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**THE DYNAMICS OF
INDUSTRIAL COMBINATION**

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THE DYNAMICS OF
INDUSTRIAL
COMBINATION

BY

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PREFACE

PERHAPS an apology is needed for adding another to the long list of books which discuss industrial combination. My excuse is that the prevalent interest in rationalisation has brought the subject to the front again. Rationalisation does not necessarily involve combination. Certainly, combination can take place without any attempt at rationalisation. But the two are often, in fact, dependent upon one another, and are instigated by similar motives. It is the purpose of this book to examine the motives which determine the act of industrial combination and to discuss their connection with rationalisation. In particular, I have tried to draw attention to the significance of the part played by finance in combination and in rationalisation. If the influence of the financial motive and the potentialities of the financial power are appreciated, contemporary business evolution may be better understood, and rationalisation may be more effectively attained.

Much of the material which forms the basis of the arguments and opinions here advanced was obtained while I held a Fellowship of the Laura Spelman Rockefeller Memorial in the United States. Though the responsibility for those opinions and arguments is my own, I must acknowledge my gratitude to Mr. Lawrence K. Frank, an officer of the Memorial, for suggesting many lines of enquiry and for the constant encouragement he gave. I must also thank my colleagues, Principal J. F. Rees and Professor W. J. Roberts, for many helpful suggestions and for reading the manuscript. Without the aid of my wife this book would never have seen the light.

H. A. MARQUAND.

CARDIFF,
December 1930.

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PART ONE
THE BACKGROUND

CHAPTER ONE

GREAT BRITAIN

THE material which the economist sets out to study is continually changing under his eyes. He can construct no satisfactory explanation of man's behaviour at work and in the market without close inspection and thorough understanding of the facts of contemporary commerce and industry. Yet almost as soon as he has composed, refined, and eventually produced his explanation, he finds that the practices of business are no longer what they were ; and the very basis of his generalisations has been destroyed. Thus, while a theory of the production and distribution of wealth, which had assumed as its basis the existence of large numbers of independent producers actively competing against one another, was being elaborately expanded with much refinement of logic, those very conditions of ownership and methods of production were rapidly disappearing. The technique of large-scale production, which Adam Smith had described when the Industrial Revolution was beginning, was steadily improved. As populations grew and markets expanded, the representative firms in the machine-using industries became larger and stronger ; and competition between them was intensified. To many contemporary theorists this competition appeared highly desirable : not only was it the normal practice of business at the time, but it seemed to be a socially necessary and valuable practice. Yet the world of industrial fact paid little heed to what was socially desirable. For the offspring of intensified competition was combination. In the field of wages, collective bargaining began to supplant the contract between individuals ; and in manufacturing industry price agreements or

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outright amalgamations in many instances effected a revolution in business methods. Too often the theories of the economist were left behind by the rapidly changing facts.

The phenomena of combination excited in all industrial countries at first interest and then alarm. In Great Britain the railway companies were again and again, during the nineteenth century, refused permission by Parliament to form amalgamations. In the United States the activities of the combines were exposed and denounced by "muck-raking" journalists and candidates for the Presidency. Congress passed the "anti-trust" legislation of 1890 and 1914. To-day, however, the fears which were formerly felt are not so strong. By public authorities and private investigators numerous inquiries have been made into the nature and extent of the combination movement. The result has been to induce in most observers a belief that an attitude of semi-benevolent watchfulness, or even active encouragement, should be adopted. The Trade Unionist has found that, for the most part, large-scale businesses tend to be more willing than small firms to enter into collective bargains. Moreover, it is easier for him to negotiate with a few large employers than with many small ones. The business man himself has become accustomed, particularly during and since the war, to the methods of big business. In Europe generally, and in Germany in particular, great combines have led the way in an improvement of productive efficiency which has been called Rationalisation. The industrial material is still changing, and the economist should be the last to make prophecies. But there is no doubt that prevailing "public opinion" regards the growth of combination more favourably than it did in the past. Long-cherished beliefs die hard; but once a new idea has "caught on" in the world of business, it seems quickly to supplant the opinions which formerly held the field. Indeed, there may be almost a danger that combination for combination's sake may become the fashion. It would be a mistake to regard

combination as synonymous with rationalisation ; for the resulting preoccupation with mere size would be as prolific in evil effects as the previous blind devotion to unregulated competition.

Combination is "in the air," and its methods are almost daily being extended into new fields. It is not our purpose here to describe in detail the extent to which it actually prevails in particular industries or countries, but rather to examine the motives which lie behind the outward act of combination and the problems of administration and control to which that act gives rise. Interpretation rather than description is attempted. We set out to study dynamics—the difficulties involved in starting a combination movement among firms, or in the rationalisation of an industry, and the friction which has to be overcome if the new type of organisation is to be kept moving.

The necessity for such an interpretation becomes urgent at the present time owing to the rapid extension of industrial combination which has succeeded the War of 1914 to 1919. Though we exclude mere description from our purpose, we may perhaps remind the reader of some recent developments. In Great Britain during the War, Government control of prices and the deliberate encouragement of standardisation and the exchange of information, brought together, frequently around a table at the Ministry of Munitions, manufacturers who had formerly been business rivals.¹ The habit of co-operation, enforced by the State to ensure increased and cheapened production of the materials of warfare, survived the cessation of hostilities. These war-time needs had so stimulated the heavy industries of the whole world that when normal conditions of international trade were restored and the extraordinary Government demand disappeared, an excessive capacity for production threatened to bring about cut-throat competition did not some kind of combination intervene. What was more natural than that those who had co-operated to increase supply to meet

¹ Cp. Levy, *Monopolies, Cartels, and Trusts*, p. 178.

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the war demand should now continue to co-operate to adjust production and prices to the suddenly slackened demand of peace-time? In these and other ways a movement which had been observed and described before 1914² was hastened by the events of the War. Since the Armistice various bodies appointed by the State have conducted enquiries which furnish us with some evidence of the prevalence of the different methods of limiting competition by agreement.

A committee appointed in 1918 by the Ministry of Reconstruction declared: "We are satisfied that trade associations and combines are rapidly increasing in this country, and may, within no distant period, exercise a paramount control over all important branches of British trade."³ Subsequent investigations by committees appointed under the Profiteering Acts, 1919 and 1920, have confirmed these findings. Mr. Patrick Fitzgerald, who has made the most recent detailed enquiry, comes to the conclusion that "England . . . has, it must be admitted, become over-run with quasi-monopolist organisations."⁴ His study of the combination movement shows that in every important industry in Great Britain there exists some form of deliberate limitation of competition. But it is still the looser type of combination which is predominant.⁵

In the cement, the clayware, the non-ferrous metals, the engineering, the meat, the milling, and the shipping industries, various associations exist, which to a large extent limit the influence of competition. In the iron and steel industry the majority of associations which existed in 1919⁶ have since decayed.⁷ However, although competition is still prevalent, and the British industry has not found itself organised to an extent sufficient to

² E.g. by Macrosty, Carter, and Levy.

³ *Report of the Committee on Trusts*, 1919, Cmd. 9236.

⁴ P. Fitzgerald, *Industrial Combination in England* (1927), p. 198.

⁵ "In spite of the public attention which consolidations attract, they cover but a small proportion of industry as a whole." *Report of the Committee on Industry and Trade*, Pt. 1, 1927, p. 6.

⁶ See *Report of the Committee on Trusts*, 1919.

⁷ Fitzgerald, *op. cit.*, pp. 40-52.

enable it to join the European cartel, nevertheless thirty companies, which "owe their size primarily to amalgamation,"⁸ "probably control over 80 per cent. of the output of pig-iron and steel."⁹ In other industries we find stronger associations at work. The whole of the salt industry, for example, "is under fairly effective control,"¹⁰ by the Salt Manufacturers' Association, though its power is limited by the possibility of the entry of new firms into the industry.¹¹ The combine controlled by Lever Brothers Ltd. produces from 70 to 75 per cent. of the total British output of soap, and the United Kingdom Soap Manufacturers' Association, of which it is the chief member, regulates prices for 80 per cent. of the British total.¹² When we turn to the electrical industry we find in existence a loose association which is attempting to become something stronger. A recent publication by the British Electrical and Allied Manufacturers' Association¹³ seemed designed to promote the growth of some kind of organisation to limit the prevailing¹⁴ competition. After surveying the state of the industry in other countries, it suggested that the correct policy for the British electrical industry is "to tighten up its own organisation, form a compact group of manufacturers with a common policy both in manufacture (prices and orders) and in finance, and at the same time strengthen the central association."¹⁵

Examples might be multiplied. But it is sufficient here to point out that there is abundant evidence in Great Britain of the practice of limiting competition by forming

⁸ Fitzgerald, *op. cit.*, p. 39.

⁹ *Ibid.*, p. 40. So far as price control is concerned, it should be noted that "the influence (of these companies) on the open markets for those products is not proportionately great."

¹⁰ *Ibid.*, p. 74.

¹¹ "There is nothing to prevent new enterprises in the industry." *Profiteering Acts Report on Salt*, Cmd. 832, p. 11.

¹² *Profiteering Acts Report on Soap*.

¹³ *Combines and Trusts in the Electrical Industry*. British Electrical and Allied Manufacturers' Association, 1927.

¹⁴ Levy, *Monopolies, Cartels, and Trusts* (1927).

¹⁵ *Combines and Trusts in the Electrical Industry*, p. 96.

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among producers "rings" or associations which exert considerable influence on trade policy, and may achieve comparative stability of structure.

We are concerned, however, with the loose associations or cartels which desire "control of the market" only in so far as they may lead to the growth of consolidations which aim at "independence of the market."¹⁶ The importance of the latter in Great Britain, though still small as compared with that of similar combines in other countries, is gradually increasing, and is likely to continue to do so in an atmosphere which becomes more and more favourable to the growth of large-scale business.

We have already mentioned Lever Brothers Ltd. This firm is one of the outstanding units of its type in the world. It "produces 75 per cent. of all soap made in this country," and 90 per cent. of that made by the United Kingdom Soap Manufacturers' Association.¹⁷ By 1923 its associated companies numbered one hundred and fifty, of whom forty were engaged in soap manufacture. It has advanced far in the direction of controlling its supplies of raw material: "Thus the company owns plantations and is interested, *inter alia*, in shipping, whaling, seed crushing, oil refining, and fisheries."¹⁸ Though its founder was a grocer, it did not during his lifetime enter the business of the distribution of its products, except that it established retail fish shops.¹⁹ Recently, however, the amalgamation of its ordinary share capital with that of Margarine Union, under the name of Unilever, has brought this concern into greater direct contact with the grocery trade. Its control of the supply of raw material is paralleled, in the trades supplying goods for domestic consumption, only by the co-operative movement, whose great creation, the Co-operative Wholesale Society, is engaged in many lines of manufacturing and extractive industry as well as in transport on a large scale.

¹⁶ Kurt Wiedenfeld, *Cartels and Combines*. League of Nations, 1927.

¹⁷ Committee on Industry, *op. cit.*, p. 86.

¹⁸ *Ibid.*

¹⁹ Mac Fisheries Ltd.

In banking, the stability which is conferred by great size, the possibility of effective supervision of a large-scale business which is routine in character, and the need to keep pace with expanding industrial undertakings have acted as inducements to the extensive amalgamations which created the "Big Six."²⁰ Evidently there is strength in the argument which defends the creation of these large banking concerns on the ground that banking combination of necessity advanced *pari passu* with combination in industry.

In the chemical and explosives trades the latest merger has united, under the control of Imperial Chemical Industries four companies²¹ which previously dominated the soda trade, the dye trade, and the explosives trade. Nearly the whole²² of the manufacture of wallpaper is controlled by the Wallpaper Manufacturers Ltd. "Most of the output"²³ in tobacco is controlled by the Imperial Tobacco Company. Even in the textile industry, where competition still prevails and recent attempts to limit it have failed,²⁴ one important section, that concerned with the production of sewing cotton, is controlled by two combines, J. & P. Coats, and the English Sewing Cotton Company, which do not compete with one another.²⁵

Cartels and combines have not yet prevailed in Great Britain as they have in other great industrial countries, notably in Germany and the U.S.A. This is due partly to the fact that, except in stone, earths, and salt²⁶ Great Britain has no natural monopoly of any raw material of industry. There is no parallel in this country to the potash monopoly of Germany, the nitrate monopoly of Chili, the diamond monopoly of the Transvaal, nor even to the quasi-monopoly of petroleum in the United States.

²⁰ The Midland, National Provincial, Lloyds, Barclay's, Westminster, and Martin's.

²¹ Brunner Mond, The United Alkali Company, The British Dye-stuffs Corporations, and Nobel Industries Ltd.

²² Fitzgerald, *op. cit.*, p. 155.

²³ *Ibid.*, p. 144.

²⁴ E.g. by the Cotton Yarn Association.

²⁵ Fitzgerald, *op. cit.*, p. 15.

²⁶ Levy, *Monopolies, Cartels, and Trusts*, p. 182.

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Coal and iron are the chief mineral resources of the country, and British producers have always been subject to foreign competition in the world markets for which a great part of their product is designed. The absence of tariff protection, moreover, has preserved competition²⁷ and restricted combination. It is also true that much of British industry is of a kind where skilled labour is a more important factor than the use either of heavy machinery or of that large-scale operation which brings amalgamation and concentration in its train. The organisation of marketing which in other countries is being undertaken to an increasing extent by manufacturing concerns, is left in Great Britain more often to the wholesale merchants who have played so important a part in our economic history.²⁸

In spite of these influences, however, the examples, by no means exhaustive, which have already been given indicate that even in this country the incentives to combination of all kinds, though perhaps not so numerous nor so urgent as elsewhere, are steadily at work to change the character of business undertakings. The absence of tariff protection may itself provoke combination. One of the main reasons for forming Imperial Chemical Industries Lord Melchett has stated, was to secure the power "to deal with similar large groups in other countries on terms of equality . . . instead of leaving it to individual units to make arrangements for the world's competitive conditions as best they can."²⁹ The Electrical and Allied Manufacturers' Association, in urging the formation of a closer union in their industry, points to the competitive power in the British market of foreign producers, and goes on to say: "The future prosperity of the industry is sufficient justification for close co-operation in prices, and in manufacturing and marketing conditions. On a conservative estimate, the industry has not more than two years in

²⁷ Levy, *Monopolies, Cartels, and Trusts*, p. 207, and Fitzgerald, *op. cit.*, p. 205.

²⁸ *Vide, e.g.* G. C. Allen, *The Industrial Development of Birmingham and the Black Country, 1860-1927*, *passim*.

²⁹ Quoted by Fitzgerald, *op. cit.*, p. 99.

which to effect the necessary changes before the testing period will come." ³⁰ The formation of international cartels may lead to the construction of British cartels in order that they may become members of such organisations. Moreover, even in British industry all observers speak of a tendency to replace the skilled worker by the methods of mass production and by the semi-skilled machine-minder.

Rationalisation is everywhere discussed ; and all who talk about it are agreed that in most instances combination of existing separate firms must precede that concentration of production in the most efficient plants, and that elimination of waste which they desire to secure. The Trades Union Congress itself is engaged in official conversations with the organised employers, seeking to encourage rationalisation, while mitigating the hardships of labour displacement which the accompanying combination must bring about. The State also, in striving to facilitate the process of rationalisation in the coal industry, has made provision for amalgamation—by compulsion if necessary. In transport it has already amalgamated the railways of the country into four great systems in order to prevent overlapping and waste ; and the Minister of Transport has told us to expect definite proposals for grouping into one concern the whole of the passenger-carrying interests in London.

The present depression in British trade, when it first set in, had the effect of breaking up the looser trade combinations. As prices fell, and it became more difficult to make profits, both the weaker and the stronger members began to break away from the various associations, the former in order, even by selling below their total costs of production, to pay interest upon their borrowings, and the latter because they found themselves better able to meet falling world prices without the handicap of adherence to the prices fixed by the cartel. The depression, however, has proved to be so chronic that it is now having the effect of encouraging combination. The blind optimism which saw at the turn of every year signs of a " trade revival "

³⁰ *Combines and Trusts in the Electrical Industry*, p. 97.

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has vanished. It is admitted on every hand that mere optimism is not sufficient, and that the repetition of the mystic words "trade cycle" does not in itself ensure that a long slump is bound to be followed by a boom. Drastic reorganisation begins to be demanded, and eyes turn to Germany and the United States, industrial countries where comparative prosperity existed for some years, while the number of British unemployed seemed to be constant. In those countries, it is seen, the building up of large-scale industrial units has been practised as it never has been in Great Britain. Hence the demand grows for rationalisation, for the elimination of obsolete plant, machinery, and methods, and the concentration of industrial processes under deliberately planned and integrated control.

"The large capital investments which concentration encourages make the foundation of competing firms increasingly costly and difficult."³¹ There is a tendency for the expansion of industry to be effected³² by the enlargement, through amalgamation and otherwise, of the already existing undertakings, rather than by the entry of new units. The improvement of industrial technique seems to depend more and more upon costly scientific research, and the development of a specialised administrative ability which is only just beginning to make its appearance. Such advantages are—to their fullest extent—at the disposal of none but the larger industrial organisations. Moreover, whatever be the conditions of fiscal policy or natural resources or technical efficiency, the financial incentives to concentration will still remain to play their part.

Evidently, developments such as these call for elucidation and explanation. It is not sufficient to treat combination as an exception to a general rule of competitive business practice, nor to describe each example of the movement as if it were *sui generis*. There must be some

³¹ Levy, *Monopoly and Competition*, p. 300.

³² *E.g.* in the Iron and Steel Industry, *vide* Fitzgerald, *op. cit.*, p. 38.

common set of motives at work to bring about so general a resort to the new methods of organisation. We shall proceed to examine what those motives are. The most fruitful method of examination will prove to be comparison. Although events have moved far enough in Great Britain to warrant close enquiry into the methods and motives of industrial combination and its relation to rationalisation, the examples of the new type of industrial structure are not sufficiently numerous, nor is their influence yet great enough to enable us to make confident generalisations. We must turn to countries where large-scale operations are more common. The rationalisation movement in Germany has already received much attention from writers in English. There is no need to reiterate what has already been said by them.³³ Instead, let us consider the United States of America. That country, no less than Germany, has been the home of large-scale industry and of deliberately planned and executed "scientific" business administration. Many arguments in this book will be illustrated by reference to American experience, and some space will be devoted to discussions of industrial developments in that country. Our object is to discover tendencies rather than to record details, and the general argument will apply equally well to Great Britain or to any other industrial community. It will be as well, however, before going further, to survey briefly, as we have already done for Great Britain, the contemporary background of the combination movement in the United States.

