J. A. TODD, M.A., B.L. In crown 8vo, cloth gilt, 306 pp. 7s. 6d. net.
- SHIPPING TERMS AND PHRASES.** Compiled by JAMES A. DUNNAGE, F.S.S., F.C.I., A.M.Inst.T. In crown 8vo, cloth, 102 pp. 2s. 6d. net.

- THE EXPORTER'S HANDBOOK AND GLOSSARY.** By F. M. DUDENEY. In demy 8vo, cloth gilt, 254 pp. 7s. 6d. net.
- THE IMPORTER'S HANDBOOK.** By J. A. DUNNAGE. Second Edition. In demy 8vo, cloth gilt, 382 pp. 10s. 6d. net.
- HOW TO EXPORT GOODS.** By F. M. DUDENEY. In crown 8vo, cloth, 112 pp. 2s. net.
- MANUAL OF EXPORTING.** By J. A. DUNNAGE. In demy 8vo, cloth gilt, 392 pp. 10s. 6d. net.
- HOW TO IMPORT GOODS.** By J. A. DUNNAGE. Third Edition. In crown 8vo, cloth, 128 pp. 2s. 6d. net.
- CASE AND FREIGHT COSTS.** By A. W. E. CROSFIELD. In crown 8vo, cloth, 62 pp. 2s. net.
- INTRODUCTION TO SHIPBROKING.** By C. D. MACMURRAY and M. M. CREE. Second Edition. In demy 8vo, cloth, 115 pp. 3s. 6d. net.
- SHIPPING AND SHIPBROKING.** By C. D. MACMURRAY and M. M. CREE. Second Edition. In demy 8vo, cloth gilt, 543 pp. 15s. net.
- SHIPPING BUSINESS METHODS.** By R. B. PAUL. Second Edition. In demy 8vo, cloth gilt, 104 pp. 5s. net.
- SHIPPING FINANCE AND ACCOUNTS.** By R. B. PAUL. In demy 8vo, cloth gilt, 74 pp. 2s. 6d. net.
- SHIPPING PRACTICE.** By E. F. STEVENS. In demy 8vo, cloth gilt, 180 pp. 7s. 6d. net.

## BANKING AND FINANCE

- ARBITRAGE IN BULLION, COIN, BILLS, STOCKS, SHARES, AND OPTIONS.** By HENRY DEUTSCH, Ph.D. Third Edition. Revised by OTTO WEBER. In foolscap 4to, cloth gilt, 384 pp. 42s. net.
- THE MONEY MACHINE.** By FRANCIS WHITMORE, B.Com. In demy 8vo, cloth gilt, 144 pp. 5s. net.
- MONEY, EXCHANGE, AND BANKING, in their Practical, Theoretical, and Legal Aspects.** By H. T. EASTON, *Associate of the Institute of Bankers*. Third Edition. In demy 8vo, cloth gilt, 331 pp. 6s. net.
- THE THEORY AND PRINCIPLES OF CENTRAL BANKING.** By WILLIAM A. SHAW, Litt.D. In demy 8vo, cloth gilt, 262 pp. 12s. 6d. net.
- AN OUTLINE OF ENGLISH BANKING ADMINISTRATION.** By JOSEPH SYKES, B.A. (Hons.) In crown 8vo, cloth, 96 pp. 2s. 6d. net.
- ENGLISH BANKING METHODS.** By LEONARD LE MARCHANT MINTY, Ph.D., B.Sc. (Econ.), B.Com., LL.B. Fourth Edition. In demy 8vo, cloth gilt, 552 pp. 15s. net.
- BANKING FOR ADVANCED STUDENTS.** By PERCY G. H. WOODRUFF Cert. A.I.B. In demy 8vo, cloth, 248 pp. 7s. 6d. net.
- THEORY AND PRACTICE OF FINANCE.** By W. COLLIN BROOKS. Third Edition. In demy 8vo, 450 pp. 10s. 6d. net.

- MODERN FINANCE AND INDUSTRY.** By A. S. WADE. Second Edition. In demy 8vo, cloth gilt, 136 pp. 5s. net.
- THE ARITHMETIC AND PRACTICE OF THE FOREIGN EXCHANGES.** By A. G. SUGG, Cert. A.I.B. In demy 8vo, cloth gilt, 144 pp. 3s. 6d. net. Second Edition.
- FOREIGN BANKING SYSTEMS.** Edited by H. P. WILLIS and B. H. BECKHART. In demy 8vo, cloth, 1300 pp. 21s. net.
- FOREIGN EXCHANGE AND FOREIGN BILLS IN THEORY AND IN PRACTICE.** By W. F. SPALDING, *Fellow and Member of the Council of the London Institute of Bankers.* Eighth Edition. In demy 8vo, 320 pp. 7s. 6d. net.
- EASTERN EXCHANGE, CURRENCY, AND FINANCE.** By W. F. SPALDING. Fourth Edition. In demy 8vo, cloth, 485 pp., illustrated. 15s. net.
- FOREIGN EXCHANGE, A PRIMER OF.** By W. F. SPALDING. Third Edition. In demy 8vo, cloth, 124 pp. 3s. 6d. net.
- THE FINANCE OF FOREIGN TRADE.** By W. F. SPALDING. In demy 8vo, cloth gilt, 190 pp. 7s. 6d. net.
- DICTIONARY OF THE WORLD'S CURRENCIES AND FOREIGN EXCHANGES.** By W. F. SPALDING. In crown 4to, half-leather gilt, 208 pp. 30s. net.
- BANKERS' CREDITS.** By W. F. SPALDING. Third Edition. In demy 8vo, cloth gilt, 170 pp. 10s. 6d. net.
- THE FUNCTIONS OF MONEY.** By W. F. SPALDING. In demy 8vo, cloth gilt, 179 pp. 7s. 6d. net.
- THE LONDON MONEY MARKET.** By W. F. SPALDING. Fifth Edition. In demy 8vo, cloth gilt, 264 pp. 10s. 6d. net.
- THE BANKER'S PLACE IN COMMERCE.** By W. F. SPALDING. In demy 8vo, cloth, 80 pp. 3s. 6d. net.
- THE DISCOUNT MARKET IN LONDON. Its Organization and Recent Development.** By H. W. GREENGRASS. Second Edition. In demy 8vo, cloth gilt, 194 pp. 6s. net.
- PRINCIPLES OF BANKING, CURRENCY, AND FOREIGN EXCHANGE.** By R. H. KING, *Certificated Associate of the Institute of Bankers.* In crown 8vo, cloth gilt, 180 pp. 5s. net.
- AN INTRODUCTION TO THE PRACTICE OF FOREIGN EXCHANGE.** By H. E. EVITT, *Fellow of the Institute of Bankers, etc.* In demy 8vo, cloth, 112 pp. 3s. 6d. net.
- THE SECURITIES CLERK IN A BRANCH BANK.** By F. J. LEWCOCK, Cert. A.I.B., A.C.I.S. In demy 8vo, cloth gilt, 228 pp. 7s. 6d. net.
- BANK ORGANIZATION, MANAGEMENT, AND ACCOUNTS.** By J. F. DAVIS, D.Lit., M.A., LL.B. Second Edition. In demy 8vo, cloth gilt, 175 pp. 6s. net.
- CHEQUES: THEIR ORIGIN AND DEVELOPMENT, AND HOW THEY ARE HANDLED BY AN ENGLISH BANK.** By C. F. HANNAFORD. Edited by Sir JOHN PAGET, K.C. In demy 8vo, cloth gilt, 195 pp. 6s. net.
- SLATER'S BILLS, CHEQUES, AND NOTES.** Fifth Edition, revised by L. LE M. MINTY, Ph.D., B.Sc., B.Com., LL.B., *Barrister-at-Law.* In demy 8vo, cloth gilt, 220 pp. 5s. net.

- THE MORTGAGE BANK.** By J. L. COHEN, M.A. Assisted by ALICE RING, Ph.D. In demy 8vo, cloth gilt, 284 pp. 10s. 6d. net.
- THE BILLS OF EXCHANGE ACT, 1882.** By M. H. MEGRAH, B.Com. (Lond.), Cert. A.I.B. In demy 8vo, cloth gilt, 195 pp. 6s. net.
- A PRACTICAL EXAMINATION OF THE BILLS OF EXCHANGE ACTS.** By C. H. FENNELL. Second Edition. In medium 8vo, cloth gilt, 168 pp. 7s. 6d. net.
- EUROPEAN BILLS OF EXCHANGE.** By C. A. SIBLEY. Second Edition. In demy 8vo, cloth, 112 pp. 7s. 6d. net.
- TITLE DEEDS OLD AND NEW.** By FRANCIS R. STEAD. In demy 8vo, cloth gilt, 192 pp. 5s. net.
- THE BANKER AS A LENDER.** By F. E. STEELE. In demy 8vo, cloth gilt, 150 pp. 5s. net.
- HOW TO SUCCEED IN A BANK.** By F. E. STEELE. In crown 8vo, cloth, 156 pp. 3s. 6d. net.
- BANKING AS A CAREER.** By F. A. WILLMAN, *Certificated Associate of the Institute of Bankers*. In demy 8vo, cloth gilt, 144 pp. 3s. 6d. net.
- TALKS ON BANKING TO BANK CLERKS.** By HAROLD E. EVANS, *Fellow of the Institute of Bankers*. In crown 8vo, cloth, 152 pp. 2s. 6d. net.
- ANSWERS TO QUESTIONS SET AT THE EXAMINATIONS OF THE INSTITUTE OF BANKERS.** By L. L. M. MINTY, Ph.D., B.Sc. (Econ.), B.Com. *Foreign Exchange*, Parts I and II. Each 3s. 6d. net. *Economics*, Parts I and II. Each 5s. net. *English Grammar and Composition*, Part I, 3s. 6d. net. Part II, 5s. net.
- BANKERS AND THE PROPERTY STATUTES OF 1925 AND 1926.** By R. W. JONES, *Certificated Associate of the Institute of Bankers*. Second Edition. In demy 8vo, cloth gilt, 200 pp. 6s. net.
- BANKERS' ADVANCES.** By F. R. STEAD. Third Edition by C. R. W. CUCKSON, B.A., LL.B. In demy 8vo, cloth gilt, 150 pp. 6s. net.
- BANKERS' TESTS.** By F. R. STEAD. In demy 8vo, cloth gilt, 144 pp. 10s. 6d. net.
- BANKERS' ADVANCES AGAINST PRODUCE.** By A. WILLIAMS. In demy 8vo, cloth gilt, 147 pp. 6s. net.
- ENGLISH COMPOSITION AND BANKING CORRESPONDENCE.** By L. E. W. O. FULLBROOK-LEGGATT, M.C., B.A. Second Edition. In demy 8vo, cloth gilt, 300 pp. 5s. net.
- DICTIONARY OF BANKING.** By W. THOMSON, *formerly Bank Inspector*. Eighth Edition. In crown 4to, half-leather gilt, 754 pp. 30s. net.
- A COMPLETE DICTIONARY OF BANKING TERMS IN THREE LANGUAGES (ENGLISH-FRENCH-GERMAN).** By L. HERENDI, *Managing Clerk, Hungarian General Credit-Bank*. Size 9½ in. by 6½ in., cloth gilt, 566 pp. 21s. net.

**SECRETARIAL WORK, ETC.**

- ENGLISH FOR SECRETARIAL STUDENTS.** By WALTER SHAWCROSS, B.A. In demy 8vo, cloth gilt, 238 pp. 5s. net.
- COMPANY SECRETARIAL ROUTINE.** By C. C. WALFORD A.S.A.A., A.C.I.S. In foolscap 8vo, leatherette, 64 pp. 1s. net.
- THE COMPANY SECRETARY'S VADE MECUM.** Edited by PHILIP TOVEY, F.C.I.S. Fourth Edition, Revised by C. W. ADAMS, A.C.I.S. In foolscap 8vo, cloth, 170 pp. 3s. 6d. net.
- SECRETARY'S HANDBOOK.** Edited by Sir H. E. BLAIN, C.B.E. Second Edition. In demy 8vo, cloth gilt, 168 pp. 5s. net.
- GUIDE FOR THE COMPANY SECRETARY.** By ARTHUR COLES. Third Edition, Revised by W. CECIL WOOD, A.C.I.S. In demy 8vo, cloth gilt, 512 pp. 6s. net.
- PRACTICAL COMPANY SECRETARY.** By P. F. KNIGHTLEY, A.C.I.S. In demy 8vo, cloth gilt, 238 pp. 7s. 6d. net.
- PRACTICAL SECRETARIAL WORK.** By HENRY I. LEE, A.I.S.A., and WILLIAM N. BARR. In demy 8vo, cloth gilt, 406 pp. 7s. 6d. net.
- GUIDE TO COMPANY SECRETARIAL WORK.** By O. OLDHAM, A.C.I.S. Fifth Edition, Revised by G. K. BUCKNALL, A.C.I.S. (Hons.). In crown 8vo, cloth gilt, 256 pp. 3s. 6d. net.
- DICTIONARY OF SECRETARIAL LAW AND PRACTICE.** Edited by PHILIP TOVEY, F.C.I.S., assisted by specialist contributors. Fourth Edition. In crown 4to, half-leather gilt, 1040 pp. 40s. net.
- HONORARY SECRETARYSHIP.** By W. B. THORNE. In crown 8vo, cloth, 81 pp. 2s. 6d. net.
- THE TRANSFER OF STOCKS, SHARES, AND OTHER MARKETABLE SECURITIES.** By F. D. HEAD, B.A. (Oxon), *Barrister-at-Law*. Fourth Edition. In demy 8vo, cloth gilt, 204 pp. 7s. 6d. net.
- PRACTICAL DIRECTORSHIP.** By H. E. COLESWORTHY, A.C.A., A.S.A.A. Second Edition. In demy 8vo, cloth gilt, 284 pp. 10s. 6d. net.
- FORMATION AND MANAGEMENT OF A PRIVATE COMPANY.** By F. D. HEAD, B.A. Second Edition. In demy 8vo, cloth, 226 pp. 7s. 6d. net.
- THE COMPANY REGISTRAR'S MANUAL.** By J. J. QUINLIVAN. Second Edition. In demy 8vo, cloth gilt, 360 pp. 10s. 6d. net.
- MEETINGS.** By F. D. HEAD, B.A. (Oxon), of *Lincoln's Inn, Barrister-at-Law*. Third Edition. In demy 8vo, cloth gilt, 262 pp. 5s. net.
- THE CHAIRMAN'S MANUAL.** By GURDON PALIN, *Barrister-at-Law*, and ERNEST MARTIN, F.C.I.S. Second Edition. In crown 8vo, cloth gilt, 174 pp. 5s. net.
- HOW TO TAKE MINUTES.** Edited by ERNEST MARTIN, F.C.I.S. Fourth Edition. In demy 8vo, cloth gilt, 144 pp. 2s. 6d. net.
- PROSPECTUSES: HOW TO READ AND UNDERSTAND THEM.** By PHILIP TOVEY, F.C.I.S., and H. LAMBERT SMITH, B.Sc. Second Edition. In demy 8vo, cloth gilt, 109 pp. 5s. net.

- PRACTICAL SHARE TRANSFER WORK.** By F. W. LIDINGTON. In crown 8vo, 123 pp. 3s. 6d. net.
- QUESTIONS AND ANSWERS ON SECRETARIAL PRACTICE.** By E. J. HAMMOND. Fourth Edition. Revised by G. K. BUCKNALL, A.C.I.S. (Hons.). In demy 8vo, cloth gilt, 250 pp. 7s. 6d. net.
- EXAMINATION NOTES ON SECRETARIAL PRACTICE.** By C. W. ADAMS, A.C.I.S. Second Edition. In crown 8vo, cloth, 80 pp. 2s. 6d. net.

## INCOME TAX

- INCOME TAX LAW, PRACTICE, AND ADMINISTRATION.** By F. F. CHARLES, F.S.A.A.; R. P. CROOM-JOHNSON, LL.B., K.C.; L. C. GRAHAM-DIXON, *of the Inner Temple, Barrister-at-Law*; and W. J. ECCOTT, *formerly one of H.M. Principal Inspectors of Taxes*. In crown 4to, half leather gilt, 1432 pp. £4 4s. net. Three volumes.
- DICTIONARY OF INCOME TAX AND SUR-TAX PRACTICE.** By W. E. SNELLING. Eighth Edition. In demy 8vo, half leather gilt, 732 pp. 25s. net.
- INTRODUCTION TO INCOME TAX.** By E. D. FRYER, A.L.A.A. In crown 8vo, cloth, 100 pp. Second Edition. 2s. 6d. net.
- SNELLING'S PRACTICAL INCOME TAX.** In crown 8vo, cloth, 181 pp. 8s. 6d. net. Twelfth Edition.
- INCOME TAX HANDBOOK FOR COMPANY SECRETARIES.** By C. W. CHIVERS. In demy 8vo, cloth gilt, 156 pp. 5s. net.