³³ E.g. A. P. L. Gordon, *The Problem of Trust and Monopoly Control*, and W. Meakin, *The New Industrial Revolution*.

CHAPTER TWO

THE UNITED STATES OF AMERICA

THE economic conditions under which industry is carried on in the United States have favoured large-scale operation and the growth of "big business." The natural resources of the country are abundant, and the majority of industries have no need to import their raw materials from abroad. The very distance between the United States and the European industrial countries would have operated to check foreign competition. To this natural advantage there has been added protection for the American manufacturer by means of a tariff barrier. In the wide internal market thus created, where population has increased with astonishing rapidity, it is not surprising to find that in businesses carried on under conditions of "increasing returns," where heavy overhead charges make cut-throat competition as tempting as it is ruinous, combination has largely superseded competition. Circumstances have favoured the growth of large industrial units, and it is always easier for a few large firms than for many small ones to combine.

The character of the population, too, has not been without its effect upon business enterprise. The frontier tradition of pioneer adventure and restless seeking after new fields of conquest is still to be traced by the observer in contemporary America. The violence and extravagance of the newspaper, the politician, the criminal, which astonish the European visitor who is accustomed to more dignified and less noisy ways of doing evil, have their parallel in the deeds of the founders of the great American trusts. Carnegie and Rockefeller, Harriman and J. P. Morgan, are figures the magnitude of whose operations

invested them with heroic importance in the business epic. That they often built upon a large scale simply because it was a large scale, no one who knows anything of America can doubt. The feats of such men attracted world-wide attention, and in America itself excited fears of a business monopoly and a "money trust." Numerous committees and commissions have sat to enquire into the extent and ramifications of the "trust movement" and have produced volumes of evidence and conclusions. Their contents the diligent researcher finds both interesting and exciting, but their size and number inevitably daunt and dismay him. The Federal and State Governments have sought by legislation to extend the common law objections to associations in restraint of trade, so as to prevent the elimination of competition by combination. But such efforts—the general character of which will be discussed in a later chapter—have met with little success. To each new law or decision of the courts the lawyers of the great corporations have replied by some new device—and America still remains a land of large-scale industry, over a large portion of which full and free competition between producers no longer exists.

Dr. Willard Thorp has made, on the basis of the figures of the Census of Manufactures for 1919, an analysis³⁴ of the extent and character of large-scale industry in the United States. The limitations imposed by the character of the information which is available in the Census figures, and by the secrecy concerning the identity of undertakings which the Bureau of the Census is obliged to maintain, have made it impossible to survey all the phenomena of combination. The more intangible types of alliance, the holding company, the combination held together by interlocking directorates, or the trade association, have not been taken into account. Nevertheless some interesting and valuable deductions can be made.

The enquiry shows clearly that even in America the

³⁴ W. Thorp, *The Integration of Industrial Operation*, Government Printing Office, Washington, D.C., 1924.

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great majority of firms operate only one establishment. Ninety-two per cent. of the manufacturing and mining establishments in the United States are shown to be carried on each by a separate firm. The remaining 8 per cent (21,464 establishments) are controlled by central-office groups.³⁵ A central-office group "exists when a single central-office operates enterprises in more than one locality or in more than one industry, or more than one plant within a locality and industry, providing those plants are sufficiently separate entities to keep separate books of account."³⁶ Of these groups the "great majority" fall somewhere between the two extremes of "huge trusts" and the small combination of two or three establishments.³⁷ Evidently the producer of small or moderate size still persists in the United States, as in Great Britain.

But the influence of the small producers is not as great as their numbers. Dr. Thorp estimates that more than one-third of all the wage-earners in the country were in 1919 employed by the 5838 central-office groups then existing. The following figures given by Professor D. H. Macgregor,³⁸ bringing the information down to a later date,³⁹ show even more clearly how important a part is now played by the small number of larger establishments:—

Value of Product (\$1000).	Establishments Per Cent.	Wage Earners Per Cent.	Product Per Cent.
5-20	31.6	2.2	1.1
20-100	36.9	8.2	5.7
100-500	21.4	19.6	15.7
500-1000	4.9	12.9	11.1
over 1000	5.2	57.1	66.4

³⁵ Thorp, *op. cit.*, p. 103.

³⁶ *Ibid.*, p. 101.

³⁷ *Ibid.*, p. 111.

³⁸ Macgregor, *The Rationalisation of Industry*, British Association Paper, 1927.

³⁹ 1923.

Dr. Thorp's figures show that "the central-office form of combination is not restricted to any particular type of industry, but has developed throughout the entire industrial system."⁴⁰ But it is also shown that thirteen industries can be distinguished which "represent the most extreme cases of large-scale production, measured both by wage-earners and by value of products." They are: sugar-refining; rubber boot and shoe making; rubber belting and hose; copper smelting; lead smelting; zinc smelting; iron and steel works and rolling mills; iron and steel-blast furnaces; steel shipbuilding; locomotives; steam railroad-cars; electric railroad cars; and ordnance and accessories.⁴¹ When Dr. Thorp examines what proportion of each leading industry is controlled by central-office groups, he finds that 78·1 per cent. of railroad repair shops and 19·7 per cent. of chemical manufacturing establishments are so controlled, and that the other industrial groups which show a higher proportion of establishments in central-office combinations than the average are—in order: textiles; stone, clay, and glass products; iron and steel; leather products; and food and kindred products.

The deductions which Dr. Thorp was able to make were limited by the scope and nature of his enquiry. Particularly, they take no note of the financial combination, and the holding company which controls a number of enterprises through the ownership of shares in joint-stock companies rather than by outright ownership of physical assets. Some further light has been thrown upon the situation by a recent report of the Federal Trade Commission.⁴² Here it is shown that :—

6	Companies control	$\frac{1}{3}$	of the total developed water powers.
8	" "	over $\frac{3}{4}$	of the anthracite reserves.
30	" "	" $\frac{1}{3}$	of immediate bituminous reserves.
2	" "	" $\frac{1}{3}$	of copper ore reserves.
30	" "	"	12 per cent. of petroleum reserves.

⁴⁰ Thorp, *op. cit.*, p. 106.

⁴¹ *Ibid.*, p. 179.

⁴² Federal Trade Commission, *Report on National Wealth and Income* Senate Resolution, 67th Congress, Session 4.

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The figures obtainable give no indication of the influence upon prices which may be exerted by such large combinations, for the "anti-trust" laws ensure that any attempts at price-regulation by agreement or by the use of monopoly power will be made only in secret. We are concerned, however, rather with the formation and character of large-scale undertakings than with any methods of price control which they may employ. The evidence is fairly clear that, though the small producer still exists in large numbers, his share of the direction of the national industrial activity is comparatively insignificant. The scale of successful operation varies considerably from industry to industry, with differences in the nature of the product⁴³ and of the supply of raw material.⁴⁴ But leadership in the American business world rests with the large corporations. It is they who set the fashion—in mass production, in scientific management, in profit sharing, in "employee representation," in cost accounting, and so on.

Even in industries where large-scale production is not notably economical and huge individual units on the scale of the steel mills or the rubber factories do not exist, there is a tendency towards the concentration of control in a few hands through the medium of joint-stock organisation of various kinds. Recent years have seen a great revival of activity in the United States in the combination of many firms under one control. The prevailing "atmosphere" of business is favourable. During the month of April 1926, to take one example entirely at random from a selection of newspaper cuttings, the *New York Times* contained announcements of no less than eleven mergers. The movement which was begun by the trust-builders of the nineties has by no means come to an end.

⁴³ *E.g.* the complex machinery required in sugar-refining makes small-scale production well-nigh impossible.

⁴⁴ *E.g.* the American rubber industry imports its raw material from South America or the East Indies. Importation in bulk is the most economical, and only large-scale units can afford the large outlay which is necessary.

A change has, however, taken place in the methods by which the great combines maintain their leadership. The ruthless elimination of competition by price-cutting which was so characteristic a weapon of the pioneers of combination has disappeared. The influence of the United States' anti-trust legislation is discussed in more detail in a later chapter. As we shall show, there seems to be no doubt that this legislation has had the effect of checking the desire to form monopolies. The large corporation finds that it is not desirable to maintain an absolute monopoly. "It often sells just enough cheaper than its small competitors to enlarge its business, but not enough cheaper to eliminate all competitors. As long as the 'marginal' concerns keep up the general retail price level it can retain the lion's share of the benefits of its economies and so amass profits." ⁴⁵ Prices are maintained at a level which allows the larger and more efficient units in the industry to earn large surpluses "concealed partly by the essential secrecy with which many of the price arrangements are conducted, partly by the continued existence of a number of small independent businesses which follow the trust prices and furnish protective colouring." ⁴⁶

Such a change in the customs of the business world has brought with it a change in the character of competition. A general desire for stability; a sentiment against the spoiling of markets; the existence of "goodwill" appertaining to particular firms which persists even when their prices are high; the potential ability of the more efficient constituents in an industry to undercut drastically the less powerful; informal "gentlemen's agreements" and understandings; all these influences have operated to check the competition of producers on the same plane within a particular industry. But there still remain other directions for competitive effort to take. The Railways Act of 1921 in Great Britain, through the authority over rate-fixing which it gave to the Rates Tribunal and the

⁴⁵ *The New Republic*, 21st October 1925.

⁴⁶ J. A. Hobson, *The Conditions of Industrial Peace*, p. 14.

fixing of a standard net revenue, has practically eliminated direct price-competition in rail transport. As a natural result, the railway companies are prosecuting with renewed vigour a competition in "facilities" or "service." No observer can fail to note a similar situation in America. As industrial technique has gradually become perfected, "production is relatively easy, distribution is the tough job."⁴⁷ The vast increase in advertising which one notices on every hand in Great Britain and still more in America has not come without cause. It was an existing demand for their services which called into being the army of "publicity experts" who strive so zealously and so clamorously to change our tastes and shape our manner of living. The annual expenditure in the United States upon advertising has been estimated at \$1,284,000,000, involving the labour of about 600,000 workers.⁴⁸ Mr Hartley Withers has put the total bill in this country at £100,000,000 a year.⁴⁹ Professor Veblen has described these phenomena in striking but not inaccurate language. "The competition," he said, "which used to run mutually between the producing sellers has . . . increasingly come to run between the business community on the one side and the consumers on the other . . . The old-fashioned plan, so far as it was effective, might be called a competition in workmanship; the later plan, so far as it has gone into effect, is a competition in publicity and scarcity."⁵⁰

This new competition is particularly remarkable in the form of competition *between* industries. Direct competition in production *within* any industry having ceased or at least declined considerably in intensity, that industry as a whole proceeds, through publicity, to persuade the customer that its product is well-nigh indispensable to the good life. The American population has been urged in turn to "Eat More Bread," "Eat More Fruit," "Drink

⁴⁷ Stuart Chase, *The Sweep towards Industrial Combination*. In *New Tactics in Social Conflict*, p. 146.

⁴⁸ Stuart Chase, *The Tragedy of Waste*, p. 109.

⁴⁹ Withers, *Poverty and Waste*.

⁵⁰ Veblen, *Absentee Ownership*, p. 51.

More Milk," " Eat More Butter," " Eat More Cheese," and " Eat More Meat." ⁵¹ Not only does the industry attempt in this way to compete with *all* other industries for a larger share of the annual expenditure of the population; it will also strive to advance the sales of its product at the expense of some other commodity or commodities for which it can be used as a substitute or alternative. Such inter-industrial competition is of great importance in the United States and of growing significance in Great Britain. The aluminium manufacturers have organised a campaign designed to displace enamel ware, to which the enamel ware manufacturers have replied by a counter-offensive. ⁵² That the extensive advertisement of artificial silk has had some effect upon the consumption of cotton or other substitutes (though, fortunately for cotton, the two are often combined in manufacture) can hardly be doubted ; and it has been suggested ⁵³ that the recent formation of an international artificial silk cartel may be in part designed to maintain this position. Advertising of belts has helped to secure the almost complete disappearance of braces (or suspenders as they are called) from America. Timber associations and stone associations or brick associations compete vigorously for the public's patronage. Rugs attempt to displace carpets. But examples might be multiplied and whole books be written on the policies and achievements of the higher salesmanship. The atmosphere in which it is carried on is familiar.

What is particularly interesting in this connection to the student of rationalisation is the recent rapid growth of trade associations. To many observers interested in the subject they are the most significant phenomena of the moment. It has been estimated after careful enquiry by the National Industrial Conference Board that " it is fairly

⁵¹ H. J. Donnelly, *The Truth in Advertising Movement as it affects the Wealth-producing Factors in the Community*. Academy of Political Science, Vol. 115, 1924.

⁵² Donnelly, *op. cit.*, 161.

⁵³ By Sir Josiah Stamp in an article in the *Manchester Guardian Commercial Annual Review*, January 1928.

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safe to assume the existence of between eight hundred and one thousand Trade Associations of national or interstate character at the present time."⁵⁴ On the ground that their activities help greatly to improve industrial and commercial efficiency, these Associations have been encouraged by the United States Department of Commerce, under the direction of Mr. Hoover. It is they which have undertaken much of the joint advertising which has just been mentioned. In addition they seek to promote joint commercial and industrial research, the making of arrangements for co-operative insurance, the provision of traffic bureaux, the organisation of relations with employees, the arbitration of disputes between members; and represent the industry in public enquiries.⁵⁵ Such activities give no ground for complaint. But when the Trade Associations begin to provide "education in cost-accounting" there is room for suspicion. As will be shown, however, in the last chapter, the courts have on the whole not proved antagonistic to the Trade Associations, and they are free to continue most of their activities without hindrance from the law.

Nevertheless, it can hardly be denied that the influence of the associations has tended to alter the character of competition. Let it be conceded that, by providing that complete knowledge of the market which the economist in his arguments concerning prices in static economics assumes to be present, they have improved rather than checked competition. (And in many instances this is at least doubtful.) Even so, the conditions of uniform practice in cost-accounting with regular instruction of all members in these matters by the central association, are very different from the assumptions usually made concerning independent competing producers. It must further be borne in mind that the Trade Associations have led the way in that competition between commodities

⁵⁴ *Trade Associations, their Economic Significance and Legal Status*, National Industrial Conference Board, p. 326.

⁵⁵ *Trade Associations and Business Combinations*, American Academy of Political Science, Proceedings, January 1926.

and between industries which is characteristic of present-day business.

There still remains to be mentioned a type of competition *within* an industry which has not been eliminated and which is of great importance. We find businesses on a given plane of activity within a trade, competition having perhaps been eliminated on that plane, extending their operations to planes above and below. Manufacturers, no longer concentrating upon competition among themselves, begin to compete with the wholesaler by selling direct to the retailer, or even to compete with the retailer by setting up their own organisation for selling direct to the consumer. In the other direction they may attempt to buy control of the supply of their raw materials. The rapid growth of chain stores and department stores, and the acquisition by them ⁵⁶ of manufacturing plants, have been the most notable recent advances in a development which had already gone far in the heavy industries.

It remains true that the entry of new firms into well-established industries is not entirely free, and is restricted by the expensiveness of the provision of capital. It will be possible for the existing constituents in such an industry, operating under a rule of "live and let live," to maintain prices at a level high enough to provide large differential gains to the more efficient producers. But what that level is will vary from industry to industry. Only those combines which have succeeded in monopolising some raw material have effectively "lamed" fresh competition.⁵⁷ In other cases, those who regulate prices will have to be very careful to ensure that they are not fixed so high as to invite some other industry to enter actively upon the competition of substitution, nor so high as to stimulate the provision of capital for a new entrant who will either compel a price-war or have to be bought out at an unprofitable expense. Dr. Liefmann has pointed out that 'competition has the tendency, when pushed to its limit,

⁵⁶ *E.g.* by Woolworth and Marshall Field.

⁵⁷ Levy, *Monopolies, Cartels, and Trusts*, p. 208.

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to destroy itself and to be turned into monopoly. Since the cheapest seller can often lower costs by producing the whole supply, it follows that the maximum satisfaction of wants is obtained when there is only one seller, competition remaining latent in the background, effective only when the seller does not employ the most efficient methods of production, or when, as a monopolist, he appropriates a profit much above the economic marginal return.”⁵⁸ That latent competition is still prevalent, though, as we have attempted to show, it has actually worked in such a manner as to prevent the emergence of the one highly efficient seller. It forms the most effective limitation to the growth of monopoly in all industries except those where it is possible for raw material to come under a single control. Thus the earlier fears of the dominance of a few powerful monopolists over the whole of economic life are seen to be unjustified—at least in the form in which they were once expressed. The United States Steel Corporation found itself quite unable to resist these forces of latent competition, except by the organisation of pools⁵⁹; the monopoly of Standard Oil, which at one time appeared so formidable, has, quite apart from the legal dissolution of the holding company, entirely disappeared⁶⁰; and other similar combines⁶¹ have preferred to seek leadership of their industries rather than monopoly. Professor Gay has well said that “in the fluctuations between competition and control, it is not, historically speaking, a question of ‘either—or’; it is rather a problem of ‘more or less.’”⁶²

This brief survey of contemporary British and American business practice has been merely a statement of the conditions of our problem. The object has been not to

⁵⁸ R. Liefmann, *Monopoly or Competition as the Basis of a Government Trust Policy*, Quarterly Journal of Economics, Vol. 29, February 1915.

⁵⁹ U.S. v. U.S. Steel Corporation *et al.*, 1915, *Federal Reporter*, Vol. 223, p. 314.

⁶⁰ G. W. Stocking, *The Oil Industry and the Competitive System*, pp. 106-111.

⁶¹ E.g. the International Harvester Company.