## ECONOMICS

- THE GENERAL TARIFF OF THE UNITED KINGDOM: LAW AND REGULATIONS.** Compiled by A. S. HARVEY, *H.M. Customs and Excise Department*. In demy 8vo, cloth gilt, 188 pp. 5s. net.
- AN INTRODUCTION TO INTERNATIONAL TRADE AND TARIFFS.** By R. A. HODGSON, B.Com. (Lond.). In demy 8vo, cloth gilt, 208 pp. 6s. net.
- ECONOMICS OF THE ENGLISH BANKING SYSTEM.** By W. J. WESTON, M.A., B.Sc., *of Gray's Inn, Barrister-at-Law*. In demy 8vo, cloth gilt, 136 pp. 5s. net.
- DICTIONARY OF ECONOMIC AND BANKING TERMS.** By W. J. WESTON, M.A., B.Sc.; and A. CREW, *Barrister-at-Law*. In crown 8vo, cloth, 248 pp. 5s. net. Third Edition.
- ECONOMIC GEOGRAPHY.** By J. McFARLANE, M.A., M.Com. Third Edition. In demy 8vo, cloth gilt, 10s. 6d. net.
- THE PRINCIPLES OF ECONOMIC GEOGRAPHY.** By R. N. RUDMOSE BROWN, D.Sc. Second Edition. In demy 8vo, cloth gilt, 223 pp. 6s. net.
- THE HISTORY OF COMMERCE.** By T. G. WILLIAMS, M.A., F.R.Hist.S., F.R.Econ.S. In demy 8vo, cloth gilt, 343 pp. 5s. net.
- OUTLINES OF THE ECONOMIC HISTORY OF ENGLAND.** By H. O. MEREDITH, M.A., M.Com. Second Edition. In demy 8vo, cloth gilt, 430 pp. 7s. 6d. net.
- INTERNATIONAL RELATIONS.** By R. L. BUELL. In demy 8vo, cloth gilt, 558 pp. 21s. net.

- MAIN CURRENTS OF SOCIAL AND INDUSTRIAL CHANGE.** By T. G. WILLIAMS, M.A., F.R.Hist.S., F.R.Econ.S. In crown 8vo, cloth gilt, 320 pp. 5s. net.
- THE PRINCIPLES OF BUSINESS ECONOMICS.** By JAMES STEPHENSON, M.A., M.Com., D.Sc. In demy 8vo, cloth gilt, 504 pp. 10s. 6d. net.
- ECONOMICS OF THE MANUFACTURING BUSINESS.** By W. A. STEWART JONES, F.C.W.A., F.S.S. In demy 8vo, cloth, 160 pp. 3s. 6d.
- ECONOMICS FOR BUSINESS MEN.** By W. J. WESTON, M.A., B.Sc. In crown 8vo, cloth gilt, 230 pp. 3s. 6d. net.
- PRINCIPLES OF ECONOMICS.** By L. A. RUFENER, Ph.D. In medium 8vo, cloth gilt, 862 pp. 16s. net.
- A TEXTBOOK OF ECONOMICS.** By W. J. WESTON, M.A., B.Sc. In demy 8vo, cloth gilt, 460 pp. 10s. 6d. net.
- ECONOMIC PRINCIPLES FOR INDIAN READERS.** By Dr. P. BASU. In demy 8vo, cloth, 356 pp. 7s. 6d. net.
- ECONOMICS OF INSTALMENT TRADING AND HIRE PURCHASE.** By W. F. CRICK. In demy 8vo, cloth gilt, 126 pp. 5s. net.
- LABOUR ECONOMICS.** By SOLOMON BLUM. In demy 8vo, cloth gilt, 590 pp. 12s. 6d. net.
- THIS AGE OF PLENTY.** By C. M. HATTERSLEY, M.A., LL.B. Fourth Edition. In crown 8vo, 427 pp., paper, 3s. 6d. net; cloth, 6s. net.
- A FAIR WAGE.** By EDWARD BATTEN, M.I.Mech.E. 100 pp. 2s. 6d. net.
- ECONOMICS OF THE INDUSTRIAL SYSTEM.** By H. A. SILVERMAN, B.A. (Econ.). In demy 8vo, 348 pp. 7s. 6d. net.
- THE SUBSTANCE OF ECONOMICS.** By H. A. SILVERMAN, B.A. (Econ.) Eighth Edition. In demy 8vo, cloth gilt, 370 pp. 6s. net.
- ECONOMICS OF PRIVATE ENTERPRISE, THE.** By J. H. JONES, M.A. In demy 8vo, cloth gilt, 456 pp. 7s. 6d. net.
- INDUSTRIAL COMBINATION IN ENGLAND.** By PATRICK FITZGERALD, D.Sc. (Econ.), *Acting Editor* "The Statist." Second Edition. In demy 8vo, cloth gilt, 248 pp. 10s. 6d. net.
- ECONOMICS OF THE WHOLESALE AND RETAIL TRADE.** By JAMES STEPHENSON, M.A., M.Com., D.Sc. In demy 8vo, cloth, 292 pp. 5s.
- ECONOMICS OF PRODUCTION AND EXCHANGE.** By JAMES STEPHENSON, M.A., M.Com., D.Sc.; and NOEL BRANTON, B.Com. In demy 8vo, cloth, 484 pp. 7s. 6d. net.
- ECONOMICS OF BANKING, TRADE AND FINANCE.** By JAMES STEPHENSON and NOEL BRANTON. In demy 8vo, cloth, 382 pp. 7s. 6d.
- ECONOMICS OF THE IMPORT AND EXPORT TRADE.** By HIROMU NAGAOKA. In demy 8vo, cloth, 235 pp. 5s.
- ENGINEERING ECONOMICS.** By T. H. BURNHAM, B.Sc., Hons., L.Com. (Lond.), A.M.I.Mech.E. Second Edition. In demy 8vo, cloth gilt, 392 pp. 10s. 6d. net.

## PITMAN'S ECONOMICS SERIES

General Editor: PROFESSOR J. H. JONES, M.A.

Each in large crown 8vo, bound in limp keratol, gilt.

- A PRIMER OF ECONOMIC GEOGRAPHY.** By L. W. LYDE, M.A., F.R.G.S., F.R.S.G.S. 220 pp. 5s. net.
- BRITISH ECONOMISTS.** By FRANCIS C. HOOD, M.A. 106 pp. 2s. 6d. net.
- BUSINESS FORECASTING.** By J. H. RICHARDSON, M.A., Ph.D. 110 pp. 2s. 6d. net.
- CURRENCY AND BANKING.** By D. T. JACK, M.A. 204 pp. 5s. net.
- ECONOMIC FUNCTIONS OF THE STATE.** By R. H. SOLTAU, M.A. 184 pp. 5s. net.
- FINDING CAPITAL FOR BUSINESS.** By DAVID FINNIE, M.A., C.A. 126 pp. 2s. 6d. net.
- INTERNATIONAL TRADE.** By D. T. JACK, M.A. 126 pp. 2s. 6d. net.
- METHODS OF REMUNERATION.** By R. WILSON, M.A., B.Sc. 108 pp. 2s. 6d. net.
- OVERHEAD COSTS.** By SIR HENRY N. BUNBURY, K.C.B. 96 pp. 2s. 6d. net.
- PRODUCTION.** By HUBERT PHILLIPS, M.A. (Oxon). 168 pp. 5s. net.
- SOCIALISM.** By ROBERT RICHARDS. 114 pp. 2s. 6d. net.
- TRANSPORT AND COMMUNICATIONS.** By K. G. FENELON, M.A., Ph.D. 110 pp. 2s. 6d. net.
- VALUE AND DISTRIBUTION.** By HUBERT PHILLIPS, M.A. (Oxon). 174 pp. 5s. net.

## MUNICIPAL WORK

- COSTING SCHEMES FOR LOCAL AUTHORITIES.** By J. H. BURTON. Second Edition. In demy 8vo, 144 pp. 5s. net.
- LOANS AND BORROWING POWERS OF LOCAL AUTHORITIES.** By J. H. BURTON. In demy 8vo, cloth gilt, 228 pp. 7s. 6d. net.
- LOCAL GOVERNMENT OF THE UNITED KINGDOM AND THE IRISH FREE STATE.** By J. J. CLARKE, M.A., F.S.S., of *Gray's Inn, Barrister-at-Law*. Seventh Edition. In crown 8vo, cloth gilt, 864 pp. 12s. 6d. net.
- RATES AND RATING.** By ALBERT CREW, *Barrister-at-Law*, and W. T. CRESWELL. Seventh Edition (England and Wales). In crown 8vo, cloth gilt, 526 pp. 12s. 6d. net.
- MUNICIPAL BOOK-KEEPING.** By J. H. MCCALL, F.S.A.A. Third Edition. In demy 8vo, cloth gilt, 130 pp. 7s. 6d. net.
- MUNICIPAL AUDIT PROGRAMMES.** By S. WHITEHEAD, A.S.A.A. Second Edition. In demy 8vo, cloth gilt, 116 pp. 5s. net.
- MUNICIPAL ACCOUNTING SYSTEMS.** By S. WHITEHEAD. Second Edition. In demy 8vo, cloth gilt, 168 pp. 5s. net.
- MUNICIPAL STUDENT'S EXAMINATION NOTEBOOK.** By S. WHITEHEAD. Second Edition. In crown 8vo, cloth, 335 pp. 7s. 6d. net.
- AMERICAN CITY GOVERNMENT.** By W. ANDERSON, Ph.D. In demy 8vo, cloth gilt, 686 pp. 21s. net.



**MUNICIPAL SERIES.** The Organization and Administration of the Various Departments of a Municipal Office. Edited by W. BATESON, A.C.A., F.S.A.A.—

**FINANCE DEPARTMENT.** By WILLIAM BATESON, A.C.A., F.S.A.A. In demy 8vo, cloth gilt, 274 pp. 7s. 6d. net.

**TRAMWAYS DEPARTMENT.** By S. B. NORMAN MARSH, *Accountant to the Birmingham Corporation Tramways.* In demy 8vo, cloth gilt, 170 pp. 6s. net.

**ELECTRICITY UNDERTAKING.** By C. L. E. STEWART, M.I.E.E. In demy 8vo, cloth gilt, 180 pp. 6s. net.

**GAS UNDERTAKING.** By EDWIN UPTON, F.S.A.A. In demy 8vo, cloth gilt, 130 pp. 5s. net.

**TOWN CLERK'S DEPARTMENT AND THE JUSTICES' CLERK'S DEPARTMENT.** By A. S. WRIGHT and E. H. SINGLETON. In demy 8vo, cloth gilt, 268 pp. 7s. 6d. net.

**WATERWORKS UNDERTAKING.** By FREDERICK J. ALBAN, F.S.A.A., F.I.M.T.A., A.C.I.S. In demy 8vo, cloth gilt, 314 pp. 10s. 6d. net.

**EDUCATION DEPARTMENT.** By ALFRED E. IKIN, B.Sc., LL.D. In demy 8vo, cloth gilt, 251 pp. 7s. 6d. net.

**PUBLIC HEALTH DEPARTMENT.** By W. A. LEONARD, *Chief Clerk and Statistician in the Public Health Department, Birmingham.* In demy 8vo, cloth gilt, 155 pp. 6s. net.

**MUNICIPAL ENGINEER AND SURVEYOR'S DEPARTMENT.** By E. J. ELFORD, *Engineer, Architect and Surveyor to the Metropolitan Borough of Wandsworth.* In demy 8vo, cloth gilt, 245 pp. 10s. 6d. net.

**BATING DEPARTMENT.** By A. H. PEACOCK, M.A., A.S.A.A., *Incorporated Accountant.* In demy 8vo, cloth gilt, 96 pp. 5s. net.

## ADVERTISING AND SALESMANSHIP

**THE DICTIONARY OF ADVERTISING AND PRINTING.** By G. J. FRESHWATER and ALFRED BASTIEN. In crown 4to, half leather gilt, 460 pp. 42s. net.

**ART IN ADVERTISING.** By DOROTHY E. M. HOLDICH and ERNEST W. TWINING. In crown 4to, cloth gilt, 206 pp. 25s. net.

**ADVERTISING TO WOMEN.** By CARL A. NÆTHER, M.A. Size 9 in. by 6 in., cloth gilt, 356 pp. 21s. net.

**STOECRAFT.** By S. A. WILLIAMS, M.A. In crown 8vo, cloth, 143 pp. 3s. 6d. net.

**PRINCIPLES OF RETAIL DISTRIBUTION.** By S. A. WILLIAMS, M.A. In crown 4vo, cloth gilt, 218 pp. 5s. net.

**PRINCIPLES OF RETAILING.** By N. A. BRISCO, Ph.D. In demy 8vo, cloth gilt, 336 pp. 16s. net.

**SUCCESSFUL RETAILING.** By E. N. SIMONS. In demy 8vo, cloth gilt, 210 pp. 5s. net.

- THE CRAFT OF SILENT SALESMANSHIP.** A Guide to Advertisement Construction. By C. MAXWELL TREGURTHA and J. W. FRINGS. Size 6½ in. by 9½ in., cloth, 98 pp., with illustrations. 5s. net.
- SALES COUNTERCRAFT.** By WILLIAM G. CARTER, M.P.S. In demy 8vo, cloth gilt, 224 pp. 7s. 6d. net.
- PERSONAL SALESMANSHIP.** By R. SIMMAT, M.A. In demy 8vo, cloth gilt, 108 pp. 5s. net.
- SALESMANSHIP.** By WILLIAM MAXWELL. In crown 8vo, cloth gilt, 238 pp. 5s. net.
- SALESMANSHIP.** By W. A. CORBION and G. E. GRIMSDALE. In crown 8vo, cloth, 168 pp. 3s. 6d. net.
- TRAINING FOR MORE SALES.** By C. C. KNIGHTS. Second Edition. In demy 8vo, cloth, 264 pp. 5s. net.
- AN OUTLINE OF SALES MANAGEMENT.** By C. C. KNIGHTS. Second Edition. In demy 8vo, cloth gilt, 196 pp. 5s. net.
- TECHNIQUE OF SALESMANSHIP.** By C. C. KNIGHTS. Second Edition. In demy 8vo, cloth gilt, 249 pp. 5s. net.
- BUILDING RETAIL SALES.** By C. C. KNIGHTS. In demy 8vo, cloth gilt, 230 pp. 5s. net.
- MORE SALES THROUGH THE WINDOW.** By C. C. KNIGHTS. In demy 8vo, cloth gilt, 170 pp. 5s. net.
- PRACTICAL SALESMANSHIP.** By N. C. FOWLER, JUNR. In crown 8vo, 337 pp. 7s. 6d. net.
- RETAIL MANAGEMENT.** By CUNLIFFE L. BOLLING. In demy 8vo, cloth gilt, 484 pp. 15s. net.
- RETAIL SALESMANSHIP.** By CUNLIFFE L. BOLLING. Second Edition. In demy 8vo, cloth gilt, 284 pp. 7s. 6d. net.
- SALES MANAGEMENT.** By CUNLIFFE L. BOLLING. Second Edition. In demy 8vo, cloth gilt, 372 pp. 10s. 6d. net.
- SALESMEN'S AGREEMENTS.** Compiled from the proceedings of a special Conference of the Incorporated Association of Sales Managers of Great Britain. In demy 8vo, cloth gilt, 84 pp. 5s. net.
- THE OUTFITTER'S SALESMAN.** By E. OSTICK, M.A., L.C.P. In crown 8vo, cloth gilt, 170 pp. 5s. net.
- TEXTILES FOR SALESMEN.** By E. OSTICK, M.A., L.C.P. Second Edition. In crown 8vo, cloth gilt, 174 pp. 5s. net.
- PSYCHOLOGY AS A SALES FACTOR.** By A. J. GREENLY. Second Edition. In demy 8vo, cloth gilt, 224 pp. 10s. 6d. net.
- MODERN SALES CORRESPONDENCE.** By D. M. WILSON. In demy 8vo, cloth gilt, 80 pp. 5s. net.
- DIRECT MAIL ADVERTISING FOR THE RETAIL TRADER.** By H. DENNETT. In demy 8vo, cloth gilt, 220 pp. 7s. 6d. net.
- SALES AND ROUTINE LETTERS FOR THE RETAIL TRADER.** By H. DENNETT. In demy 8vo, cloth gilt, 204 pp. 7s. 6d. net.
- COMMERCIAL TRAVELLING.** By ALBERT E. BULL. In crown 8vo, cloth gilt, 174 pp. 3s. 6d. net.
- TRAINING FOR TRAVELLING SALESMEN.** By FRANK W. SHRUBSALL. In crown 8vo, cloth gilt, 90 pp. 2s. 6d. net.