⁶² Academy of Political Science, Session on Trade Associations.

bring forward new information but to remind the reader of facts already familiar, and to arrange those facts in an order significant in the light of what is to follow. To summarise, a study of the evolution of business organisation during the last twenty years makes possible three main generalisations. Firstly, it is evident that large-scale operation, in both manufacture and distribution, still yields economies that make it attractive. Secondly, the character of competition has changed. As the result either of outright agreement or of tacit understanding, price competition is less common than it was ; while competition between industries, or—within industries—for control of extractive and distributive processes, tends to take its place. Lastly, we have seen that public opinion, expressed in legal decisions, in books, and in public documents, is now inclined to encourage, where formerly it desired to check the expansion of big business. We may conclude, then, that the growth of combination in large-scale units calls for a treatment somewhat different from that which it has usually received in the past. The danger of monopoly has been shown to be less menacing than was feared. Into the price policy of the trusts sufficient enquiry has already been made. What is more important is to study the efficiency of these new business organisations, to examine the nature of their structure, and to determine how far they satisfy the tests of technological and administrative economy. Is their framework a “rationalised” one, and will their administrators be able to keep them efficient and active without the old competitive stimulus ?

PART TWO
TYPES OF INDUSTRIAL STRUCTURE

CHAPTER THREE

THE INCENTIVES TO COMBINATION

THE motives which have inspired the formation of combinations of all kinds have been exhaustively studied by the numerous writers who have entered this field of enquiry. Though each of these authors has summarised his conclusions in a different way, those conclusions have always been substantially the same. What is important is not so much the actual enumeration of incentives as the degree of significance attached to each of them. Never probably in the formation of any combine has one advantage only, to the exclusion of all others, been present to the minds of the promoters. A considerable number of factors will generally be responsible for the decision to form such a new undertaking. Nevertheless, it is possible for the economist, after having studied the history of many combinations to analyse and classify the predominant motives which have led to their formation. When this classification has been made the phenomena of combination in general may be studied with a view to estimating the effect of one or other of these predominant incentives in particular.

The chief motives which have led to the formation of combinations may, then, be classified as technological and administrative; commercial or strategic; financial; and personal.

We may dispose briefly of the last-named set of motives. The full examination of them is properly the province of the sociologist or the psychologist. The economist must concentrate his attention upon motives directly concerned with tangible gain. Yet it can scarcely be denied that these personal or psychological motives do exist. They

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may perhaps be described as the threads which bind together the whole complex of motives involved. That is to say that often, where the technological and commercial advantages of fusion were none too obvious, and where the financial situation was not especially favourable, the advent of some forceful personality has brought a combine into existence. A strong desire for power, or an artist's impulse to construct a concern whose efficiency and whose perfection of economic and administrative organisation should be to its creator a source of æsthetic satisfaction seems to be at work in such instances. An enterprise so built up, if it is to be successful must of course rest upon the rock of a sound economic basis. But examples will easily occur to the reader's mind of great businesses of this kind which look with anxiety towards the day "when the old man is gone," or have actually declined in prestige and power and even in efficiency when the guiding and inspiring personality has been removed. It is useless to attempt an interpretation of industrial structure upon the assumption that even the big business man is at all points careful to calculate a nice balance of economic advantage and disadvantage before proceeding to action. Intangible psychological forces have undoubtedly played their part in the combination movement. We may note the fact and pass on. Indirectly, we shall return to this aspect of the matter at the end of this book. For some space yet we must be concerned with matters that are more easily measured.

On the side of technology the motive discernible is the desire to secure to the fullest possible extent the well-known advantages of specialisation and division of labour, while combining the differentiated functions into an administrative whole. What is sought is to obtain the economies of large-scale operation. There is no need to give a very lengthy account of what these economies are. It is a commonplace that they exist, and every trust-builder who was ever challenged to justify the grouping of many smaller firms into one large one has done so by

pointing to the technological and administrative economies which great size alone can secure. At every stage of the industrial process the larger firm, provided of course that there is a market wide enough to take off its large output, and that its size does not make efficiency of administration impossible, tends to have certain advantages over the smaller.

In buying raw materials, fuel, and power, it is able to make purchases in bulk. It will find other firms eager to tender for its large orders, and thus will have opportunities for comparison and selection which are denied to its smaller rivals. Moreover, it will be able to ensure, as those who place a small order never can, the supply of its requirements exactly to its own standards and specifications.

In actual production, the large concern is further enabled to profit by division of labour. Each individual in its employ can be given his own job to do ; there need be no waste of time or skill in standing idle or transferring from one kind of work to another. So, too, with the mechanical equipment. The manufacturing plant will tend to be worked to capacity, and every machine, like every worker, can be given its own particular task to perform, so that it can turn out the product with such accuracy and precision that little or no human skill is required to adapt it to its final purpose. Products are standardised ; and the large scale of the operations enables by-products to be utilised and waste to be disposed of profitably in bulk. Research laboratories may be maintained, and the cost of their upkeep becomes negligible when spread over every unit of an enormous output.

When he markets his product the large-scale producer can profit by the cheapness of transport in bulk, and may even maintain his own services by road, rail, or water. He may go in for " nation-wide " advertising, and maintain a selling force considerably less costly, per unit of product sold, than that of smaller firms. He will find that the greater the size of his concern and the volume of its output the better it will be known to the public, and that there-

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fore one product bearing his name will advertise another. He may even go so far as to set up his own distributing and wholesale and retail selling agencies, thus earning for himself the profits which formerly went to middlemen.

In management, as in production, the large firm will find it possible to utilise labour more economically than the small. It will reduce its overhead expenses by being able to keep every member of its clerical staff fully occupied every day, and by obtaining specialised skill in each of its office departments. By instituting systems of detailed cost-accounting it will be able to track down waste and direct the attention of engineers and research workers to those of its processes where improvement would be most profitable. Finally, it may minimise the risks of imperfect anticipation of the demand for its products or of the supply of its raw material by maintaining a specialised staff whose job is the collection of trade statistics and the forecasting of business trends.¹

It will be seen that many of these economies which are sought (but by no means always achieved) by combinations are in their nature commercial as well as technological. But they are concerned chiefly with the efficiency of the administration of the business, as it were, internally. No hard and fast line can be drawn between any of these categories. But in our third class of incentives, which we have called commercial or strategic, we include considerations affecting the relations of the business to competitors, to the consuming public, and to organised labour.

Combination has been well described by Professor

¹ With this account of the economies of large-scale operation compare Thorp, *op. cit.*, pp. 86-87, the Committee on Trusts, p. 16, and Jones, *op. cit.*, pp. 500-530. The distinction between the internal economies peculiar to the business itself and the external economies common to the whole trade is not here emphasised, because it is not at this point relevant. We are concerned merely with the aims of manufacturers, deciding to produce on a larger scale, and not, for the moment, with the forces which tend, in most trades, to make it impossible for one concern to become the sole producer. *Vide, e.g.* Marshall, *Principles*, pp. 284-286, 457-459, etc.

Macgregor as a "revulsion against risk."² It has been brought about by a desire to eliminate risks of two kinds, both of which are outcomes of the competitive struggles of independent producers. The first is the danger of cut-throat competition. There has been a tendency, particularly marked in industries where overhead costs are high and business is carried on under conditions of rapidly increasing returns, for competition to force prices below the cost of production. In such circumstances there is naturally an incentive to combination in order to protect investments. This desire to avoid the risk of competition may take many forms. It often operates only after a period of intense competition has brought many independent producers to the point where they fear that bankruptcy may ensue. But it may well inspire adroit business organisers to protect themselves against a potential competition which has not yet developed. For instance, the Eastman Kodak Company and the United Shoe Machinery Company owe their monopoly position mainly to the purchase of patents which they did not intend to use, but which they feared might be used against them.³ An even better example may be drawn from the American automobile industry, where, after the formation in 1908 of the General Motors Company of New Jersey, that company, partly by exchange of stock and partly by outright purchase, bought control of ten companies making motors and accessories. "W. C. Durant at that time stated that one of the reasons for amalgamating into the General Motors Company in 1910, concerns making so many widely varying products was that there was no certainty as to what would happen. 'They say I shouldn't have bought Cartercar,' he said. 'Well, how was anyone to know that Cartercar wasn't to be the thing? It had the friction-drive and no other car had it. How could I tell what these engineers would say next? Maybe friction-drive would be the thing. And

² Macgregor, *The Rationalisation of Industry*. Paper read before the Economic Section of the British Association, 1927, p. 9.

³ Vaughan, *The Economics of Our Patent System*, p. 116.

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then there's Elmore, with its two-cycle engine. That's the kind they were using on motor-boats; maybe two-cycles were going to be the thing for automobiles. I was for getting every kind of thing in sight, playing safe all along the line.' " 4

The second form of risk to which we refer is the risk of economic instability, arising from periodic maladjustments in the relation of supply to demand. We are accustomed to regard the trade cycle, in business as a whole, as inevitable at present, if avoidable in the future. But an individual producer, finding himself from time to time unable to secure supplies of raw material readily and in satisfactory volume, or finding that his strategic position in the industry is so weak that his competitors have been able to prevent his access to certain markets, often feels impelled to protect himself, through combination, by controlling the production of some at least of his raw material or the sale of his products to the ultimate consumer.

Finally, the parties to combination may find that their strategic position in bargaining with labour is considerably improved after combination has taken place. This is never likely by itself to bring about such a movement, but it is often found as an additional motive along with others.

There remains the last group of incentives which we have called financial. Of this aspect of the formation of combinations we shall say more in later chapters. It is the hope for monopoly gains from the elimination of competition, and for securing the economies of large-scale operation through combination, which gives rise to the purely financial motive. Financial interests, in the hope of securing substantial promotion payments for themselves, have attracted to already saturated industries the funds of numerous investors, by holding out the promise of a share in the gains of a combination which they propose

⁴ Seltzer, *Capital in the Automobile Industry*, p. 153, quoting A. B. C. Hardy, formerly President of the Olds Motor Works and assistant to Durant.

to effect. At the same time industries operating on a large scale are frequently and regularly in need of expansion. The engineer's desire for the provision of new capital fits in with the financier's desire for promotion profits, and a combination results. Or, it may be that the desire to protect his own or his clients' capital from risk leads the investment banker to spread his holdings over a wide variety of enterprises, which ultimately he may be led to combine under a unified direction. In these or in other ways the expectation of immediate financial gain has brought about the formation of combinations with the help of those not themselves actively engaged in industry. Such motives have always been taken into account by economists seeking to analyse the phenomena of combination. But the emphasis they have placed upon them or the weight they have allowed them in their estimates have differed considerably. Though it is unquestionable that a combine, if it is to be successful in business, must have technical and commercial justifications for its continuance, it by no means follows that these alone would have been sufficient to bring it into existence. The financial interests which created it may be so powerful, the difficulty in the way of raising capital by potential new entrants so great, and the sentiment against "spoiling the market" so strong, that it may continue in the leadership of its industry, even if its efficiency be less than that of the constituents which formed it. Because this motive is so important and because insufficient attention has in the past been devoted to it, it will be treated in full in a later chapter. But before it can be adequately discussed we must consider further the influence of technological and administrative expediency in determining the size and nature of industrial structures.

CHAPTER FOUR

HORIZONTAL AND VERTICAL COMBINES

THE various types of organisations for limiting competition may be divided into two classes, terminable associations and combinations intended to be permanent.⁵ Moreover, according to differences in industrial technique, they may further be classified as horizontal or vertical in character.

The terminable associations — “gentlemen’s agreements,” trade associations, pools, cartels—from which the member may retire at any time, are invariably horizontal organisations ; that is to say, they unite, more or less loosely, industrial units upon the same plane of production or distribution. They vary considerably in the closeness with which their members are associated ; but, generally speaking, they are short-lived. The individual firm which is a member of such an association is too easily tempted, particularly in times of trade depression, to seek advantage for itself by breaking the terms of the agreement to limit output or to keep up prices. They may serve, however, even if unstable, as an education to their members in the possible gains of regulation of output and prices, and their very instability may act as an inducement to the producers concerned to create a more lasting structure.⁶ These terminable associations—often, as has been indicated in the previous chapter, of a very informal and almost intangible kind—are still the most common type of anti-competitive organisation. But in many branches of production they have given place to outright combinations.

Those motives which we classified above as “ commercial

⁵ Cp. Report of the Balfour Committee on Industry and Trade, p. 73.

⁶ Mr. G. D. H. Cole in his *Next Ten Years in British Social and Economic Policy*, pp. 121-123, points out that the English law concerning restraint of trade favours amalgamations rather than cartels.

or strategic" have probably been, on the whole, the most powerful incentive to the formation of these various organisations. Historically, at any rate, they have been the first to make themselves felt. The revulsion against risk brought into existence first of all the terminable associations, and then, when these were found to be unreliable, the horizontal combination. Such were the first "trusts," combinations of business units on the same plane of production under a central control. These organisations, because of their very character, were led to aim at monopoly. Complete protection against the risks of competition and particularly against those of maladjusted supply of raw materials and demand for finished product, can, in the case of a horizontal combine, only be secured through monopoly power. Accordingly, the earlier horizontal trusts—for example, the Standard Oil Trust, the American Tobacco Company, the American Sugar Refining Company—were distinguished by a zealous seeking after monopoly.

Such undertakings reaped some of the advantages of large-scale operation which have been described above. They would be able to make bulk purchases and to enforce some standardisation of materials. By closing down the less efficient manufacturing units under their control they might secure a better utilisation of plant, standardisation of product, and the application of research to the undertaking as a whole. They would also have the benefit of cheaper transport, cheaper advertising, and economical utilisation of by-products and waste material. But there were other gains of large-scale operation which they could not secure, and there were important influences mitigating the success of their efforts.

The struggle to secure and maintain a monopolist position in order to be able to dictate to both supplier of raw material and consumer of finished product, leads the horizontal combine into continual and ever-recurrent wasteful expenditure.⁷ In their formation such under-

⁷ Cp. Marshall, *Industry and Trade*, p. 514.

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takings frequently bought up "antiquated, inefficient, and badly located plants,"⁸ which were usually promptly closed down. The purchase price of these units, if in the form of shares in the combine, reduced the rate of profit payable; if in the form of cash or debenture stock, constituted a permanent drain upon the trust's resources. Moreover, not only are inefficient units incorporated in the new venture, but again and again new competitors may have to be bought out. Either the trust will have to wage an expensive price-war in order to stifle this fresh competition, or it will have to take over the independent undertaking at a figure which will capitalise its power to harass the trust rather than its ability to earn for it increased revenue when once incorporated. The sugar, tobacco, gunpowder, glucose, and starch trusts were outstanding examples in American economic history of combines which suffered from this weakness. The formation in Great Britain in 1919 of British Glass Industries, Ltd., may serve as a further illustration of this process. There already existed in the glass bottle industry in this country a horizontal combine, the United Glass Bottle Manufacturers, Ltd., which exercised semi-monopolist leadership in the trade, partly because of its great size, and partly through its predominant voice in terminable associations (the Association of Glass Bottle Manufacturers of Great Britain and Ireland, and the British Association of Glass Bottle Manufacturers, Ltd.), which, through price-fixing and ownership of patents, regulated the vast majority of manufacturers involved. The new entrant, British Glass Industries, was organised by promoters who had little or no knowledge of the technical problems of the industry; but nevertheless within a very short period from its formation it had absorbed the United Glass Bottle Manufacturers, Ltd. In other words, the latter, faced with potential new competition, had been forced to extend the scope of the combine—and, incidentally, to increase "enor-

⁸ Eliot Jones, *The Trust Problem in the United States*, p. 537.

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mously " 9 the capitalisation upon which dividends have to be paid.

To take yet another example, companies owning patents have frequently purchased patents similar to their own, not in order to use them, but to avoid litigation ¹⁰ and to prevent the entry of new firms into their industry. A committee on Interstate Commerce of the United States' Senate found that "paper patents, patents covering inoperative devices, and dormant patents (that is, patents not used, but applied for and held for the purpose of preventing the manufacture of the devices or improvements therein described) are at the foundation of much of the most injurious monopoly and trade restraint. . . . There are thousands of patents lying dormant, having been acquired by established concerns whose business was threatened by competition." ¹¹ It was very often the expensiveness and wastefulness of such methods of obtaining control which led American trusts to adopt instead the policy of "live and let live." For such buying out of potential competition is very expensive and leads to inefficiency rather than efficiency. ¹² The energies of the great concern tend to be exhausted in the effort, whereas, had they been devoted to the full utilisation of the advantages in production which large size gave, the gains of superior efficiency might have been greater than those of continually challenged monopoly.

Another strategic weakness of the horizontal combine, forced by its nature to attain a monopoly position if it is to secure the full economies of large-scale operation, is that it quickly incurs the active hostility of public opinion and even of the law. Such undertakings, while they are at first in a strong position with respect to wage-bargaining, may actually provoke labour into the formation of horizontal organisations (industrial unions) of considerable

⁹ Profiteering Acts, Report on Glass Bottles.

¹⁰ Vaughan, *op. cit.*, p. 166.

¹¹ U.S. Senate Committee on Interstate Commerce, 63rd Congress, 2nd Session, Vol. 2, p. 1078.

¹² Clark, *Social Control*, p. 432.

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strength.¹³ Moreover, they present a good "target for the application of State control or the institution of State ownership."¹⁴ The attention drawn in the United States to the exactions of monopolist trusts led to the passing of numerous laws designed to curtail their activities; and their efforts to escape the effects of this legislation involved the trusts in still further expense. They had to meet the costs of bribery,¹⁵ of fighting expensive and long-drawn-out law suits, or of devising new forms of combination to evade the provisions of the Acts.¹⁶ The controllers of such enterprises began to see that deliberate flouting of public opinion might be expensive and wasteful, and that a monopoly position, unless in exceptional cases, is very difficult to maintain. Commodore Vanderbilt once enunciated in memorable words the principle on which the early monopolists worked—"the public be damned."¹⁷ But his successors, who took "community of interest" as their guide, looked for less obtrusive and less dangerous methods of attaining similar ends.

The horizontal combines, designed to remove the insecurities of terminable associations and to secure the economies of large-scale operation which such associations, preserving as they do the administrative independence of the separate units, never attain, had partially failed in their objects. But their very existence and their attempts to secure for themselves monopoly control horizontally, gave rise to a new type of organisation—the vertical combination. This is an attempt to do away with the maladjustment of supply to demand which still

¹³ From the point of view of labour organisation, industrial unions would doubtless be best classified as vertical, crossing the horizontal craft (or occupational) and general labour unions. Here, however, it is well to emphasise the fact that an industrial union organises itself in one industry just as a horizontal combine does. It therefore follows that this type of labour organisation might be quite unsuitable in a world in which integrated concerns, occupied in many industries, prevailed.