- THE BUSINESS MAN'S GUIDE TO ADVERTISING.** By A. E. BULL. In crown 8vo, cloth, 127 pp. 3s. 6d. net.
- ADVERTISING AND THE SHOPKEEPER.** By HAROLD W. ELEY. In crown 8vo, 160 pp. 3s. 6d. net.
- ROUTINE OF THE ADVERTISING DEPARTMENT.** By REGINALD H. W. COX. In demy 8vo, cloth gilt, 202 pp. 10s. 6d. net.
- LAY-OUTS FOR ADVERTISING.** By JOHN DELL. In crown 8vo, cloth gilt, 176 pp. 12s. 6d. net.
- ADVERTISEMENT LAY-OUT AND COPY-WRITING.** By A. J. WATKINS. In crown 4to, cloth, 130 pp. 15s. net.
- PRACTICAL TYPOGRAPHY AND COPY WRITING.** By COURTNEY D. FARMER. In demy 8vo, cloth gilt, 110 pp. 5s. net.
- BUSINESS LETTER PRACTICE.** By J. B. OPDYCKE. Fourth Edition. In demy 8vo, cloth gilt, 602 pp. 7s. 6d. net.
- SELLING BY POST.** By HAROLD W. ELEY. In foolscap 8vo, leatherette, 64 pp. 1s. net.
- THE OUTDOOR SALES FORCE.** By P. E. WILSON. In crown 8vo, cloth, 146 pp. 3s. 6d. net.
- SUCCESSFUL BUYING.** By E. N. SIMONS. In demy 8vo, cloth gilt, 291 pp. 10s. 6d. net.
- MODERN PUBLICITY.** By A. W. DEAN. In crown 8vo, cloth, 70 pp. 2s. 6d. net.
- MARKET RESEARCH.** By R. SIMMAT, M.A. In demy 8vo, cloth gilt, 128 pp. 6s. net.
- PRACTICAL AIDS TO RETAIL SELLING.** By A. EDWARD HAMMOND. In demy 8vo, cloth gilt, 180 pp. 128 pp. 7s. 6d. net.
- ADVERTISING THROUGH THE PRESS.** By N. HUNTER. In demy 8vo, cloth, 146 pp. 5s. net.
- PRACTICAL PRESS PUBLICITY.** By A. L. CULYER. In demy 8vo, cloth, 95 pp. 3s. 6d. net.
- SHOP FITTINGS AND DISPLAY.** By A. E. HAMMOND. In demy 8vo, cloth, 142 pp. 5s. net.
- WINDOW DRESSING.** By G. L. TIMMINS. In crown 8vo, cloth, 85 pp. 2s. net.
- ART OF WINDOW DISPLAY.** Edited by H. ASHFORD DOWN. In crown 4to, cloth gilt, 220 pp. 21s. net.
- COMMERCIAL PHOTOGRAPHY.** By D. CHARLES. Second Edition. In demy 8vo, cloth gilt, 316 pp. 10s. 6d. net.
- HINTS AND TIPS FOR COMMERCIAL ARTISTS.** By BERNARD J. PALMER. Second Edition. In crown 8vo, 122 pp. 5s. net.
- TRAINING IN COMMERCIAL ART.** By V. L. DANVERS. In crown 4to. 21s. net.
- TICKET AND SHOW CARD DESIGNING.** By F. A. PEARSON. In foolscap, 180 pp. 4to, cloth. 3s. 6d. net.

- TYPES AND TYPE FACES.** (From *Modern Advertising*.) By C. M. TREGURTHIA. In crown 4to, quarter cloth, 48 pp. 2s. 6d. net.
- THE ART AND PRACTICE OF PRINTING.** Edited by Wm. ATKINS. In six volumes. In crown 8vo, cloth gilt. Each 7s. 6d. net.
- PRINTING.** By H. A. MADDOX. Second Edition. In demy 8vo, cloth, 178 pp. 5s. net.

## JOURNALISM

- SUB-EDITING.** By F. J. MANSFIELD. In demy 8vo, cloth gilt, 264 pp. 10s. 6d. net.
- JOURNALISM.** By SOME MASTERS OF THE CRAFT. In demy 8vo, 232 pp. 5s. net.
- MODERN JOURNALISM.** By C. F. CARR and F. E. STEVENS. In demy 8vo, cloth gilt, 252 pp. 10s. 6d. net.
- JOURNALISM AS A CAREER.** Edited by W. T. CRANFIELD. In demy 8vo, cloth, 108 pp. 5s. net.
- AUTHORSHIP AND JOURNALISM.** By ALBERT E. BULL. In crown 8vo, cloth, 170 pp. 8s. 6d. net.
- PITMAN'S POPULAR GUIDE TO JOURNALISM.** By ALFRED KINGSTON. Fourth Edition. In crown 8vo, cloth, 124 pp. 2s. 6d. net.
- PITMAN'S PRACTICAL JOURNALISM.** By ALFRED BAKER. Second Edition, Revised by E. A. COPE. In crown 8vo, cloth, 180 pp. 3s. 6d. net.
- SHORT STORY WRITING AND FREE-LANCE JOURNALISM.** By SYDNEY A. MOSLEY. Second Edition. In demy 8vo, cloth gilt, 241 pp. 7s. 6d. net.

## LAW

- ELEMENTARY LAW.** By E. A. COPE. In crown 8vo, cloth, 224 pp., with specimen legal forms. 4s. net. Second Edition, Revised by A. H. COSWAY.
- SLATER'S MERCANTILE LAW.** Seventh Edition, by R. W. HOLLAND, O.B.E., M.A., M.Sc., LL.D., *Barrister-at-Law*, and R. H. CODE HOLLAND, B.A. (Lond.), *Barrister-at-Law*. In demy 8vo, cloth gilt, 588 pp. 7s. 6d. net.
- INTRODUCTION TO COMMERCIAL LAW.** By NORMAN A. WEBB, B.Sc. In demy 8vo, cloth, 175 pp. 5s.
- COMPANIES AND COMPANY LAW.** By A. C. CONNELL, LL.B. (Lond.). Fourth Edition, Revised by W. E. WILKINSON, LL.D. In demy 8vo, cloth gilt, 422 pp. 6s. net.
- MANUAL OF COMPANY LAW AND PRACTICE.** By LESLIE MADDOCK, *Barrister-at-Law*. In demy 8vo, cloth gilt, 437 pp. 10s. 6d. net.
- COMPANY LAW.** By D. F. DE L'HOSTE RANKING, M.A., LL.D., and E. E. SPICER, F.C.A. Sixth Edition. Edited by H. A. R. J. WILSON, F.C.A., F.S.A.A. In demy 8vo, cloth gilt, 498 pp. 10s. net.
- THE LAW OF JOINT STOCK COMPANIES.** By W. J. WESTON, M.A., B.Sc., of *Gray's Inn, Barrister-at-Law*. In demy 8vo, 308 pp. 7s. 6d. net.