¹⁴ Stockder, *Business Ownership Organisation*, p. 253.

¹⁵ *Vide, e.g.* Tarbell, *History of the Standard Oil Company*, *passim*.

¹⁶ Cp. Committee on Industry and Trade, p. 109.

¹⁷ Moody, *Masters of Capital*, pp. 20-27; *The Railroad Builders*, pp. 71-94.

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continued to exist under the regime of the horizontal combines and associations. "It is clear that, despite the fact of individual legal ownership and independent operation and control, no factory can run for long unless the production in the prior stage is sufficient to supply the needed materials and supplies, nor unless the factories or other users in the subsequent stage consume what it manufactures."¹⁸ If an individual firm finds that its only supplier at the prior stage or its only customer at the subsequent stage is a horizontal combination which is restricting production in order to raise prices or is using its monopoly position to pay unduly low prices for its raw material, then that firm will seek to obtain control of its own supplies or of the marketing of its products. It will attempt to extend its organisation backward towards its raw material and forward towards the ultimate consumer of its products. Such vertical combinations therefore present themselves as a further extension of the principle of defence against risk.¹⁹ Comparatively early in the history of industry it was seen to be profitable to include within the larger factories departments, such as tool-making or repair shops, which were charged with minor or subsidiary processes. But the concentration under one management of several different stages of production was the outcome of much trial and error and a longer evolution of industrial forms.

The differentiation of function and then the integration of parts into a co-ordinated whole is the key to industrial as to biological evolution.²⁰ Latter-day developments in the integration of industry (as the formation of vertical combinations is fittingly called) are only further examples of a process which commenced when the first craftsmen in primitive society began to devote themselves exclusively to that function for which they were best adapted. It

¹⁸ Frank, *The Significance of Industrial Integration*, in *Journal of Political Economy*, Vol. 33, April 1925.

¹⁹ Macgregor, *Rationalisation*, p. 10.

²⁰ Cp. Willoughby, *Integration of Industry in the United States*, in *Quarterly Journal of Economics*, Vol. 16, November 1901.

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proceeded further at the time of the industrial revolution when firms became specialised, when merchanting houses extended their organisation to draw them together, and when Adam Smith's pin-makers began to perform their repetitive tasks. Nor has it yet exhausted its power of vastly increasing mankind's productivity. "With the several stages of the total industrial process brought under one managerial control, with each plant put upon a budget of performance and costs and the whole process directed to the production of the finished product, it becomes possible to achieve that technical co-ordination of process which the pecuniary operations of buying and selling could rarely approximate, except perhaps for brief intervals and then only with undesirable "booms." ²¹

The elimination of insecurity, then, through the extension of control over the whole process from raw material to finished product, is seen to be one of the main motives for forming integrated undertakings. Continuity of plant operation is a vital necessity of the economic running of modern large-scale industry, with its highly specialised machine tools which are responsible for such heavy overhead expenses. Control of a supply of raw materials is a valuable aid to such continuity. The vertical combine in this and other ways is able to reap advantages not always available to the horizontal. To an unusual degree it may benefit from the economies of eliminating the middleman, of plant utilisation, of standardisation of all kinds, of the utilisation of by-products, and of the adjustment, with the aid of elaborate statistics, of production to carefully and accurately anticipated demand.

But it is, above all, as a technique of management that the vertical combination is of importance. The application of science and machinery to processes of production has wrought many marvels, but in well-established industries it is no longer in this direction that we must look for the major economies. In such industries, as economists have often pointed out, it is to be expected that after a

²¹ Frank, *Integration*, p. 187.

time the application of additional "doses" of capital, in the form of new inventions and machinery, may no longer bring forth the increasing returns to which they have been accustomed. But by developing executive efficiency and perhaps revolutionising managerial methods it may be possible once again to push far away the point at which only diminishing returns can be received. It is because industry generally no longer finds it so easy as it did to earn increasing returns through the regular and almost automatic improvement of machinery that so much attention is now being paid to the education of prospective industrial leaders in the science of management and administration. The integrated concerns represent a distinct advance in the complexity of management, and will have either to solve these problems or cease to exist.

A complex of industrial and commercial processes which were formerly adjusted to one another by the mechanism of markets and prices are in these organisations knit together and centralised under the direction of a unified management. Those who formed them undoubtedly expected to reap the gains of efficiency in management, not only the saving of overhead clerical expenses and the provision at less cost of greatly improved statistical and cost-accounting methods, but the keying-up of the whole organisation to act in harmony as a unity. Professor Macgregor has said of integration that ". . . the permanent or rational aspects of this policy are . . . not purely industrial; they are more generally administrative. . . . It is natural for any great administration to consider the continuity of its relations with any supply on which it depends. . . . In some industries the technical advantages are more obvious than in others; they appear to be greatest in the iron and steel trade. But broad considerations of administrative supervision may lead to its (vertical integration's) application in any case."²³ Elimination of waste on every hand—and particularly on the

²³ Macgregor, *Rationalisation*, p. 10.

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side of management—is the chief potential gain of this form of organisation. It is undoubtedly in this respect that we must regard integration as a new stage in industrial evolution; and it is from the point of view of administrative method that it deserves most careful study.

Integrated undertakings have usually been built up in recent years through the mechanism of joint-stock ownership, either by the creation of holding-companies to purchase the shares of the subsidiary concerns, or by amalgamations of existing companies.²³ Sometimes the method has been that of absorption, the buying up of the physical assets of the subsidiaries by the so-called parent company. Any one integration may owe its existence to one or all of these processes. There is in addition one outstanding integrated business which is the creation of an engineer and has been almost entirely free throughout its history from any kind of financial manipulation.

We have seen that to a large extent it was the activities of horizontal combinations and associations which gave an impetus to the formation of integrated concerns. Now such horizontal organisations of course are still numerous and far outnumber the vertical. Their formation, as we have tried to indicate in the first chapter, is still going on, so that on each level of production in many industries they are to be found. Cutting across them, as it were, are the vertical business erections. The latter obtain their supplies at the lower stages of their production without having to pay tribute to the cartels or horizontal combines. They are independent of the market. But frequently they are themselves members, either outright or through their subsidiaries, of the various horizontal associations which exist at the different stages of the process. Of their lower products "they use what they

²³ Cp. Marshall, *Industry and Trade*, p. 216. ". . . a firm with limited capital can seldom undertake considerable vertical expansions with success; for such expansions are not easily made by gradual steps. On the other hand, a business may proceed gradually and tentatively when extending its operations horizontally in the same stage."

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require for their own finishing processes and put the rest on the market at cartel prices.”²⁴

But though a vertical combination may assist the operations of cartels which aim at monopoly, and though the method of integration may assist a monopolist of a link in a chain of processes to extend his control over the other links,²⁵ such organisations are not in themselves necessarily monopolies.²⁶ They may frequently be parties to various price-fixing agreements, tacit and explicit; they may share the prevailing reluctance to spoil a market and shape their policy accordingly; but, generally speaking, especially in the United States, they have not undertaken wasteful and expensive efforts to secure monopoly control. Their very nature as administrative organisations leads them rather to seek leadership and reap the gains of the differential advantage arising from the gap between their efficiency and that of marginal producers. The study of some examples may serve to make their nature clearer.

²⁴ Macgregor, *Rationalisation*, p. 12. It should be noted, however, that the interests of cartels and vertical combines sometimes conflict, and the latter may sometimes seriously annoy the former by “dumping” part of their output which they do not require for their own use.

²⁵ Clark, *Social Control*, p. 431.

²⁶ Cp. Marshall, *Industry and Trade*, pp. 528 and 587.

CHAPTER FIVE

SOME INTEGRATED BUSINESSES

THE United States Steel Corporation, the earliest great integration in the United States, has been conspicuously successful, and the prices of its shares on the Stock Exchange are still looked to as one of the chief indicators of the state of American business. Before its formation, the consolidation of "likes," the formation of horizontal combinations, had gone far in this industry. One great combination came in this way into direct contact with and dependence upon another, for each was the supplier of the materials or the consumer of the products of its neighbour. The actual number of units in this industry, where large-scale production is a necessity, was not large, and in consequence the dependence of one upon the other soon grew irksome. Individual businesses, notably the Carnegie Steel Company and the Federal Steel Company, began to "integrate" on their own account. Rapid improvements in methods of manufacture, increasing the gains to be made from the application of specialised but costly machinery, hastened the process. The industry "reached the limit, or very nearly so, at which economies from a metallurgical or mechanical standpoint could be made effective" and "instead, as was then the practice, of having one mill to make ten or twenty or fifty products the greatest economy would result from having one mill make one product, and make that product continuously."²⁷ A threat of intensive competition by the strongest of the integrated companies, the Carnegie Company, led to the formation, under the leadership of J. P. Morgan & Co., already interested in the Federal Steel Company, of the

²⁷ Witness in *U.S. v. U.S. Steel*, U.S. Reports, Vol. 251, 1920, p. 443.

United States Steel Corporation, a combination of combinations.

The corporation has knit together, to form a compact whole, units engaged in all the necessary processes of steel production, from the extraction of coal and ore to the finished bridges, rails, girders, or whatever it may be. It has secured "a complete control of all the factors necessary for the successful and uninterrupted prosecution of its work."²⁸ Some of the economies it has been able to obtain, while steadily expanding the quantity of its product, are shown by the following quotation from the monthly letter of the National City Bank of New York for January 1927:—

	1901	1926
" No. of manufacturing plants	164	138
No. of blast furnaces (pig-iron, etc.) . . .	70	112
No. of converters for production of Bessemer steel ingots.	35	34
No. of steel furnaces for production open-hearth and electric steel ingots	112	332
No. of by-product coke ovens	120	3,284
No. of beehive coke ovens	16,661	13,305
No. of coal-mining plants	67	105

Railroad Mileage.

Main and branch lines	1,027	1,126
Second main tracks	139	442
Lines operated under trackage rights . . .	178	348
Industrial tracks, sidings, and yards . . .	472	1,946
Total mileage of tracks	1,816	3,862

Railroad Equipment (Standard Gauge)

Locomotives	471	1,464
Cars	26,164	64,705

Marine Equipment

Bulk cargo vessels and barges on Great Lakes	114	98
Steamers on the high seas	—	35
Steamers and barges on inland rivers	—	380

"While the number of vessels in service on the great lakes has decreased, the aggregate carrying capacity of the fleet has

²⁸ Willoughby, *Integration*.

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materially increased, arising from disposal of smaller vessels and the construction and purchase of larger capacity ships.

"The production of pig-iron at blast furnaces averaged about 370 tons per furnace per day in 1901, and had been increased to 545 tons in 1925. The tons of open-hearth steel ingots made per furnace per each melting averaged about 40 tons in 1901, while in 1925 it averaged 79 tons.

"The gross commercial value of coke by-products recovered at Corporation plants in 1925 amounted to \$36,000,000. In 1901 the waste gases utilised by the Corporation plants represented a fuel value of about \$3,000,000. In 1925 the gases and other recovered by-products . . . reached a total of close to \$40,000,000."

The United States Steel Corporation has maintained the leadership in its industry, but has never become a monopolist. It was acquitted by the United States Courts²⁹ of the charge of being in itself a restraint of trade, though it was forbidden to engage in any attempts to restrain trade by agreements with its competitors.³⁰

The International Harvester Company, formed about the same time as the Steel Corporation, is another American example. It is engaged in the manufacture and sale of farm implements, and "manufactures or controls the manufacture of practically all the raw materials it uses, with the exception of paints. It owns iron ore and coal properties and operates iron, steel, and coke plants. One of its subsidiaries, the Wisconsin Lumber Company, owns extensive timber property and produces pole stock and other materials. The Harvester Company has also special facilities for obtaining from the Philippine Islands and Yucatan manila and sisal fibre used in the manufacture of binder twine. In addition, the company owns and operates several small industrial railroads. Through the foregoing and other auxiliary operations the International Harvester Company is able to obtain most of its raw materials at production costs. This gives the company a large advantage, as few of the other companies control their

²⁹ U.S. v. U.S. Steel *et al* 1915, *Federal Reporter*, Vol. 223, p. 176.

³⁰ For detailed accounts of the history and position of the U.S. Steel Corporation, see *Report of the Commissioner of Corporations, 1911*; Berglund, *The United States Steel Corporation*; Stockder, *Business Ownership Organisation*, and other works listed in the Bibliography.

raw materials.”³¹ Its entire requirements in lumber (timber) are not met from its own supplies. Somewhat more than half the steel it uses comes from its own mills, and the rest is bought in the open market. Its requirements in ore it meets from its own supplies, and similarly with coal, some of which it is in the habit of selling on the open market. It does not manufacture the electric motors or the canvas which form part of some of its finished products.

Not only, however, has this concern reached back to control the supplies of its raw material; it has also a widely extended marketing organisation. In harvesting machinery “the preponderance of the International Harvester Company has enabled it to dominate the trade to such an extent that whatever prices this company makes must be followed by other companies.”³² In consequence, no trade association exists in this section of the agricultural machinery trade. In other sections, however, the company has worked with the aid of the National Implement and Vehicle Association, whose activities, the Federal Trade Commission concluded in 1920, indicated “that the object sought was to accomplish through co-operation based on unity of opinion developed at association meetings the same economic results in controlling competition and enhancing prices that would be obtainable through formal price agreements. These activities include concerted action to standardise implements, to adopt uniform terms of sale, to secure, compile, and study group costs, to exchange information on prices and price policies, to form price agreements, and to prevent decreases in prices following the Armistice.”³³ Whatever the influence of this trade association may be, the Harvester Company is not in itself a monopolist. But its marketing organisation is highly perfected. It “maintains at each of its branch houses a force of salesmen,

³¹ *Report of the Federal Trade Commission on the High Prices of Farm Implements*, 1920, p. 48.

³² *Farm Implements*, p. 544.

³³ *Ibid.*, p. 290-291.

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canvassers, and experts. The salesmen are called 'blockmen' because each of them operates one section or block of the branch territory. . . . The blockmen supervise and solicit trade with the dealer, the canvassers solicit trade with the farmer and assist the dealer and blockmen, while the experts aid in the installation, adjustment, and repair of machines."³⁴ These branch houses exert over retailers of the machines an influence which comes near to being control.³⁵ The company has found it an important advantage in marketing to be a "full-line house,"³⁶ that is to say, to manufacture every type of agricultural machinery required by farmers.

The business done by the Chicago meat-packing houses affords further examples of the economies of large-scale integrated operation and of the control over marketing which such an organisation may maintain. The "Big Five" meat-packers were accused of combining in restraint of trade in defiance of the anti-trust laws, and their history and activities were closely examined by the Federal Trade Commission, whose report, published in 1919, gives the inquirer voluminous information. How far the accusation of combination was justified was never decided by a court of law; but the impartial foreigner, on reading the report, the evidence collected, and the criticisms of the report published by the companies, cannot but conclude that the meat-packers were not innocent of an attempt to control prices.³⁷ The outcome of the investigation was that the accused submitted, after conferences with the United States Attorney-General, to a "consent decree," handed down by the Supreme Court of the District of Columbia. This compelled the packers to sell their holdings in public stockyards, stockyard railways, market newspapers, and in public cold-storage warehouses, except as necessary for their own meat-products. They were further obliged to cease from dealing in "unrelated lines,"

³⁴ *Farm Implements*, p. 56.

³⁵ *Ibid.*

³⁶ *Ibid.*, p. 47.

³⁷ Cp. Virtue, *The Meat-Packing Investigation*, in *Quarterly Journal of Economics*, Vol. 34, pp. 625-685.

such as wholesale groceries and fish, to abandon the use of their distribution system for any other than their own meat and dairy products, and never to engage in any attempt at monopoly.³⁸ The list of activities which they were forced to abandon³⁹ gives some idea of the ramifications of business into which concerns possessing a highly organised distribution and marketing system may be led by the desire to secure a full utilisation of that system. The packers were still allowed to deal in cottonseed oil and oleo, and to engage in the production of butter, cheese, eggs, and poultry, the latter two of which, at any rate, are not directly related to the meat industry. To-day the policy of the leading concerns is that of "live and let live." "As everywhere else—gentlemanly tactics succeeded the piratical."⁴⁰ The various units of the business come together to promote research, to improve trade relations, and to devise propaganda to increase meat consumption.

The scheme of other vertically organised undertakings is that of the integration of a large number of different raw materials and diversified processes into the production of one finished complex product. That of a typical meat-packing house, on the other hand, is the production from a single unit of raw material—the carcase of a pig or a steer—of a vast number of different products, applying to the raw material at different stages many diversified processes. From the original carcase the scheme reaches out to centralise control of an ever-widening spread of manufacturing and marketing operations. This continued extension may be attributed to a desire to obtain the economies firstly of production and secondly of distribution.

On the side of production the greatest gain resulting

³⁸ Vide Clemen, *The American Livestock and Meat Industry*, pp. 783-784.

³⁹ "It has been strongly urged that the decree would seem to have been the result of an active propaganda on the part of the Southern Wholesale Grocers' Association, whose monopoly was threatened. . . . The outcome of the decree left the grocers in control."—Clemen, *op. cit.*, p. 784.

⁴⁰ Clemen, *op. cit.*, p. 793.

from the large-scale operations of the meat-packers had been made through the utilisation of by-products. The following list, by no means exhaustive, taken from an advertisement of Messrs. Swift & Co.⁴¹ will give some idea of the range of the chief by-products of this industry :—

Buy these

SWIFT & COMPANY PRODUCTS

They are unrivaled in quality. Perhaps you are overlooking some of them when you specify " Swift Products " at your dealers.

Swift's Premium Ham
 Swift's Premium Cooked Ham
 Swift's Premium Bacon
 Swift's Premium Sliced Bacon
 (in cartons and glass jars)
 Swift's Premium Dried Beef
 (sliced, in cartons and glass jars)
 Swift's Silverleaf Brand Pure Lard
 (in tins and cartons)
 Swift's Jewel Shortening
 Swift's Premium Oleomargarine
 Gem Nut Margarine
 Brookfield Pork Sausage
 Swift's Premium Frankfurts
 Swift's Premium Milk-fed Chickens
 Golden West Fatted Fowl
 Brookfield Butter
 Brookfield Eggs
 Brookfield Cheese
 Buttercup Cheese
 Maxine Elliott Toilet Soap
 Wool Soap
 Classic Soap
 Quick Naptha Soap
 Arrow Borax Soap
 Sunbrite Cleanser
 Wool Soap Flakes
 Quick Naptha Chips
 Snap
 Swift's Pride Washing Powder
 Red Steer Fertilizer
 Vigoro
 (for lawns and gardens)

⁴¹r. G. L. Noble, formerly a member of Messrs. Armour's
Econ.

⁴¹ Year Book of Swift and Company, 1925.

Bureau of Agricultural Research and Economics, has prepared a table ⁴² illustrating the range and diversity of packing-house by-products. This shows that bones yield nineteen by-products ; horns and hoofs, thirteen ; hides and skins, eight ; bristles and hair, five ; intestines, fifteen ; fats, fourteen ; meat-scrap and blood, three ; glands, a great number of medical preparations ; and wool, of course, a large variety of clothing. By no means all of these products are actually manufactured by the packers, though many of them are ; but so large is the scale of operation that all can be saved in easily merchantable quantities.

The packing companies have utilised to the full the modern methods of mass production. Departments, men, and machinery have been specialised for the performance of particular tasks. Division of labour has proceeded so far that the United States' Bureau of Labour Statistics lists the following occupations in the cattle-killing department alone : " drivers and penners, knockers, shacklers or slingers, head-holders, stickers, headers, droppers and pitchers up, foot skinners, leg breakers, rippers open, gullet raisers, floormen or siders, breasts or brisket breakers, and sawyers, crotch breakers, hoisters, tail rippers and pullers, lung droppers, rumpers, fell cutters, fell pullers and beaters, backers, gutters, shank skinners, hide droppers, tail sawyers, splitters, scribes, trimmers, utility men, washers and wipers, butchers general, tonguers, labourers, and truckers." ⁴³ In addition to this department, a modern packing plant has also departments for : hog killing ; sheep killing ; offal ; fresh beef ; fresh pork ; lard and oleo oil ; sausage ; cured meat ; canning. In each of these are specialised workers performing repetition work on material brought to them by conveyor machinery and by labourers as part of a steady process along a defined route through the factory of every portion of the animals killed. The provisions of the " consent decree " and the Packers

⁴² Reproduced by Clemen, *op. cit.*

⁴³ Quoted by Clemen, *op. cit.*, p. 686.

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and Stockyards Act, 1921, which was passed to enforce them, may have weakened the control which the packers formerly possessed over the supply and prices of their raw material. But once that raw material has been brought to the packing-plants, it is watched with minute care, so that not a piece of it escapes utilisation.

Its distribution is supervised with no less attention to detail. In various ways the problems of distribution have led the larger packers into more and more varied activities. They are, to make use of a phrase used by Dr. Thorp, engaged in making dissimilar products for the same market. In such circumstances it is a great commercial advantage to have a "full-line" production. Swift's Premium Hams will advertise Swift's Premium Milk-fed Chickens or Swift's Pride Washing Powder. The packers, engaged in the production and selling of one type of wholesale grocery commodity, were led to commence the manufacture or distribution of others. Experience gained in one branch of the live stock industry was of use in others. Moreover, the fact that the price of meat will be, to some extent, determined by the price of alternative foods may not have been without its influence in persuading them to "go into" eggs, butter, cereals, poultry, and so on.

Another inducement to extension has been the desire to make the fullest and most economical use of an elaborate distributive system and its material equipment. The packer's raw material and much of his finished product are perishable—he is "taking a risk at both ends,"⁴⁴ though it must be remembered that the comparative inelasticity of supply of material and demand for product tends to offset this. The large firms in the industry, therefore, have provided extensively for refrigeration, both in their branch houses and in specially adapted privately-owned refrigerator cars which they have had constructed for use on the railways.

In 1923, the five large packers owned about one thousand

⁴⁴ Armour, *The Packers, the Private Car Lines, and the People*, p. 133.

branch houses in the United States.⁴⁵ "Each of the branch houses has its own manager, office force, and sales and delivery organisation. The branches are grouped into districts—in the case of Armour & Co. some twenty-five in number—under the supervision of a district manager, or field superintendent. The field superintendents in turn report to the general branch house superintendent's office in Chicago. Each branch house is, therefore, an integral part of the system of distribution."⁴⁶ The whole of the work of these branches is strictly controlled and co-ordinated with the manufacturing end of the business through centralised administration. Each department promotes through the branch houses the sales of its own particular products. It was soon found that the refrigerating equipment of the branch house could be used with advantage for the storing of butter, eggs, cheese, poultry, and so on, thus utilising more fully the available plant and saving overhead expenses of administration and equipment. Through a storing organisation which is as wide as the American continent these companies are able to adjust with the minimum of loss the fluctuating demand of an Eastern city, for example, to the fluctuating supply of an agricultural state three thousand miles away.

The need for fuller utilisation of their refrigerator cars was another motive inducing the packers to extend their distributive organisation. The cars were there, not always fully loaded with meat, and so the packers were able to offer to shippers of perishable goods a superior service to that provided by the railways. Mr. Armour in 1906 claimed that "the operation of the private fruit refrigerator car has changed the growing of fruits and berries from a gamble to a business, from a local incident to a national industry."⁴⁷ He further asserted that the building of these cars by the meat-packers "was the step, as recognised now by historians of the livestock industry, that changed

⁴⁵ Clemen, *op. cit.*, p. 388.

⁴⁶ *Ibid.*, p. 390.

⁴⁷ Armour, *op. cit.*, p. 29. Cp. Clark, *Overhead Costs*, p. 4.

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stock raising from an adventure to a business.”⁴⁸ The carriage and storage of perishable products led to their manufacture. “Having found that we could handle butter efficiently, it naturally followed that we wanted to look for a surer and more constant source of supply. We therefore erected what we call produce plants, in such states as Illinois, Iowa, Nebraska, Missouri, and Kansas, as well as other states in the Central West. At most of these produce plants we have butter factories; these same plants collect, handle, and pack eggs; and they also assemble, feed, and pack poultry.”⁴⁹ “. . . practically all the buttermilk from the creamery part of the plant is used for feeding poultry, thereby converting it into a valuable meat product of fine quality. When the butter volume is light, the volume of poultry handled is heavy, so that overhead expenses are kept at a minimum. Naturally, the same management can look after these various enterprises; the same refrigeration equipment can be used for all products. Even the farmer finds it convenient to market cream and eggs together; he often brings both of these products on a single trip to the produce plant.”⁵⁰

It would be interesting to follow still further the ramifications of this remarkable business. But sufficient has perhaps been said to illustrate the ease with which “one thing leads to another.” Though the industry is in a sense engaged in *disintegration*: the disintegration of the carcasses of animals, it is an outstanding example of the integration of related functions by subjecting them to an administrative unity.

It is when we turn to the American automobile industry that we find our most valuable example. In this industry, in spite of the variety of design which distinguishes the finished product, large-scale methods of production and concentration of ownership have proceeded to a remarkable

⁴⁸ Armour, *op. cit.*, p. 298.

⁴⁹ Weld, *The Meat Packer as a Distributor of Dairy Products*, p. 4.

⁵⁰ Weld, *Dairy Products*, p. 5.

extent. Mr. Seltzer in his study of the growth of capital in the industry shows that in 1923 eight companies, the Ford Motor Company, General Motors Corporation, Studebaker Corporation, Dodge Bros, Inc., Packard Motor Car Company, Nash Motors Company, Reo Motor Car Company, and Hudson Motor Car Company, owned between them 76·2 per cent. of the total invested capital of the industry. These eight companies in the same year accounted for 83·5 per cent. of the total output, and for 90·9 per cent. of the value of that output.⁵¹ All the important undertakings manufacturing automobiles exercise very close control over their marketing, either selling outright for cash to dealers, or so supervising dealers, in their repair and advertising service, in the layout of their showrooms, in the prices they charge for new and used cars, and in the general conduct of their business, that the latter more resemble agents of the manufacturer than independent merchants.⁵²

Two large concerns are outstanding even among the "Big Eight," namely, the Ford Motor Company and the General Motors Corporation. The latter "is the only large automobile amalgamation that has been commercially successful."⁵³ It is primarily an operating but also a holding company, in some cases owning the share capital of the concerns it has absorbed, in some cases owning their physical assets. Its passenger car products comprise more than seventy different models, which in 1924 ranged in price from \$495 to \$4950 each.⁵⁴ In addition, through various subsidiaries, it engages in the manufacture of numerous accessories, such as electric systems, ball bearings, wheels, rims, tyres, differential gears, shafts, castings, spark plugs, etc., etc. It controls the Fisher Body Corporation, which is an integrated undertaking controlling producers of plate glass, automobile hardware, and timber, and operating saw-mills.⁵⁵ General Motors, however, though it has integrated control of the production of many

⁵¹ Seltzer, *Capital in the Automobile Industry*, pp. 7, 8.

⁵² Epstein, *History of the Automobile Industry*, pp. 87-102.

⁵³ Seltzer, *op. cit.*, p. 133.

⁵⁴ *Ibid.*, p. 107.

⁵⁵ *Ibid.*, pp. 108-115.

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of the commodities which go to make up its finished products, buys most of its raw material and steel.

The Ford Motor Company, on the other hand, is the best example in the world of the policy and method of integration in industry. There are differences of opinion as to whether the United States Steel Corporation was founded primarily because of the need for integration or as a financial manoeuvre. But there can be no question that the founder of the Ford Company has built it up deliberately as an integrated concern, and has attempted to apply to his whole business those principles of orderly processing, of accurate standardisation, of deliberate planning, and of the elimination of waste and overlapping which he has so notoriously found to be successful in the individual workshop. It has been well said that in this concern "the entire business of production is geared, as one great interconnecting machine, to the demand for the finished product." ⁵⁶

In the main line of its production the Ford undertaking owns its own timber supplies, its own sawmills, its own kilns, its own ore mines, its own blast furnaces, steel rolling mills, foundry, bearing plant, wire mills, battery plant, artificial leather plant, glass mills. It also manufactures ignition systems, electric generators, and motor bodies. Some of its timber is bought on the market. Some steel is bought in billets and then rolled to the required size, but an extension of steel manufacture is contemplated. The company owns its own sand pits, but does not use the sand for glass manufacture as long as market prices are satisfactory. The whole of the wire required is not yet produced by the company. Many makers of automobile parts are dependent for their existence upon the chief consumer of their products, the Ford Motor Company. In addition there are several Ford manufacturing plants making parts of motor cars, which are then shipped to thirty-two assembly branches (which are also sales agencies delivering to dealers). These branches paint the parts and assemble

⁵⁶ Clark, *The Super-Trust*, *New York Times*, 13th December 1926.

the finished cars. If ore which leaves the mine at 7 p.m. on a Saturday be converted into metal, and the metal into car parts and assembled at Detroit, the finished car can be in the hands of the dealer at twelve noon on the following Wednesday. The process of production occupies forty-one hours from the time the ore boat docks at Detroit. There is no need to point out how rapid in such circumstances the adjustment of supply to demand can become.

In auxiliary industries the undertaking produces all the coal it needs, and in addition sells some of its surplus ; it owns the railroad over which the coal passes and the steamships which carry the ore across Lake Michigan. It cokes its own coal and generates its own power. It manufactures turbines, glass machinery, and tools in large quantities. It repairs its own locomotives, manufactures airplanes and tractors, and operates an air transport and a telegraph service between its various plants. It makes gauges and " educational " films, and has its own research laboratories on a large scale.

The by-products are fully utilised. A salvage department collects sweepings and chips from machine processes, and extracts silver from the sediment left in developing tanks. The waste paper left by employees who bring their meals to the factory at Detroit is used with other waste as the main stock of a paper mill, whose product is used in the various activities of the concern. From the slag taken from the blast furnaces cement is manufactured. The gas, tar, and oil recovered from the coal in coking are sold, and the ammonium sulphate is distributed through the regular distribution system to be used as fertiliser. Powdered coal, mixed with tar and oil recovered from coked coal, is used in the electric-power generators. Benzol is sold as motor fuel. Waste wood from the saw-mills and forests is distilled into tar, wood alcohol, etc.

In the lay-out of Ford plants the old plan of placing in one workshop all machines of a given type, all milling machines, for example, and then bringing to that shop all work that had to be milled, has been abandoned. Instead,

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“machines are located not according to kind, but according to their function in turning out the finished product.”⁵⁷ In this way orderly processing is the keynote of production, and the minimum of conveyance of materials takes place. This is only possible where mass production on the largest scale is employed. The large “overheads” involved necessitate that the machinery shall be constantly employed, and therefore “the most frequent stimulus to make additional parts within the enterprise seems to have been a desire for a certainty of supply, so as to promote the continuity of plant operation rather than primarily to lower production costs.”⁵⁸ Machine tools have been highly specialised for the production of a standardised product, and often by their accuracy turn out a more reliable product than could be made by individual craftsmanship.⁵⁹

In its control of marketing, the Ford Motor Company is similarly methodical. The dealers who are supplied by its branch houses are strictly supervised. The Ford dealers' contract provides that the Company may determine retail prices, and prices for repairs and replacements, may supervise the accounting methods and control the advertising of the dealer. It even has a voice in the planning of his sales rooms. The Company has been in this strong position, *vis-à-vis* the dealers, since its first entry into the business, and has been able to maintain it until “more than 52,000 sales-dealers and service stations, individually owned by their operators, are directly supervised by the Ford Motor Company.” So strong is this hold that “in its financial crisis of 1921 the company felt free to call upon its dealers to absorb shipments of cars in excess of contracted allotments, payments being made in cash or draft, the dealers instead of the company assuming much of the burden of emergency financing.”⁶⁰

Mr. Ford seems to hold by the policy of integration as an article of faith. When one hears that he intends to

⁵⁷ Epstein, *op. cit.*, p. 138.

⁵⁸ *Ibid.*, p. 151.

⁵⁹ *Ibid.*, p. 158.

⁶⁰ Seltzer, *op. cit.*, p. 55.

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produce, some time in the future, his own supplies of raw rubber from South American plantations, one is surprised, but one fears to use the word impossible of anything contemplated by this industrial miracle worker.⁶¹

⁶¹ The foregoing account of the Ford organisation, where other references are not given, is based upon *The Ford Industries*, published by the company, upon articles on *The Super-Trust*, by Evans Clark in the *New York Times*, and upon observation and information obtained during a visit to the River Rouge and Highland Park plants at Detroit.

CHAPTER SIX

THE EXTENT AND LIMITS OF INTEGRATION

It is difficult to make anything but the vaguest estimates of the extent to which the policy of integration has so far been carried. It would appear that here and there undertakings have attempted to secure a supply, by producing it themselves, of this or that accessory or raw material of their business; but that few have followed the deliberate policy of integration adopted by the firms which have just been described. In the British iron and steel industry, for example, large concerns have made a practice of owning coal mines. The Royal Commission of 1925 made it one of their principal reasons for rejecting the Miners' Federation scheme for nationalisation that such a policy would ignore the advantages of integration. "Probably not less than one-fifth of the coal production, other than for export, is already carried on by companies which conduct at the same time blast furnaces, or coking enterprises in other localities, or other associated industries. It is proposed to sever into its component parts all this organisation, the creation of years of effort and enterprise. By removing these mines into State ownership, the very sections of the industry which already approach the standards that are likely to prevail in the future would be the most injured. Existing combinations would be disintegrated, and a serious obstacle would be raised against further integrations."⁶² Such concerns as Dorman Long, the Ebbw Vale Steel and Iron Company, Guest Keen & Nettlefolds, are well-known examples of this policy which so commended itself to the Royal Commission. But there is in the British steel industry no outstanding leader, corresponding to the United States Steel Corpora-

⁶² *Report of the Royal Commission on the Coal Industry, 1925, p. 67.*

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tion, which makes integration a fundamental of its organisation.

It may be that, under the pressure of falling profits, amalgamation will bring such a leader into existence. Important moves were made in 1929. Messrs. Vickers & Vickers-Armstrong entered into an agreement with Messrs. Cammell Laird & Co. A new company, the English Steel Corporation, was formed to take over the whole of the steel interests of the three companies, with the exception of those concerned with guns, gun mountings, and armoured cars and "tanks." Soon after it was formed, the new corporation proceeded to close down redundant enterprises, notably an iron and steel works at Penistone. Vickers & Cammell Laird also agreed to amalgamate their railway carriage and wagon interests. For this purpose, the name of the Metropolitan Carriage, Wagon and Finance Company, a subsidiary of Vickers, was changed to the Metropolitan-Cammell Carriage, Wagon and Finance Company, and the carriage and wagon interests of Messrs. Cammell Laird were transferred to it.

It is not surprising, in these circumstances, to find that other concerns in the iron and steel industry have recently been following the example set by Vickers and Cammell. Messrs. Baldwins and Guest, Keen & Nettlefold have come to an understanding concerning the manufacture of steel⁶³; and Messrs. Dorman Long have absorbed Messrs. Bolckow Vaughan. The latter amalgamation has produced the largest concern in the British industry, capable of producing an annual output of 2,500,000 tons of coal, 1,500,000 tons of pig-iron, and 1,500,000 tons of steel. It owns forty-two of the ninety-five blast furnaces on the north-east coast.⁶⁴ The chairman of Messrs. Bolckow Vaughan, in recommending the merger, referred significantly to the advantages of combination and integration as follows:—

⁶³ *The Economist*, 15th February 1930.

⁶⁴ *The Iron and Steel Trades in 1929, A Special Review*, by Messrs. William Jacks & Company.

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“ In such close competition, obviously, there was duplication both in equipment and in organisation, and as long as the producing units of the two concerns were in separate ownership such duplication would continue. To show one of the economies that would result, an expensive part of the equipment of a rolling mill was the stock of rolls which must be kept so that steel sections of a variety of sizes might be supplied. To maintain a reasonable commercial range of these sections for one mill meant a permanent investment of some £50,000 or £60,000, or twice that for two competing mills ; under amalgamation it was possible to roll certain sections in one mill and certain sections in another, thereby reducing the variety of rolls kept at each mill. Working economy was also effected as greater tonnages of a certain section passed through one mill, causing fewer changes of rolls, and greater efficiency was developed by the men operating the mills.