- LAW OF CARRIAGE BY RAILWAY.** By L. R. LIPSETT, M.A., LL.D., and T. J. D. ATKINSON, M.A. Size 6 in. by 9 in., cloth gilt, 966 pp. 50s. net.
- LAW OF ARBITRATION AND AWARDS.** By H. S. PALMER, M.A. (Oxon). In demy 8vo, 180 pp. 6s. net.
- LAW OF GAMING AND BETTING.** By C. F. SHOOLBRED, B.A., LL.B., *Barrister-at-Law*. In demy 8vo, cloth gilt, 274 pp. 10s. 6d. net.
- LAW RELATING TO RESTRAINT OF TRADE.** By R. YORKE HEDGES, LL.M., *Barrister-at-Law*. In demy 8vo, cloth gilt, 140 pp. 7s. 6d. net.
- AIR AND AVIATION LAW (CIVIL AVIATION).** By WM. MARSHALL FREEMAN, *Barrister-at-Law*. In demy 8vo, cloth gilt, 176 pp. 7s. 6d. net.
- ADMINISTRATION OF ESTATES.** By A. H. COSWAY. In crown 8vo, 172 pp. 5s. net.
- RIGHTS AND DUTIES OF LIQUIDATORS, TRUSTEES, AND RECEIVERS.** By D. F. DE L'HOSTE RANKING, M.A., LL.D., E. E. SPICER, F.C.A., and E. C. PEGLER, F.C.A. Size 9½ in. by 7 in., cloth gilt, 455 pp. 15s. net. Eighteenth Edition. Edited by H. A. R. J. WILSON, F.C.A., F.S.A.A.
- LIQUIDATOR'S INDEX AND SUMMARY OF THE COMPANIES ACT AND WINDING-UP RULES, 1929.** By JOHN H. SENIOR, F.C.A., and H. M. PRATT. In foolscap folio, buckram, 96 pp. 15s. net.
- GUIDE TO BANKRUPTCY LAW AND WINDING UP OF COMPANIES.** By F. PORTER FAUSSET, M.A., *Barrister-at-Law*. Second Edition. In crown 8vo, cloth gilt, 216 pp. 5s. net.
- NOTES ON BANKRUPTCY LAW.** By V. R. ANDERSON, A.C.A. In crown 8vo, cloth, 86 pp. 2s. 6d. net.
- DUCKWORTH'S PRINCIPLES OF MARINE LAW.** Fourth Edition, Revised by WM. MARSHALL FREEMAN, *Barrister-at-Law*. In demy 8vo, 388 pp. 7s. 6d. net.
- LAW FOR JOURNALISTS.** By CHARLES PILLEY, *Barrister-at-Law*. Second Edition. In demy 8vo, cloth, 170 pp. 5s. net.
- THE LAW RELATING TO BANKING AND FOREIGN EXCHANGE.** By L. LE M. MINTY, Ph.D., B.Sc. (Econ.), B.Com., LL.B., Cert. A.I.B., *Barrister-at-Law*. In crown 4to, half leather gilt, 384 pp. 30s. net.
- PARTNERSHIP LAW.** By D. F. DE L'HOSTE RANKING, M.A., LL.D., E. E. SPICER, F.C.A., and E. C. PEGLER, F.C.A. Fourth Edition. In medium 8vo, cloth, 167 pp. 7s. 6d. net.
- PARTNERSHIP LAW AND ACCOUNTS.** By R. W. HOLLAND, O.B.E., M.A., M.Sc., LL.D., *Barrister-at-Law*. In demy 8vo, 174 pp. 6s. net.
- THE LAW OF CONTRACT.** By R. W. HOLLAND, O.B.E., M.A., M.Sc., LL.D. Revised Edition. In demy 8vo, cloth, 123 pp. 5s. net.
- TRUSTS.** By C. KELLY and J. COLE-HAMILTON, *Chartered Accountants*. In demy 8vo, cloth gilt, 418 pp. 15s. net.

- EXECUTORSHIP LAW AND ACCOUNTS.** By D. F. DE L'HOSTE RANKING, M.A., LL.D., E. E. SPICER, F.C.A., and E. C. PEGLER, F.C.A. Size 10 in. by 7½ in., cloth gilt, 370 pp. 15s. net. Tenth Edition.
- A HANDBOOK ON WILLS.** By A. H. COSWAY. In crown 8vo, cloth, 123 pp. 2s. 6d. net.
- WILLS. A Complete Guide for Testators, Executors, and Trustees. With a Chapter on Intestacy.** By R. W. HOLLAND, O.B.E., M.A., M.Sc., LL.D., of the Middle Temple, Barrister-at-Law. In foolscap 8vo, cloth, 122 pp. 2s. 6d. net. Third Edition.
- SOLICITOR'S CLERK'S GUIDE.** By EDWARD A. COPE. Revised by FRED G. W. LESTER. In crown 8vo, cloth gilt, 214 pp. 4s. net.
- MUNICIPAL AND LOCAL GOVERNMENT LAW.** By H. EMERSON SMITH, LL.B. (Lond.). Third Edition. (In the Press.) In demy 8vo, cloth gilt, 272 pp. 10s. 6d. net.
- LAW FOR THE HOUSE-OWNER.** By A. H. COSWAY. Second Edition. 128 pp. In crown 8vo, cloth. 2s. 6d. net.
- THE BUSINESS TENANT.** By E. S. COX-SINCLAIR, *Barrister-at-Law*, and T. HYNES, LL.B., *Barrister-at-Law*. In crown 8vo, cloth, 263 pp. 7s. 6d. net.
- LAW AND PRACTICE RELATING TO INCORPORATED BUILDING SOCIETIES.** By C. P. BEST, B.A., LL.B., of the Middle Temple, *Barrister-at-Law*. In crown 8vo, cloth gilt, 480 pp. 12s. 6d. net.
- THE LAW RELATING TO BUILDING AND BUILDING CONTRACTS.** By W. T. CRESWELL, Hon. A.R.I.B.A., F.R.San.Inst., of Gray's Inn, *Barrister-at-Law*. Second Edition. In demy 8vo, cloth, 372 pp. 12s. 6d. net.
- LAW OF INLAND TRANSPORT.** By W. H. GUNN, LL.B. (Lond.), of the Middle Temple and the South-Eastern Circuit, *Barrister-at-Law*. In demy 8vo, cloth gilt, 332 pp. 8s. 6d. net.
- COPYRIGHT IN INDUSTRIAL DESIGNS.** By A. D. RUSSELL-CLARKE, of the Inner Temple, *Barrister-at-Law*. In demy 8vo, cloth, 212 pp. 10s. 6d. net.
- THE LAW OF EVIDENCE.** By W. NEMBARD HIBBERT, LL.D., *Barrister-at-Law*. Sixth Edition, Revised. In crown 8vo, 132 pp. 7s. 6d. net.
- THE LAW OF PROCEDURE.** By W. NEMBARD HIBBERT. Fourth Edition. In demy 8vo, cloth gilt, 142 pp. 7s. 6d. net.
- THE LAW OF MASTER AND SERVANT.** By FRANCIS RALEIGH BATT, LL.M., of Gray's Inn, *Barrister-at-Law*. Second Edition. In demy 8vo, cloth gilt, 522 pp. 12s. 6d. net.
- TRADE MARK LAW AND PRACTICE.** By A. W. GRIFFITHS, B.Sc. (Eng.), Lond., *Barrister-at-Law*. In demy 8vo, cloth gilt, 268 pp. 10s. 6d. net.
- THE LAW RELATING TO ADVERTISING.** By E. LING-MALLISON, B.Sc. (Lille), *Barrister-at-Law*. In crown 8vo, cloth gilt, 234 pp. 7s. 6d. net.
- THE LAW RELATING TO INDUSTRY.** By H. SAMUELS, M.A., of the Middle Temple, *Barrister-at-Law*. In demy 8vo, cloth gilt, 258 pp. 15s. net.
- THE LAW OF THE SALE OF GOODS.** By C. G. AUSTIN, B.A. (Oxon). In demy 8vo, cloth gilt, 172 pp. 5s. net.
- LAW AND ORGANIZATION OF THE BRITISH CIVIL SERVICE.** By N. E. MUSTOE. In demy 8vo, cloth gilt, 218 pp. 7s. 6d. net.