“ In the effort to obtain adequate and regular supplies of raw materials most iron and steel concerns of any magnitude had acquired, either directly or indirectly, control of the coal and ore they needed. Under amalgamation it was possible to pool these materials so as to assure supplies of materials at the lowest cost. Instead of running two ironstone mines at 5000 tons per week it was possible to run one at 10,000 tons per week, keeping the other in reserve, the saving being in the order of 1s. per ton of stone or 3s. per ton of pig-iron at the least. Then there were technical problems, such as economy in the use of fuel. By blowing a certain number of furnaces in one group of works it was possible to eliminate the use of coal in reheating furnaces and soaking pits and to reduce the amount of coal required to feed steel melting plant. Consequently the make of pig-iron would be concentrated in those works where it would be produced most cheaply and where greatest use might be made of the surplus blast furnace gas.”⁶⁵

It has been suggested⁶⁶ that these movements have

⁶⁵ *Manchester Guardian*, 14th November 1929.

⁶⁶ In *The Observer*, 13th October 1929.

brought about in the British industry a similar situation to that which existed in the American when the United States Steel Corporation was formed, and that further developments may be expected, perhaps enabling the British industry to negotiate as a unit with the European steel cartel.

We have already referred to the policy of integration pursued by Messrs. Lever Bros. in the soap industry. Outside the soap and the steel industries, probably the most noteworthy examples are to be found in the manufacture of paper, where the Inveresk Paper Company has deliberately set out to produce its own raw materials, and even to own a newspaper as a consumer of its finished product. Various newspaper undertakings have secured control of forests and cellulose and paper factories.⁶⁷ But, generally speaking, the establishment of vertical combinations has not gone far in Great Britain.

When we turn to the United States, the information available, though still scanty, is somewhat more definite. Dr. Thorp, after his examination of the census data, found that "over two-thirds, or 68·8 per cent., of the central-office combinations have all their manufacturing establishments engaged in a single line of industry. . . . Although much fewer in number, the remaining 31·2 per cent. are those which, because they embrace two or more industries each, are of the greatest significance in indicating relationships present in the economic organisation of industry. Of the ten most complex concerns, that is, showing the widest range of activities, one has establishments classified in thirteen different industries, three have establishments in twelve industries each, two in eleven industries, and four in ten industries each. Less than 1 per cent. of the entire number of central offices operate along lines so varied that their establishments are found in more than five industries."⁶⁸ These are not necessarily all integrated

⁶⁷ Levy, *Monopolies, Cartels, and Trusts*, pp. 215-216.

⁶⁸ Thorp, *op. cit.*, p. 125.

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concerns. But the figures are some guide to the extent of integration.

He finds, as we should expect, that "cases are rare in which the manufacturer who utilises agricultural products raises his own raw material."⁶⁹ Such concerns may undertake educative services for the farmer-producer, but prefer not to engage in an industry which is none too profitable, which is subject to great uncertainty, and where large-scale methods of production have so far not proved advantageous. With the extractive industries, however, where large-scale operation is successful, where there is no dependence upon climate, and where production can be more easily adjusted to demand, there has been much integration. But even when such extractive industries are excluded from account, there remain 602 of the central-office groups examined which practise some extent of integration.⁷⁰ The most important industries involved are timber and its remanufactures; paper and printing; vehicles for land transport; iron and steel; stone, clay, and glass; chemicals and allied products.⁷¹ The policy of integration has evidently been more widely adopted in the United States than in Great Britain. Even in an industry like bread-baking, where the small producer, it might be thought, has an overwhelming advantage in nearness to his customer, and where the housewife is always, at least in the last resort, a potential competitor, there has been a wide extension of large-scale operation and some integration.⁷²

Different industries, it is clear, have differences in the extent to which integration prevails within them. To understand the phenomena of integration it is important to examine what causes may prevent the extension to one industry of a method which has been widely accepted and has proved advantageous in another. Evidently the effective range of marketing in any particular industry is an important factor limiting the extent to which combination can be successfully carried. We have seen that the

⁶⁹ Thorp, *op. cit.*, p. 129. ⁷⁰ *Ibid.*, p. 238. ⁷¹ *Ibid.*, p. 237-238.

⁷² Alsberg, *Combinations in the American Bread-baking Industry*, p. 99.

ownership of refrigerator cars and branch houses was essential to the success of the Chicago meat-packers. Similarly, in the American bread-baking industry it is only in the larger towns that combination and large-scale production have been successful. "There is no prospect, in the light of present-day knowledge, that the bread industry can be centralised as the steel industry, for example, has been."⁷³ The greater the development of transport and communications, the greater will be the possibility of effective supervision of a wide area and the larger the outlet for commodities produced on a large scale.

The nature of the supply of raw material is again an important determinant. A firm which is confident of its ability to obtain supplies satisfactory both in quantity and quality is unlikely to be tempted to enter a business with which it is unfamiliar. Nor will a firm be able economically to integrate such supplies if thereby it restricts itself unduly to one particular type of raw material. If a baking combine were to obtain control of a number of flour mills sufficient to supply the whole of its needs, it would run a considerable risk of spoiling its final product. "If a great baking corporation had its own mills, it would have to use the output of those mills. Its raw material would vary from season to season, and thus difficulties would be introduced in standardising the final bakery product. On the other hand, if a bakery concern is free to buy its flour where it pleases, it may shift its source of supply from year to year, according to the quantity and quality of the crop in each wheat region. It will thus be able to secure a more uniform raw material—a vitally important matter in its manufacturing operations. It will be better able to buy different flours and blend them to the end of supplying its plants with a flour as uniform year in and year out as may be. If it owned its own mills it would not have so free a choice."⁷⁴ Integration in this industry, therefore, is likely to be effected only on occasional

⁷³ Alsberg, *op. cit.*, p. 41.

⁷⁴ *Ibid.*, p. 97.

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strategic points; “. . . through Buffalo flows much of our strong wheat and much of Canada’s. If a baking corporation had a mill at Buffalo with adequate storage bins, it might early in the season cull out the choice parcels of wheat as they arrive, and assure itself a supply of very strong flour to blend through the year with the less good flours it would buy. It could use such a mill as a sort of fly-wheel, ensuring it greater control over the uniformity of its raw material.”⁷⁵ Another example⁷⁶ may be taken from the case of a manufacturer of fancy worsteds. He makes use of a very wide range of supply and continually changes the yarns which he weaves. It would obviously be impossible for him to spin them all himself, and therefore he will not be led to restrict his range of supply by attempting to integrate his business.

There is, moreover, a limit to successful combination of any kind which is set by mere size. “. . . there is no mechanical law which says that efficiency must inevitably grow if the bulk of every tool is blindly multiplied.”⁷⁷ In spite of the rapidly increasing returns which it yields, one huge mechanical unit which breaks down and causes a cessation of production may well be less efficient than four or five smaller units, only one of which breaks down at any given time. Integration has been an abundantly successful policy in the rapidly expanding automobile industry, but it by no means follows that it would improve the prospects of a declining industry. There are industries whose products cannot easily be standardised or are subject to quick deterioration; industries which produce for a small market or whose transport costs are unusually high; and industries in which skilled labour is the chief element. In such it is well understood that large-scale operation is not profitable, and no one expects to see integrated concerns entering these fields. But even in

⁷⁵ Alsberg, *op. cit.*, p. 100.

⁷⁶ Following Lavington, *Technical Influences on Vertical Integration*, in *Economica*, March, 1927.

⁷⁷ Clark, *Overhead Costs*, 116.

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other industries a point is often reached where further expansion is unsound and diminishing returns set in. The exact position of such a point is usually determined in any undertaking by empirical experience rather than by general principle. The meat-packers, for example, have differed as to the economies obtainable by extension of their manufacturing and marketing range. Armour & Co. manufacture insulin, but not so Swift & Co. Armour & Co. during the War also undertook the marketing of coffee, rice, and cereals, but other packers did not follow them. After a certain expansion such marketing organisations find that, in retailing, the expenses of a small shop are less per unit sold than those of a large, and generally it is only in buying and advertising that the department store or even the chain store tends to have the advantage.⁷⁸

Considerations of administration and organisation, of human efficiency, more than any other determine the point at which an undertaking may become too large. Mechanical limits may cause the size of individual plants to remain comparatively small; but human limits fix the extent to which such plants may usefully be co-ordinated under one business control. For a horizontal combination the danger of constructing an unwieldy organisation may be considerable. But the problems of effective supervision and the higher direction of an enterprise, as distinct from mere routine administration, are even more formidable in a vertical concern. The latter depends, as we have shown, for the obtaining of its greatest economies upon the careful fitting of many parts into a harmonious whole, and upon the accurate adjustment of production at one end of a long chain of processes to demand at the other. This is by no means a simple problem; and it is not surprising that in those industries in which integration has been most successful a steadily expanding or an inelastic demand has been found. Without the development of managerial ability of a high order vertical combinations will fail to

⁷⁸ Weld, *Do Principles of Large-scale Production apply to Merchandising?* American Economic Association, 1923.

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realise the hopes of their founders and may even fall to pieces.

There are powerful forces working against the continued growth of combination in industry. The large-scale enterprise in many fields of business has proved superior to its smaller competitors because it has been better able than they to utilise the advantages of specialisation of function and division of labour. But after a certain limit of size has been passed these advantages tend, particularly where human skill and organising ability is concerned, to make for disintegration rather than integration. There remains, however, to be estimated a further strong inducement to combination—that set of motives which we have called financial, as distinct from commercial and industrial. Such motives may bring about a combination for which little or no industrial justification exists; and the combination when once formed is usually remarkably difficult to “unscramble.” The actual efficiency of the concern created by the amalgamation or merger may be even less than that of the units which make it up, when the latter were separate and independent. Yet the sentiment against spoiling the market, the difficulty of finding new capital for new entrants into an already overcrowded industry, the widespread influence of the financial interests involved in the success or failure of the venture, may keep the new combine alive. A combination may live longer without an underlying justification of economic efficiency than an abstract theory might suppose. An argument which concentrates too closely upon technical considerations to the exclusion of the financial will neglect one of the most important factors in the situation. It is the financial motive which we must now proceed to examine.

PART THREE
THE FINANCIAL MOTIVE

CHAPTER SEVEN

PROMOTERS' PROFITS

THE joint-stock form of ownership, providing a simple means whereby small amounts of capital may be combined into larger aggregates, has been invaluable in assisting the growth in size of industrial units. The principle of limited liability has proved an additional incentive to the small investor to bring forward his capital and with it assist the prosecution of enterprises with whose technique he is quite unfamiliar and from the scene of whose operations he may be far distant. The process of combination has also been facilitated by the evolution of such legal forms. The bringing under unified control of two undertakings owned by joint-stock companies may be effected in a variety of ways without the necessity of making an actual money payment. If one company absorbs another it will issue new shares of its own to the shareholders of the absorbed concern. In another type of combination an entirely new company may be formed which will issue shares in exchange for those of the two amalgamated companies, which now disappear as separate organisations. Alternatively, a holding company may acquire a number of the shares of each of the companies, sufficient to control their policy, and proceed to administer the affairs of both, though allowing them to continue a separate existence.

To the investor the fact that he can generally reckon upon being able at any time to withdraw, through the mechanism of the stock market, some at least of the capital which he has lent to industrial enterprises is no doubt a great advantage. The existence of this market makes possible the gathering of capital, particularly by large undertakings whose securities are frequently bought

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and sold, from small investors whose risk otherwise would be so great as to prevent them from parting from their savings. But ready negotiability of company shares is not an unmixed blessing. The financial speculator as well as the small investor can engage in buying and selling. The profits to be made on the Stock Exchange are not inconsiderable, and they are quick. It follows that those in control of joint-stock companies will not only always watch with anxiety fluctuations in the price of the securities of those companies, but may themselves take advantage of their inside knowledge and of their control over the earning power of their companies to engage in lucrative Stock Exchange transactions. New companies will never be floated without very careful attention to the possible future Stock Exchange price of their securities. The advance of industrial technique tends to be inextricably mixed up with, and to some extent dependent upon, the pecuniary phenomena of security-price fluctuation.

New inventions, new processes, reorganisations of industrial structure can none of them be utilised by the business organiser without the aid of capital supplied by the investor. As intermediary between him and the investor there stands the company promoter and the investment banker, the complicated mechanism of publicity house, underwriters, accountants, and so on which makes up the new issue market. This market, in the majority of cases, the business man finds he must approach if he is to obtain the large capital necessary to provide expensive machinery, wide advertising, the best technical advice, and all the other advantages of large-scale industry which we have already described. A combination can usually be brought about only with the aid of financial houses, who will facilitate the marketing of the shares of the new concern and enable it to draw its capital from a sufficiently wide area. And the small producer, when approached by a company promoter, who offers to buy him out (while perhaps still leaving him in managerial control of his plant) with the securities of some large combine, knows

that under the new regime his plant need fear no shortage of capital and will be part of an undertaking whose products are widely advertised and marketed. It may employ machinery and processes from the use of which it was formerly excluded by patents, and will have the advice of business and scientific experts to aid it. Above all—and this perhaps has been the strongest inducement to the small man—it will be ensured stability and fairly good management. The proprietor may die unharassed by misgivings that his heirs may not continue to maintain it and to draw from it a satisfactory income. The promoter, then, frequently finds a receptive ear turned to him ; and has the satisfaction of knowing that the greater the number of mergers he can bring about, the greater his own (promoter's) profits are likely to be.

The part played by the promoter in the formation of combinations of all kinds has been extensive. The history of the promotion of each great amalgamation differs in some respect from that of others. But the typical process is that in which the promoters first of all secure options to purchase the individual businesses which they wish eventually to combine. Next, the promoters ensure that working capital and cash for the purchases (where necessary) shall be forthcoming for the new combine, by finding underwriters. Often the promoters themselves will also be underwriters.¹ Then the promoters will form a company to acquire the plants or securities on which they hold options. In the new company they are usually careful to secure representation for themselves on the directorate.

In such a typical promotion the greater part of the plants acquired are usually paid for in the securities of the new combine rather than in cash ; for had the owners of the various plants insisted on cash payments, promoters would not have been found ready to undertake the formation of the new company.² The promoters pay themselves and the underwriting syndicate a substantial

¹ Cp. Dewing, *Corporate Promotions and Reorganisations*, p. 537.

² Cp. Jones, *op. cit.*, p. 284.

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number of the new securities as a recognition of their services of organisation. The lawyers who assist are frequently rewarded in a similar manner. The manufacturers who sell out usually receive stocks of the new concern to a nominal value far in excess of the going value of their plants. It therefore follows that the nominal capital of the combine bears little relation to the total value of the units included. Indeed, the capitalisation is usually arranged by the financial groups who undertake flotation simply at that figure which they judge would be most attractive to the public, which is eventually to be asked to take up a large number of the securities. Whatever the exact process of flotation, the aim of the promoters is to sell securities to the public for a sum higher than was necessary to form the combine and provide working capital.³ The difference represents promoter's profits.

Such profits have not been inconsiderable. The syndicate engaged in the formation of the United States Steel Corporation, after a cash outlay of \$28,000,000 for working capital and flotation expenses, received stock to a nominal value of \$129,997,500, which the members were able to dispose of for about \$90,500,000.⁴ They thus made a profit of \$62,500,000. Of this the firm of J. P. Morgan & Co., as syndicate managers, received \$12,500,000 in addition to the share of which they were entitled as syndicate members. When the New York, New Haven, and Harford Railroad issued \$67,000,000 of debenture stock, it paid J. P. Morgan & Co. an underwriting commission of $1\frac{1}{2}$ per cent. But the underwriters ran no

³ Meade, *Corporation Finance*; Lyon, *Corporation Finance*; Dewing, *Financial Policy of Corporations*; Marshall, *Industry and Trade*, pp. 329-332.

⁴ *Report of the Commissioner of Corporations on the Steel Industry*, 1911, p. 144. The report of the House of Representatives put the figure even higher. It calculates that "the grand total in cash and securities turned over by the Steel Corporation and its subsidiaries to the Moore, Morgan, and other syndicates for services was \$160,765,894, or approximately 50 per cent. of the actual value of all its plants and properties combined—House of Representatives, Report No. 1127, 62nd Congress, 2nd Session, Investigation of United States Steel Corporation, p. 67.

risk. For the stock sold easily at 106.⁵ The formation of the Asphalt Company of America left in the hands of promoting interests about "one-third of the total bonds issued in acquisition of the various constituent properties."⁶ Even many years before the founders of the United States Steel Corporation had set an example to the world of finance, the promoters who organised the Chicago Junction Railways and Union Stockyards Company, capitalised at \$23,000,000 in stocks and bonds, received for their services a sum of \$2,700,000.⁷ Examples might be multiplied. The history of the majority of great combinations affords instances of the large profits which financial interests may expect to make if they assist business amalgamations. Professor Dewing, who examined in detail the promotion and financial history of fourteen of the largest American combines, concluded that in their promotion "the total tangible assets averaged 40 per cent. of the total issued securities." Of the remaining 60 per cent., "10 per cent. went to the promoter for his services, 10 per cent. to the banker for his services, 20 per cent. to the manufacturers as a gift in excess of the value paid for their plants, 15 per cent. to the public as a 'bait' to induce the purchase of the securities, and 5 per cent. for the direct labour incident to incorporation. Such figures represent the roughest approximation. They are susceptible to infinite variations, according to the proportions of bonds and stocks, to the period of promotion, to the kind of industry, to the prevailing sentiment of the public. As rough approximations, however, they are believed to be fair statements of average conditions."⁸ Financial houses, therefore, have the best of reasons for being as eager to assist in forming combinations as the engineer may be to approach them with a request for additional capital for his

⁵ Brandeis, *Breaking the Money Trust*, in *Harper's Weekly*, November 1913 and January 1914.

⁶ Dewing, *Promotions*, p. 539.

⁷ *Report of the Federal Trade Commission on the Meat-packing Industry*, Part 3, p. 199.

⁸ Dewing, *Promotions*, p. 540.