**BUSINESS REFERENCE BOOKS**

- BUSINESS MAN'S ENCYCLOPAEDIA AND DICTIONARY OF COMMERCE.** A reliable and comprehensive work of reference on all commercial subjects. Fourth Edition. Edited by FRANK HEYWOOD, F.C.I.S. Assisted by upwards of 50 specialists as contributors. In 2 vols., large crown 4to, cloth gilt, 1926 pp. 30s. net.
- BUSINESS TERMS, PHRASES, AND ABBREVIATIONS.** In crown 8vo, cloth, 280 pp. 3s. 6d. net. Seventh Edition. With equivalents in French, German, Spanish, and Italian; and facsimile documents.
- PITMAN'S BUSINESS MAN'S GUIDE.** In crown 8vo, cloth, 546 pp. 6s. net. Ninth Edition, Revised.
- MERCANTILE TERMS AND ABBREVIATIONS.** Size 3 in. by 4½ in., cloth, 126 pp. 1s. 6d. net. Containing over 1,000 terms and 500 abbreviations with definitions.
- BUSINESS FORECASTING AND ITS PRACTICAL APPLICATION.** By W. WALLACE, M.Com. (Lond.). Third Edition. In demy 8vo, cloth gilt, 148 pp. 7s. 6d. net.
- PRACTICAL BUSINESS FORECASTING.** By D. F. JORDAN. Size 6 in. by 9 in., cloth, 270 pp. 16s. net.
- BUSINESS CHARTS.** By T. G. ROSE, A.M.I.Mech.E. In demy 8vo, cloth gilt, 104 pp. 10s. 6d. net.
- BUSINESS BUDGETS AND BUDGETARY CONTROL.** By A. W. WILLSMORE, F.R.Econ.S. In demy 8vo, cloth gilt, 238 pp. 10s. 6d. net.
- POLEY'S LAW AND PRACTICE OF THE STOCK EXCHANGE.** Fifth Edition. By R. H. CODE HOLLAND, B.A., *of the Middle Temple, Barrister-at-Law*, and JOHN N. WERRY. In demy 8vo, cloth gilt, 470 pp. 15s. net.
- FINANCIAL ORGANIZATION AND MANAGEMENT.** By C. W. GERSTENBERG, *Professor of Finance at New York University*. Size 6 in. by 9 in., cloth gilt, 739 pp. 25s. net.
- FRAUD AND EMBEZZLEMENT.** By IRVINE HUBERT DEARNLEY. In demy 8vo, cloth gilt, 192 pp. 7s. 6d. net.
- MONEY-MAKING IN STOCKS AND SHARES.** By SYDNEY A. MOSELEY. Third Edition. In demy 8vo, cloth gilt, 252 pp. 7s. 6d. net.
- HOW THE STOCK MARKET REALLY WORKS.** By W. COLLIN BROOKS. In demy 8vo, cloth gilt, 160 pp. 5s. net.
- MARKETS OF LONDON.** By CUTHBERT MAUGHAN. In demy 8vo, cloth gilt, 218 pp. 6s. net.
- SCIENTIFIC INVESTMENT.** By HARGREAVES PARKINSON, B.A., B.Com. Second Edition. In demy 8vo, 246 pp., cloth gilt. 10s. 6d. net.
- INVESTMENT IN STOCKS AND SHARES.** By E. D. KISSAN and L. D. WILLIAMS. In demy 8vo, cloth gilt, 224 pp. 8s. 6d. net.
- THE SMALL INVESTOR'S GUIDE.** By SYDNEY A. MOSELEY. Second Edition. In demy 8vo, cloth, 160 pp. 5s. net.
- THE ROOT PRINCIPLES OF INVESTMENT.** By H. COPE WEST. In demy 8vo, cloth, 232 pp. 15s. net.

- TYPES OF BUSINESS ENTERPRISE.** By M. C. CROSS, LL.B., Ph.D. In medium 8vo, cloth gilt, 348 pp. 21s. net.
- DUPLICATING AND COPYING PROCESSES.** By W. DESBOROUGH, O.B.E. In demy 8vo, cloth gilt, 146 pp. 5s. net.
- BUSINESS CYCLES. The Problem and its Setting.** By W. C. MITCHELL. Size 6 in. by 9 in., cloth gilt, 511 pp. 30s. net.
- STATISTICAL METHODS.** By F. C. MILLS, *Associate Professor of Business Statistics, Columbia University.* In demy 8vo, cloth gilt, 620 pp. 15s. net.
- STATISTICS.** By WILLIAM VERNON LOVITT, Ph.D., *Professor of Mathematics, Colorado College;* and HENRY F. HOLTZCLAW, Ph.D., *Professor of Commerce, University of Kansas.* In medium 8vo, cloth gilt, 304 pp. 15s. net.
- BUSINESS STATISTICS, THEIR PREPARATION, COMPILATION, AND PRESENTATION.** By R. W. HOLLAND, O.B.E., M.A., M.Sc., LL.D. Third Edition. In crown 8vo, cloth, 108 pp. 8s. 6d. net.
- STATISTICS IN THEORY AND PRACTICE.** By L. R. CONNOR, M.Sc., *Barrister-at-Law.* In medium 8vo, cloth gilt, 392 pp. 12s. 6d. net.
- STATISTICS AND THEIR APPLICATION TO COMMERCE.** By A. L. BODDINGTON, *Fellow of the Royal Statistical and Economic Societies.* Fifth Edition. In medium 8vo, cloth gilt, 340 pp. 12s. 6d. net.
- A MANUAL OF CHARTING.** Size 6 in. by 9 in., cloth gilt, 116 pp. 6s. net.
- PITMAN'S BOOK OF SYNONYMS AND ANTONYMS.** In crown 8vo, cloth, 140 pp. 2s. 6d. net.
- PITMAN'S OFFICE DESK BOOK.** Third Edition. In crown 8vo, 320 pp., cloth. 2s. 6d. net.
- MODERN DEBATE PRACTICE.** By WALDO O. WILLHOFT. In crown 8vo, cloth, 339 pp. 5s. net.
- REPORT WRITING.** By CARL G. GAUM, M.E., and HAROLD F. GRAVES, M.A. In medium 8vo, cloth gilt, 322 pp. 12s. 6d. net.
- SPEAKING IN PUBLIC.** By ARLEIGH B. WILLIAMSON, M.A., *Associate Professor of Public Speaking, Washington Square College, New York University.* In medium 8vo, cloth gilt, 430 pp. 15s. net.
- HOW TO SPEAK IN PUBLIC.** By C. F. CARR and F. E. STEVENS. Second Edition. In crown 8vo, cloth, 128 pp. 3s. 6d. net.
- DICTIONARY OF THE WORLD'S COMMERCIAL PRODUCTS.** By J. H. VANSTONE, F.R.G.S. With French, German, and Spanish equivalents for the names of the products. In demy 8vo, cloth, 170 pp. 5s. net. Third Edition.
- RAW MATERIALS OF COMMERCE.** Edited by J. H. VANSTONE, F.R.G.S. In two volumes, demy 4to, cloth gilt, 793 pp. Complete, 20s. net.



- COMMERCIAL COMMODITIES.** By F. W. MATTHEWS, B.Sc., A.I.C., F.C.S. In demy 8vo, cloth gilt, 326 pp. 12s. 6d. net.
- THE COTTON WORLD.** Compiled and Edited by J. A. TODD, M.A., B.L. In crown 8vo, cloth, 246 pp. 5s. net.
- SPICES AND CONDIMENTS.** By H. STANLEY REDGROVE, B.Sc., F.I.C. In demy 8vo, cloth gilt, 378 pp. 15s. net.
- FRUIT AND THE FRUIT TRADE.** By FORD FAIRFORD. In demy 8vo, cloth, 162 pp. 6s. net.
- TEA AND TEA DEALING.** By F. W. S. STAVEACRE. In demy 8vo, cloth gilt, 150 pp. 7s. 6d. net.
- THE COCOA AND CHOCOLATE INDUSTRY.** By A. W. KNAPP, M.Sc., F.I.C. In demy 8vo, cloth gilt, 200 pp. 7s. 6d. net. Second Edition.
- THE FURNITURE STYLES.** By H. E. BINSTED. Size 9½ in. by 6½ in., cloth, 208 pp., illustrated. 10s. 6d. net. Second Edition.
- BUYING AND SELLING A BUSINESS.** By A. H. COSWAY. In crown 8vo, cloth, 110 pp. 8s. 6d. net.
- HOW TO COLLECT ACCOUNTS BY LETTER.** By C. HANNEFORD-SMITH, F.C.W.A. In crown 8vo, cloth gilt, 94 pp. 3s. 6d. net.
- LETTER WRITING: A GUIDE TO BUSINESS CORRESPONDENCE.** By G. K. BUCKNALL, A.C.I.S. (Hons.). In foolscap 8vo, leatherette, 64 pp. 1s. net.
- LETTERS THAT COLLECT.** By JOHN WHYTE, Ph.D., and F. R. OTTER, B.A. In medium 8vo, cloth gilt, 435 pp. 15s. net.
- HOW TO GRANT CREDIT.** By CUTHBERT GREIG, *Secretary, London Association for Protection of Trade, Ltd.* In crown 8vo, cloth, 102 pp. 3s. 6d. net.
- HOW TO APPEAL AGAINST YOUR RATES.** By A. STANLEY EAMER, F.S.I., *Rating Surveyor to the Metropolitan Borough of Lambeth.* In two volumes, in crown 8vo, cloth. Vol. I (without the Metropolis), 5s. net. Vol. II (within the Metropolis), 8s. 6d. net.
- GUIDE TO COUNTY COURT PROCEDURE.** Being the Second Edition of *The Traders' Guide to County Court Procedure.* By F. H. B. CHAPMAN. Revised by B. S. HILLS. In crown 8vo, cloth, 104 pp. 2s. 6d. net.
- COMMERCIAL ATLAS OF THE WORLD.** In crown 4to, cloth, 226 pp. 5s. net.
- STATISTICAL ATLAS OF THE WORLD.** By J. STEPHENSON, M.A., M.Com., D.Sc. In foolscap folio, cloth, 146 pp. 7s. 6d. net.
- THE FUTURE OF EMPIRE TRADE.** By J. E. RAY. With a Foreword by The Rt. Hon. L. S. AMERY. In crown 8vo, paper, 128 pp. 2s. net.