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enterprise. "Improvements and developments ordinarily proceed slowly. For them, even where the enterprise involves large expenditures, a series of smaller issues is usually more appropriate than single large ones. . . . The 'great' security issues in which bankers have co-operated were, with relatively few exceptions, made either for the purpose of effecting combinations or as a consequence of such combinations."⁹ The enormous profits to be made from such "great" issues are a direct incentive to the formation of combinations. The owners of the businesses to be combined are allowed to share in these profits as an inducement to them to consent to the fusion. It is only when the producers have demonstrated the ability of their concerns to earn profits that the financiers will become interested. Then they will begin to see the advantages of forming a combine and raising capital for it from the public with whom they are in touch.¹⁰

Those who came into control of undertakings formed in this way were naturally greatly concerned with the vendibility of the securities they held. They had a standing temptation so to manage the affairs of the concern as to ensure a ready sale for the securities so long as they held them. Professor Dewing has shown how, in the case of many of the companies whose history he examined, dividends were distributed when there was no real justification for doing so. This was done while the original organisers of the combine were in control and continued to hold securities. When their holdings had been disposed of, the organisation was left derelict and went bankrupt. "Every evidence shows that had the early interests been willing to forego immediate profits and conserve the funds of the corporations, the enterprises could have been placed on a sound footing and the men themselves have secured vastly greater returns."¹¹ "To outward appearance the failure was due to insufficient

⁹ Brandeis, *op. cit.*, cp. Seltzer, *op. cit.*, pp. 2, 9, 19.

¹⁰ Cp. Seltzer, *op. cit.*, 2, pp. 9, 19.

¹¹ Dewing, *Promotions*, p. 550.

working capital, and inability to secure more liberal allowances from the banks. But the truth of the matter in the majority of cases was that working capital and bank credit had been used in the past to meet interest payments. The crisis resulting primarily from capital disbursements had been shifted forward and given the form of a crisis due to impaired working capital." ¹² A desire to secure the profits to be made by the buying and selling of securities which have been issued without any close relation to the tangible assets they are supposed to represent may lead the controllers of a great combination to adopt a business policy detrimental to its industrial efficiency. "The men who have the management of such an industrial enterprise, capitalised and quotable on the market, will be able to induce a discrepancy between the putative and the actual earning capacity, by expedients well known and approved for the purpose. . . . If they are shrewd business men . . . they will aim to manage the affairs of the concern with a view to an advantageous purchase and sale of its capital rather than with a view to the future prosperity of the concern. . . . That is to say, the interest of the managers of a modern corporation need not coincide with the permanent interest of the corporation as a going concern."¹³ "The interest of the community at large demands industrial efficiency and serviceability of the product; while the business interest of the concern as such demands vendibility of the product; and the interest of those men who have the final discretion in the management of these corporate enterprises demands vendibility of the corporate capital."¹⁴

What the framers of the financial scheme of a great industrial consolidation seek to capitalise is its earning capacity. This is such a commonplace of text-books of corporation finance that there is no need to elaborate it here. It is well understood that the capitalisation of a business must represent in its nominal value not only the

¹² Dewing, *Promotions*, p. 555.

¹³ Veblen, *Business Enterprise*, p. 156.

¹⁴ *Ibid.*, pp. 157-158.

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value of the plant and other tangible assets but also the "goodwill," the value of the intangible assets, the patents or privileges the company may hold, the trade-marks or brands it may have registered, the reputation it has established for reliability, the business connection it has built up. Besides these, some have included the organising ability of its managers. Not original cost, nor replacement price, but "going concern" value is the basis of modern capitalisations. How far the nominal capitalisation corresponds to the reality of earning power will, as Professor Veblen has pointed out, be known only to the controllers of the business, but will be daily estimated by the stock market in the price which it makes for the securities.¹⁵

But the basing of capitalisation upon present earning capacity is one thing; calculating it by reference to estimated *future* earning capacity is another. Yet this is precisely what the creators of the great combinations, especially in the United States, set out to do. The steady expansion of industry and population in the United States induced throughout the country a spirit of optimism concerning the future of its business undertakings of which financial interests were quick to take advantage. A large portion of the securities issued by newly-created consolidations was explained by the promoters as the capitalisation of the expected economies of combination. Some of it might perhaps reasonably have been issued against that security. Some again may justly be regarded as having been issued as the capitalisation of an immediate specific monopoly or differential advantage. But in more instances than one there still remained over some securities which can only be regarded as capitalisation of the future prosperity of the United States. The promoters capitalised in the form of securities their optimistic view of the future and sold it to investors for cash which they enjoyed in the present.

¹⁵ Veblen, *Business Enterprise*, p. 152, and elsewhere throughout his works.

What a conservative capitalisation should be has been described by Mr. Meade in 1902. "In capitalising the profits of such an integrated industry the amount of stocks and bonds that can safely be issued should not absorb the maximum earning power of the new company, but should preferably represent the average of high and low profits, or, even more prudently, should be fixed at a point where the requirements of interest, maintenance, and dividends should not absorb more than the minimum earnings. If both these rules are disregarded, and the maximum earnings of an integrated company are fully capitalised, especially if the capitalisation contains a large proportion of interest-bearing obligations, its financial standing is certain to be impaired by the first decline of prices. A conservative policy is evidently far more necessary in the capitalisation of an integrated than of a non-integrated company, because, in the case of a non-integrated business, the proportionate decline in profits, as a result of a fall in prices, is much less than where little compensation for falling prices is afforded by decreasing cost of materials."¹⁶ Judged by those standards the capitalisation of the United States Steel Corporation was far from being sound. Yet in the outcome the steady growth of American prosperity has enabled the Steel Corporation to reap such gains from the differential advantage of the leadership it enjoys in its industry and the early start it made, that in 1926 not only was all the water squeezed out of its capitalisation by the steady increase in the value of its tangible assets, but it was enabled to capitalise its reserves by a stock dividend of 40 per cent.¹⁷

The conservative principles advocated by Mr Meade are by no means always followed. A recent example of optimistic capitalisation in an expanding industry deserves mention. Messrs. Dillon Read, who recently outbid Messrs. J. P. Morgan & Co. for the privilege of selling

¹⁶ Meade, *Capitalisation of the United States Steel Corporation*, in *Quarterly Journal of Economics*, Vol. 16.

¹⁷ National City Bank, Letter, January 1927.

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Dodge Bros. to the investing public announced in the prospectus which they issued that "the capital stock of the company will be issued almost entirely against the established earning power, which is not assigned a value in the Balance Sheet."¹⁸ A sum of \$146,000,000 in cash paid to the proprietors was raised by selling to the public \$75,000,000 6 per cent. debenture stock and 850,000 7 per cent. preference shares of no-par value (subsequently quoted as high as \$91.50 each in 1925). There were also created 2,535,000 class A ordinary shares of no-par value (subsequently quoted as high as \$48.75 each) of which some were distributed as a bonus to those who took up the preference shares, and others were reserved so that debenture stock might be converted into them on defined terms. Finally, there are 500,000 class B ordinary shares of no-par value, carrying complete voting control of the company and reserved to the "Participants and Managers of the Purchase Group which originally acquired the property." It is not very surprising to learn that "earnings on the present capitalisation have been subject to considerable fluctuation during the past few years, having been at the annual rate of \$3.35 per share on the common stock in 1924, as compared with \$3.21 in 1922; nothing was earned on the common in 1923."¹⁹

The capitalisation of probabilities in this way is clearly likely to promote general business instability. It is in itself speculation and calculated to incite further speculation. "Booms" are founded upon optimism of this kind and while it lasts stimulate that real over-capitalisation of industry which eventually results in over-production, the decline of optimism, and the deflation of the fictitious values which have been sold to the public by the promoters. Responsibility for not only the downright "milking" of consolidations by their controllers in the way we have described above, but for a general dislocation of business and trade must be laid (at least some of it) at the door of the

¹⁸ Quoted by Seltzer, *op. cit.*, p. 233.

¹⁹ Standard Statistics, 19th March 1926.

financial manipulators who have played such a large part in the formation of industrial combinations.

The profits which these manipulators earned upon the watered capital which they issued can scarcely be regarded as payment for risk. The only risk they incurred was the risk that the investor whom they sought to attract might understand what they were doing. What they did was to capitalise the differential advantages of the new concerns they organised and to appropriate it to themselves. Theoretical economists have recognised the possibility and the existence of such earnings of differential advantage. But they have tended, it seems to the present writer,²⁰ to ignore their significance and permanence. Such economists have erred not so much through faults of omission as in emphasis. So far as the actual distribution of wealth in society regarded as static may be concerned, such earnings are perhaps of comparative insignificance. But in the dynamics of economic life they would seem to have been of the greatest importance. The desire to obtain them has been again and again, and still is, one of the most powerful existing incentives to bring about a reorganisation of industrial structure. And once they have been obtained they burn holes in the pockets of those who have gained them until they are made use of in turn for the bringing about of further reorganisations and the still greater multiplication of profits.

²⁰ Cp. Dobb, *Capitalist Enterprise and Social Progress*, Chap. 5.

CHAPTER EIGHT

CAPITALISATION

CONSIDERATION of these problems of promotion and recapitalisation involves us inevitably in an examination of the effects of the "watering of capital." Such "watering," as a result of the formation of an amalgamation, or even in other circumstances—as, for instance, when a company issues bonus shares to its proprietors—has often been severely criticised. It is felt to be in some way unsatisfactory that the amount of the nominal capitalisation of a company should not closely reflect the value of its real assets. To the man in the street and even to the small investor, who is not skilled in the ways of the company financier, the fact that a firm has a "capital" running into millions seems to indicate that it is a firm of great size and strength. If, after purchasing some of its shares, he finds later that his "one pound" shares have to be "written down" to ten shillings he feels not only very annoyed, but somewhat confused. He cannot quite make out what the whole transaction means. His confusion is shared by others who feel themselves to be much better instructed about these matters. No term is used more loosely than the term "capital," and the practice of formally attributing a nominal (or "par") value to shares whose actual value (as measured by the price at which they can be bought or sold) is continually fluctuating has been a source of endless misunderstanding.

To make matters clearer, let us consider the practical problems involved in valuing the assets of an industrial company. When we have done so, we shall see how very difficult it is to ensure for any length of time that the nominal capitalisation of the company has any correspond-

ence to the value of its assets. Law Courts and Public Utility Commissions in the United States, when public supervision or control of profits has been imposed, have often been charged with the task of determining the value of a public utility so that its owners may receive a "fair return" annually upon that value. They have found that their task is no simple one.

It will not do for them to consider merely the amount of money which the original founders of the business had to expend in order to bring it into existence. That may be a very inadequate indication of its present value. The business may have been reinvesting its profits, and making therewith improvements in its plant, its technique, its organisation. It is equally possible that it may have been doing none of these things, that it may have been neglecting to set aside sufficient amounts to provide for the depreciation of its plant, or that it may have been carelessly managed in other ways. On the other hand, the organising ability, the honesty, and the skill of the proprietors may have added to the concern all sorts of intangible values which must be regarded as their property. Moreover, the purchasing power of currency may not be the same as it was when the business was established.

If original investment is not a satisfactory criterion to adopt, perhaps it will be fairer to consider "replacement cost." But if we decide to measure the value of the assets by the amount of money which would be needed in the present to reconstruct the plant and equipment, we soon come across fresh difficulties. In many cases actual equipment will have no more than scrap value without the existence of intangibles, such as the legal right to conduct a transport business, or the administrative mechanism which the proprietors have built up. Replacement cost, except through the effect it may have upon depreciation allowance and insurance charges, has no influence upon earnings. The cost of a given plant may have originally been \$100,000. Perhaps \$150,000 would be needed at the given moment to replace it. Yet if it were offered for sale

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it might fetch only \$50,000, because its earning power was low.

There is one institution which is occupied every day in valuing the securities of public companies. That is the Stock Exchange. But the value placed by that market upon the securities of any company will only reflect the market's estimate of its actual earning power in the immediate future. Stock Exchange value changes from day to day, and will not at any moment be a satisfactory figure on which a public authority can base a decision meant to endure for a long period. In consequence, the bodies concerned are forced back upon "going concern" value, which takes into account the various factors just enumerated and attempts to measure their importance over a number of previous years.

Thus the Interstate Commerce Commission of the United States, charged with the duty, under the Act of 1920, of valuing the railroads of the country, "reports a total figure, together with all the substantiating evidence, but does not indicate the exact weight assigned to any one element. The figure is an expert guess—no more, no less."²¹ The method of making the guess follows the lines laid down by Mr. Justice Harlan²²: "In order to ascertain the value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stocks, the present as compared with the original cost of construction, the probable earning capacity . . . under particular rates prescribed by statute, and the sum required to meet operating expenses are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property."

In Great Britain in 1921 a similar problem was more or less solved by avoiding the difficulty of an outright

²¹ Vanderblue and Burgess, *Railroads*, p. 352.

²² In *Smyth v. Ames*, 169 U.S., pp. 466, 546. Quoted by Vanderblue and Burgess, *op. cit.*, p. 337.

valuation. It was laid down by Act of Parliament that the Railway Rates Tribunal in prescribing railway rates and fares should do so in such a way as to secure to the companies the net revenue which they earned in 1913. In addition the companies would receive a fair return upon capital which became remunerative after 1913 and upon any economies they might effect after 1921. There was no mystic virtue about the year 1913. Indeed, it had been rather a prosperous one for the railways ; but any apparent generosity to the companies involved in choosing that year was doubtless offset by the wide difference between the purchasing power of the pound in 1913 and its purchasing power in 1921. The further anomaly that the companies were to receive a minimum standard net revenue regardless of changes in the price level, whereas at the same time the wages of their employees were voluntarily fixed by reference to cost of living, has also proved of little importance. For the railway companies have lost their semi-monopoly position and, though they have not earned their standard net revenue, have been prevented by competition from exercising their right to raise their charges. The British compromise was anomalous and the American settlement cumbrous and very expensive ; but both illustrate the difficulties involved in valuation and the necessity for adopting " going concern " value as a basis.

Accountants and writers on company finance seem to come to much the same conclusion. It is now a frequent practice to include in balance-sheets among the assets an item of " goodwill." Generally speaking, accountants in estimating the value to place upon this item in an amalgamation or a reconstruction, will take into account the business abilities and prestige in their trade of the persons who are to control the new concern ; the turnover and profits in the past of the businesses to be fused ; and the future prospects of the new concern of maintaining that turnover. They will first of all estimate the value of the tangible assets of the company by reference to original investment and to replacement cost. Suppose that the

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value is £100x. Then they will calculate what annual profit such a sum could be expected reasonably and regularly to earn if invested in the ordinary shares of a stable and successful industrial concern operating in the same line of business as is that which they are now capitalising. Suppose that such a profit would be £6x per annum. Now suppose that the accountants fully expect that this new amalgamation of theirs will regularly earn £8x per annum. It will be earning a surplus of £2x per annum over the normal annual profits to be expected from the value of its tangible assets. This surplus of £2x per annum they will then capitalise. The figure at which they capitalise it will depend upon their own caution and upon their estimate of the business ability of the new directors, or possibly upon their judgment of what the public will be willing to pay for the shares to be issued. If they judge business ability to be average, and are themselves neither very cautious nor very optimistic, they will probably capitalise the surplus at a figure of £33½x (*i.e.* at the rate of 6 per cent. already used). Thus the real assets will figure in the balance-sheet at £100x and "goodwill" at £33½x. In other words, differential advantage will be capitalised as goodwill, and the total nominal capital of the concern will be the capitalisation of its average total estimated earning power over a number of years. Such a principle of capitalisation is well summarised in the following definitions taken from text-books. Professor Stockder says that "overcapitalisation of a corporation is that state in which the earnings of the corporation are for a period of years, more or less, consistently inadequate to meet the current claims of its security holders on its income."²³ Professor Gerstenberg phrases his definition somewhat differently, but arrives at a similar conclusion. "If stock is issued to an amount much in excess of capitalised earning power of a company, the company is said to be overcapitalised and stock is said to be watered."²⁴

²³ Stockder, *Business Ownership Organisation*, p. 148.

²⁴ Gerstenberg, *Financial Organisation and Management*, p. 278.

It is earning power, therefore, which in modern conditions is the recognised criterion to adopt in deciding upon capitalisation.²⁵ And in respect to earning power companies may be undercapitalised as well as overcapitalised. The undercapitalised concern finds itself sometimes at a business and financial disadvantage. It will appear to be making exceptionally high profits and may thereby attract to itself inconvenient attention. Competitors may be led to enter the field of its activities. Its employees, seeing it declare dividends at a high rate per cent., are likely to put forward wage demands and become discontented. Customers also may think themselves exploited and diminish their purchases in the hope of obtaining price reductions. If the concern be engaged in a key industry or be regarded as a public utility, a demand may arise for the supervision of its affairs by some Government authority. Moreover, its directorate, looking to the vendibility of its securities, may find that these, being few in number and enjoying in consequence only a limited market, are selling at less than their investment value. In such circumstances the controllers of large public companies frequently proceed to issue bonus shares to the existing shareholders, capitalising thereby earning power which has hitherto found no place in the balance-sheet. Such increases of capitalisation to conceal profits are recognised by writers on the subject as normal occurrences, and there are many examples.²⁶

The company which is overcapitalised suffers disadvantages which are more serious than those of the undercapitalised, since they are less easily remediable. Though it is true that its securities will be relatively numerous and therefore may enjoy a wide market and perhaps be quoted at a price above their investment value, they will nevertheless be quoted below par, that is, at a price below their nominal value. This tends to make it difficult for the concern to obtain short-term credit and to raise new capital from

²⁵ Cp. Marshall, *Industry and Trade*, pp. 333-337.

²⁶ *E.g. Meat Report*, Part 3, p. 192 *et seq.*

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long-term investors.²⁷ The individual security holder, moreover, may also find it difficult to raise loans with "watered stock" as collateral. The security holder in an undercapitalised company which makes a bonus issue may find it possible to make a profitable sale of his holdings before the whole of the market has quite realised the extent to which the concern's capitalisation may now be out of correspondence with (either above or below) its earning power. But he who continues to hold his securities, or who buys when the bonus issue is made, if the company has actually now been overcapitalised, may find, as the true values of his holdings begin to be revealed, that he has suffered a loss.