## FOREIGN LANGUAGE DICTIONARIES

**DICTIONARY OF COMMERCIAL CORRESPONDENCE IN SEVEN LANGUAGES: ENGLISH, FRENCH, GERMAN, SPANISH, ITALIAN, PORTUGUESE: AND RUSSIAN.** Third Edition. In demy 8vo, cloth, 718 pp. 12s. 6d. net.

**ENGLISH-FRENCH AND FRENCH-ENGLISH DICTIONARY OF BUSINESS WORDS AND TERMS.** Size 2 in. by 6 in., cloth, rounded corners, 540 pp. 5s. net.

**FRENCH-ENGLISH AND ENGLISH-FRENCH COMMERCIAL DICTIONARY of the Words and Terms used in Commercial Correspondence.** By F. W. SMITH. Second Edition. In crown 8vo, cloth, 576 pp. 7s. 6d. net.

**GERMAN-ENGLISH AND ENGLISH-GERMAN COMMERCIAL DICTIONARY.** By J. BITHELL, M.A. Second Edition. In crown 8vo, cloth gilt. 992 pp. 16s. net.

**A NEW GERMAN-ENGLISH DICTIONARY FOR GENERAL USE.** By F. C. HEBERT and L. HIRSCH. In crown 8vo, cloth gilt, 1769 pp. 15s. net.

**ENGLISH-GERMAN AND GERMAN-ENGLISH DICTIONARY OF BUSINESS WORDS AND TERMS.** Size 2 in. by 6 in., rounded corners, 440 pp., cloth. 5s. net.

**SPANISH-ENGLISH AND ENGLISH-SPANISH COMMERCIAL DICTIONARY of the Words and Terms used in Commercial Correspondence.** By G. R. MACDONALD. Third Edition. In crown 8vo, cloth gilt. 833 pp. 12s. 6d. net.

**ITALIAN-ENGLISH AND ENGLISH-ITALIAN COMMERCIAL DICTIONARY.** By G. R. MACDONALD. In crown 8vo, cloth gilt, 1180 pp. 30s. net.

**BARETTI'S ITALIAN AND ENGLISH DICTIONARY.** Compiled by GUGLIELMO COMELATI and J. DAVENPORT. In two volumes, cloth gilt, Vol. I, 796 pp.; Vol. II, 752 pp. 25s. net. (Reprinted.)

**PORTUGUESE-ENGLISH AND ENGLISH-PORTUGUESE COMMERCIAL DICTIONARY.** By F. W. SMITH. In crown 8vo, cloth gilt, 486 pp. 16s. net.

**A NEW DICTIONARY OF THE PORTUGUESE AND ENGLISH LANGUAGES.** Based on a manuscript of Julius Cornet. By H. MICHAELIS. In two volumes, demy 8vo, cloth gilt. Vol. I, Portuguese-English, 736 pp.; Vol. II, English-Portuguese, 742 pp. Each 21s. net. Abridged Edition, 783 pp. 26s. net.

**TECHNICAL DICTIONARY OF ENGINEERING AND INDUSTRIAL SCIENCE IN SEVEN LANGUAGES—ENGLISH, FRENCH, SPANISH, ITALIAN, PORTUGUESE, RUSSIAN, AND GERMAN.** Compiled by ERNEST SLATER, M.I.E.E., M.I.Mech.E., in collaboration with leading Authorities, complete with index to each language. In five volumes. Each in crown 4to, buckram gilt, £8 8s. net complete.

---

# PITMAN'S "ART AND LIFE" SERIES

GENERAL EDITOR:

**WRIGHT WATTS MILLER, B.A.**

LONDON (FIRST CLASS HONS.), M.ED., MANCHESTER  
*Late Campbell Clarke Scholar, University College, London,  
Lecturer of the Borough Road College, and to L.C.C. Literary  
Institutes and the Workers' Educational Association*

A new series of popular introductions to literature, the arts, and other subjects of general interest. The volumes are specially intended for evening students voluntarily attending the cultural, non-vocational classes held by the L.C.C. Literary Institutes, the Workers' Educational Association, and the University Extension Boards, and for all general readers interested in self-culture.

*NOW READY*

**ECONOMICS: THE STUDY OF WEALTH**

By A. L. GORDON MACKAY, M.Litt., M.A., M.Econ. 5s. net.

**BOOKS: AN INTRODUCTION TO READING**

By WRIGHT WATTS MILLER, B.A., M.Ed., Manchester. 5s. net.

**ART: AN INTRODUCTION TO APPRECIATION**

By RAYMOND COXON, A.R.C.A., *Lecturer at the Chelsea School of Art.* 5s. net.

**THE FILMS: THE WAY OF THE CINEMA**

By ANDREW BUCHANAN. 5s. net.

*READY SHORTLY*

**MUSIC APPRECIATION**

By W. J. TURNER.

**THE PLAYHOUSE: A BOOK OF THE THEATRE**

By D. NUGENT MONCK, *Director of the Norwich Players, Maddermarket Theatre, Norwich.*

Each in large crown 8vo, cloth, about 200 pp. 5s. net.

# COMMON COMMODITIES AND INDUSTRIES SERIES

In each of the handbooks in this series a particular product or industry is treated by an expert writer and practical man of business. Beginning with the life history of the plant, or other natural product, he follows its development until it becomes a commercial commodity, and so on through the various phases of its sale in the market and its purchase by the consumer. Industries are treated in a similar manner.

Each book in crown 8vo, illustrated. 3s. net.

Asbestos	Cotton Spinning	Photography
Bookbinding Craft and Industry, The	Engraving	Platinum Metals
Books from the MS. to the Bookseller	Explosives, Modern	Pottery
Boot and Shoe Industry	Fertilizers	Rice
Brushmaking	Fishing Industry, The	Rubber
Butter and Cheese	Furniture	Salt
Button Industry, The	Furs	Silk
Carpets	Gas and Gas Making	Soap
Clocks and Watches	Glass	Sponges
Cloths and the Cloth Trade	Gloves and the Glove Trade	Starch
Clothing Trades Industry	Gold	Stones and Quarries
Coal	Gums and Resins	Sugar
Coal Tar	Iron and Steel	Sulphur
Coffee	Ironfoundry	Tea
Cold Storage and Ice Making	Jute	Telegraphy, Telephony, and Wireless
Concrete and Reinforced Concrete	Knitted Fabrics	Textile Bleaching
Copper	Lead	Timber
Cordage and Cordage Hemp and Fibres	Leather	Tin and the Tin Industry
Corn Trade, The British	Linen	Tobacco
Cotton	Locks and Lockmaking	Weaving
	Match Industry	Wheat
	Meat	Wine and the Wine Trade
	Oils	Wool
	Paper	Worsted
	Perfumery	

## PITMAN'S SHORTHAND

INVALUABLE FOR ALL BUSINESS AND PROFESSIONAL MEN

*The following Catalogues will be sent, post free, on application—*  
EDUCATIONAL, TECHNICAL, LAW, SHORTHAND, FOREIGN LANGUAGE, AND  
ART AND CRAFT

LONDON: SIR ISAAC PITMAN & SONS, LTD., PARKER ST., KINGSWAY, W.C.2