It is obviously only in rare instances of firms of great stability that capitalisation will remain over any long period in close correspondence with earning power. The latter will fluctuate from time to time and the company find itself either undercapitalised or overcapitalised. To meet this difficulty many American companies have adopted the method of issuing shares of "no-par" value. The investor is told that he holds a one-millionth share in a certain company, and not that he holds a \$100 share in a company having a capital of \$100,000,000. These shares are, of course, entered on the books of the company at a certain nominal value, and are quoted in the stock market at a valuation which may not by any means always correspond to that entered on the balance-sheet. But the lack of correspondence is not so evident in current quotations of no-par shares as it is in the case of securities having a nominal value, and such firms may remain for a long time undercapitalised without attracting inconvenient attention. The very ignorant small investor (and the number of such is rapidly increasing in the United States) may be thus less easily deceived as to the value of his holding; for the use of the monetary unit in expressing share holdings is often deceptive. Moreover, the adjustment of the balance-sheet valuation of shares to correspond

²⁷ Cp. Gerstenberg, *Organisation*, p. 280.

with changes in their earning capacity can be far more easily effected when those shares are given no nominal value than when an elaborate process of "writing down," with an appeal to a court, is necessary.

The word overcapitalisation is often used in a manner implying adverse criticism. We have tried to use it as objectively as possible to describe a state of affairs which is constantly recurring in the business world. Our argument is twofold. Firstly, we have attempted to show that in practice no basis but "going concern" value can be found for modern capitalisation. Secondly, it will be found profitable, *for purely businesslike reasons*, to increase capitalisation when for any long period a firm has been paying dividends at an abnormally high rate per cent., and to reduce capitalisation when it has been for long distributing at an abnormally low rate per cent. Such increases and reductions will become increasingly usual as the reasons for them become understood.²⁸ It therefore follows that the terms "undercapitalisation" and "overcapitalisation" can usefully be employed only in the businesslike sense in which we have here used them. It does not appear strange to say that a firm which has been able to pay dividends for a long period at the rate of only 1 per cent. is overcapitalised. Neither, then, should it appear strange to say that a firm paying dividends, for example, of 15 per cent. over a long period is undercapitalised. This businesslike sense of the words is the only sense in which they can have any financial meaning. When we speak of firms whose *real* capital (their plant and equipment, as distinct from their *capitalisation*) is in excessive proportion to the other factors of production over which they have control, we shall refer to such a state of affairs as "real overcapitalisation," and to the contrary case as "real undercapitalisation." But the terms overcapitalisation and undercapitalisation, used

²⁸ Of course, it is also true that the better they are understood, the less effective they become; for the whole object of them is the concealment of facts by the use of figures which convey a false impression.

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without qualification, have each a definite meaning. Thinking in the social sciences would become a great deal more exact were it easier to secure acceptance for one meaning, and one only, for each term used.

It is the form of capitalisation rather than the amount which is of most importance where the business policy of a joint-stock company is concerned. If a company having a nominal capital of £1,000,000 and paying dividends upon it at the rate of 10 per cent., proceeds through bonus issue, or as the result of amalgamation, to increase that nominal capital to £2,000,000 and pay dividends at the rate of 5 per cent., clearly its earning capacity is in no way impaired and there is no reason *in this transaction as such* why it should alter its policy either to customers or to wage-earners. There may, of course, be some new shareholders who bought shares just after the issue was made and who may find that they bought at a price above investment value as measured by the prices of the securities and by the earnings of other companies of a similar kind at the same time. These shareholders may be inclined to bring pressure to bear upon the directorate to increase in some way the earning power of the company's assets. But, assuming that the company was, at the time the issue was made, earning profits to its fullest capacity, there is no reason to suppose that its capitalisation of its differential advantage²⁹ in this manner need seriously affect either its wage or its price policy.

But the foregoing is too simple a case to be typical. It takes no account of differences of class of security and whether securities be entitled to a fixed return at a guaranteed rate per cent. The typical modern capitalisation of course regularly includes a number of fixed-interest

²⁹ Assuming that the normal rate of profit upon capital expended in the purchase of shares of companies of its class was at the time 5 per cent., such an increase of capital from £1,000,000 to £2,000,000 by a concern hitherto regularly paying dividends at the rate of 10 per cent. would be a simple capitalisation of differential advantage. Before the issue its £1 shares would probably be quoted at £2 or a little less, and after it at par—that is, it would be bringing its capitalisation into exact correspondence with its earning power.

bearing securities. There is a continual danger that companies may be led to burden themselves unduly with the fixed obligations represented by such securities. During a time of boom, whether accompanied by currency inflation or not, when prices are rising and profits are easily earned, companies are apt to become undercapitalised (in the sense in which we have all along been using the term). For the reasons we have given, they will proceed to increase considerably their nominal capital, and the excessive optimism prevalent at such a time, coupled with the possibility of making Stock Market gains from the sale of watered securities while speculation is still active, may lead them to overload themselves with fixed-interest bearing securities. Even supposing that the new issues are made in the form of ordinary shares not guaranteed a fixed dividend, it is possible that when the boom collapses there may not be sufficient earnings to pay, with conservative management, any dividend at a reasonably high rate upon the ordinary shares. At such a time the directorate, usually itself holding ordinary shares rather than securities of the other classes, may be led to sacrifice the interests of the preference shareholder. They may neglect the provision of adequate reserves; they may pay dividends upon the ordinary shares which prudence would not justify and thereby impair the value of the company's property; or they may (especially where the rights of preference shareholders are not cumulative) defer for a year or two the declaration of any dividend until there will be sufficient profits in hand to enable a payment to ordinary shareholders to be made. Having in any of these ways fictitiously maintained the price of their securities in the Stock Market, they may even take advantage of their standing to borrow further from credit institutions and thereby make still heavier their fixed-interest burdens.

Even in the early days of the formation of great amalgamations it was well understood that their ordinary shares, or common stock, as the American phrase goes, were issued only against goodwill, or differential advantage, the

capitalised economies of trustification or expected monopoly earnings. Judge Moore, the famous trust promoter, stated before the Industrial Commission that "everybody knows what they are getting when they get common stock; they know they are not getting anything that represents assets."³⁰ The preferred shares and any debenture stock outstanding were understood to represent the tangible assets. But as concerns became more established the tendency was for the directorate to trade upon an ever thinner equity. It needs no demonstration to prove that it is to the personal advantage of directors who are themselves holders of ordinary shares, to raise as much capital as they reasonably can by the sale of securities whose rate of interest, in return for a guarantee that it will be constant, is fixed comparatively low. The old established firms, therefore, attempted to increase their issues of debenture stock, or bonds, in order to improve the share of earnings which went to the holders of ordinary shares or common stock. When bad times came their companies went bankrupt. Professor Dewing summarises as follows the main reasons for the failure of many of the important consolidations whose history he studied: "These financial difficulties were not the consequence of overcapitalisation as is usually alleged. These corporations did not fail because the capitalisation items were large or small. They failed because their earnings were inadequate for the load put upon them. If the load was especially burdensome by reason of heavy fixed charges and unwarranted dividend payments, the failure was all the more certain. The direct cause of failure in every instance was the deflection of working capital to the payment of interest and dividends. Beneath this, as the fundamental cause, was the lack of judgment of promoters in placing bonds upon an untried industrial enterprise and the lack of conservatism of the early management in paying dividends without due regard to sound principles of finance."³¹ The very existence of

³⁰ *Industrial Commission Reports*, Vol. 1, p. 963.

³¹ Dewing, *Promotions*, p. 557.

overcapitalisation, by making it difficult for a company to raise new capital from the ordinary investor, may lead it to borrow still further by means of fixed-interest bearing debentures, and thus worsen, in the way we have described, its prospects of improving its efficiency.³²

So far we have considered the effect of overcapitalisation upon industrial efficiency from the point of view of the companies overcapitalised, and from that of their security holders. But it may surely be justly argued that efficiency can be regarded from another angle. When we speak of the efficiency of an industrial concern we are too apt to lay emphasis upon its profit-making ability. Yet a wise and detached appreciation of efficiency should take into account the extent to which the concern satisfies the requirements of those who are to use its products. So-called "economic friction" is so prominent a part of the existing price mechanism that it is unwise to assume too easily that in actual fact in the modern business world the interests of both parties to a bargain are as fully satisfied by the price arrived at as the conclusions of static economics would have us believe. Efficiency, then, must be looked at from the point of view of the consumer as well as from that of the producer. From the latter angle an enterprise may appear to be quite efficient, though in the opinion of the consumer it will seem to be failing lamentably to fulfil its proper function. The effect of overcapitalisation upon price-policy will therefore be as important a consideration, in the interests of the community as a whole, as its effect upon Stock Market values and the position of the investor.

Concerns whose capitalisation has been optimistically and even recklessly increased during a boom period find themselves in a very awkward situation during a slump. The fierce competition of such a period demands that they should improve their industrial efficiency. This they can do only by raising new capital, for the introduction of new processes or machinery, or for the effecting of reorganisation.

³² Cp. Fitzgerald, *op. cit.*, 190.

But such new capital can, as we have attempted to show, only be raised by the sale of securities issued on mortgage against their tangible assets and carrying a fixed-interest charge,³³ which still further impairs the possibility of paying dividends upon their ordinary shares, and therefore impairs the vendibility of the latter. "Overhead" charges have been increased by this borrowing, and since these overhead charges are calculated as part of the cost of production, the firm will have a strong incentive not to lower the prices of its products as rapidly as we might expect during a period of business depression and falling wages.

In a situation in which large numbers of the leading industrial producers find themselves so placed that the nature of their capitalisation deters them from a courageous policy of price-cutting, the prevailing business ethic which we have already referred to as the "sentiment against spoiling the market" will operate to prolong the stagnation. The policy of industry will be directed to maintaining prices so as to earn a high profit per unit upon a small total production rather than a small profit per unit upon a large total production. Professor Veblen, discussing the post-war situation in the United States, came to the conclusion that "an inflated capitalisation has been kept intact as a whole, and has steadily been increased, and inflated market prices have been maintained without substantial abatement during these years, at the cost of persistent inaction in industry; in the face of extreme provocation to go to work and a very appreciable run of popular hardship and discontent due to continued unemployment and restriction of output. Whereas, if those concerns which control the financial end of things had kept their hands off and let the inflated credit situation come to a head, a drastic liquidation of the country's business affairs would doubtless have gone into effect in due course and brought on an effectual retrenchment in capitalisation and prices; whereupon the country's industries would shortly have got under way and

³³ Cp. Fitzgerald, *op. cit.*, p. 190.

would speedily have made good the wastes of the war, and supplied all ordinary needs." ³⁴ The United States Comptroller of the Currency in his Annual Report of 6th December 1920 declared that during the depression, " By closing down mills and mines the output of steel and iron was reduced, in order that manufacturers and miners might obtain, because of the insistent and peremptory demand, the exorbitant profits realised during the War rather than the more moderate profits they would have had to accept if a maximum output had been maintained. While the profits of steel manufacturers and coal operators were swollen, the country became poorer from the lack of production brought about by the unnecessary closing down of mills and mines and the incidental idleness of labour." ³⁵ Other observers confirm this general conclusion that the prevalence of overcapitalisation tended to prolong business depressions.

There is an inertia in industry disclosed by recent events which writers on the principles of economics seem inadequately to have appreciated. The business policy of deferring liquidation is further encouraged by the action of banking interests which frequently hold a large share of the fixed-interest bearing securities of the firms in difficulties. Rather than cut their losses and compel a rapid liquidation and reorganisation of industry upon a technologically sound basis, these interests seem to prefer to maintain the *status quo* in the hope that eventually " things will improve " and a return will be made to the conditions of extreme optimism which prevailed when the

³⁴ Veblen, *Absentee Ownership*, p. 329.

³⁵ Quoted by Lauck, *Human Standards*, p. 77. Cp. also Dobb, *op. cit.*, pp. 88-89, " Unless . . . each firm fears that its rivals are intending to poach on its preserves, its chief concern is likely to be to maintain prices in its own private market . . . there seems little doubt that the existence of high capitalisation will tend to act as a restraining influence on each and all not to spoil their several markets. The idea of what is the ' normal ' price below which sellers do not wish to fall will be adjusted to the increased capital charges, and this idea of the ' normal ' price will affect judgments as to the intentions of rivals . . . Where the entry of new firms is restricted, there seems a fair chance of the level of ' normal ' output and prices being adapted to the level of profits rather than the reverse."

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now depressed concerns were capitalised. The effect of their reluctance is reinforced by a desire of the controllers of embarrassed companies to hold on as long as may be to their seats on boards of directors, which bring in a certain income, even though no dividends be paid. In consequence, in times of depression, when reorganisations might assist industry to recover, they tend to be postponed. In times of boom the incentives to combination are much more favourable. Presumably if such times return again in this country the merry game of competitive optimistic capitalisation will begin all over again, and the whole process be repeated. No doubt there is real reason to fear that now that leadership in industry has assumed such importance, the bankruptcy of any of the important industrial undertakings of great size would have such a bad effect upon business confidence as to defer once again the prospects of revival. But it is at least doubtful whether anything short of drastic action in some industries will suffice.

Many amalgamations of numerous competitors in order to eliminate competition have produced a real overcapitalisation for which the differential advantage resulting from the merger has not been able to make up. The amalgamation has been made before the competitive struggle had been allowed to go far enough in weeding out the unfit.³⁶ In consequence, a burden of inefficiency has had to be carried by the new undertaking. But there also exist other concerns whose technical equipment is excellent, which are burdened by unduly heavy overhead charges, resulting from optimistic capitalisation. It may even happen that the technologically inefficient firm is thus enabled to compete effectively with its better equipped but more recklessly directed neighbour. In an industry in which competitive ability and financial standing differ considerably in this way from firm to firm, it is difficult indeed to introduce any kind of reorganisation or rationalisation. In the British iron and steel industry, for example,

³⁶ Levy, *Monopolies, Cartels, and Trusts*, p. 286.

the financial conditions of the leading companies have been, in recent years, "so different that they constitute a very powerful hindrance to any practical large-scale movement towards concentration in the British iron industry."³⁷

We are concerned with the "watering" of capital only in so far as it is an accompaniment of industrial combination. The conclusion is that the object of increases of capitalisation, however effected, without a corresponding increase in a company's productive capacity, is usually to make a pecuniary profit for the promoters, the vendors of the property, and others who are admitted to share the spoils. This profit may be made either by the sale of watered stock before its true character has been perceived, and this perception has been reflected in the quotations of the stock market, or by the exercise of a monopoly power so as to increase earnings. Such a profit is of a purely artificial character—it represents no increase in the productive capacity of the concern. Yet that "profit" has to be made good in terms of real wealth by someone.³⁸ By whom? By the purchaser of the watered stock—in the form of lower dividends than he expected? Or by the consumer—in the form of a higher purchase-price for the company's products? Or by the worker—in lower real wages or longer hours? The answer will depend, of course, upon the relative bargaining ability of the three parties to bring pressure to bear on the company.

³⁷ *The Economist*, 9th January 1926.

³⁸ *Vide* Marshall, *Industry and Trade*, p. 333.

CHAPTER NINE

REORGANISATION

IN British industry, during the post-War depression, in spite of the adoption in many quarters of a policy of maintaining prices in a vain attempt to protect an excessive capitalisation, drastic capital reorganisations have taken place.³⁹ These have involved wholesale writing down of assets, often in spite of protests by holders of fixed-interest bearing securities that their just claims were unfairly neglected. The natural optimism of the creators of amalgamations was undoubtedly further increased during and immediately after the War by Government inflation of the currency; and constituent concerns were bought up at more than normally inflated values. The subsequent deflation has made more difficult than usual the position of overcapitalised firms, especially in those industries where war-time expansion was largest.

The two great firms of Vickers Ltd. and Sir W. G. Armstrong, Whitworth & Co. afford excellent illustrations of the disastrous results of forming amalgamations at the instigation of the financial incentive without due attention to the industrial and administrative prerequisites of success. "They expanded spasmodically without sufficient correlation and internal organisation."⁴⁰ During the War and the post-War boom they absorbed at inflated prices, and with but little regard to considerations of technology,

³⁹ Cp. Fitzgerald, *op. cit.*, pp. 190-192. Cp. Balfour Committee, *Survey of Metal Industries*, p. 44, where the continued prosperity and financial success of Messrs. Guest, Keen, & Nettlefold is contrasted with the losses of other large concerns. It was only after the financial reorganisation of Baldwins Ltd. that they came to an arrangement with Guest, Keen, & Nettlefold for the amalgamation of their steel interests.

⁴⁰ *The Times* (London) *Annual Financial and Commercial Review*, February 1927.

numbers of smaller firms—some of them only very remotely connected with the engineering industry. The capital and reserves of Vickers Ltd., which in 1913 stood at about £9,500,000, were £31,000,000 in 1922. "In 1915 Vickers' holdings in other concerns were valued at £5,500,000; with the purchases made in the next few years, Vickers' holdings appeared in the 1919 balance-sheet at over £17,000,000, and in the 1920 balance-sheet at over £18,000,000."⁴¹ When the period of optimism was at an end, the company proceeded early in 1926 to effect a "capital reorganisation by which no less than £12,442,366 was written off the company's assets, of which sum £8,210,322 was obtained by reducing the nominal value of the ordinary shares from £1 to 6s. 8d. This scheme . . . was followed by a thorough reorganisation of the whole concern, by which the general board was reconstituted and three special boards set up to deal respectively with industrial management; armaments and shipbuilding; and finance."⁴²

The plight of Sir W. G. Armstrong-Whitworth & Co. Ltd. was even more miserable. Whereas, in 1913 its total share and loan capital stood at £9,952,000,⁴³ at the end of 1926 its assets were valued in the Balance Sheet at £25,115,000.⁴⁴ In 1925 its trading losses were £900,000, and it failed by £290,000 to meet the interest on debenture stock, three-year notes, and loans. The *Times* correspondent at the time declared that "there can be little doubt that faults of management had contributed to this unfortunate result, and the company had over-reached itself in its commitments with respect to subsidiary undertakings, the most important of which was the Newfoundland Power and Paper Company."⁴⁵ This particular venture the vice-chairman of the company, Mr. J. Frayter Taylor, ex-

⁴¹ Labour Research Department, *The Workers' Register of Labour and Capital*, p. 168.

⁴² *Times Review*, February 1927.

⁴³ *Workers' Register*, p. 168

⁴⁴ *Manchester Guardian*, 19th November 1927.

⁴⁵ *Times Review*, February 1927.

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plained to the shareholders in November 1927 as follows : " The greatest individual loss (in investments) was that entailed in the Newfoundland situation, where a financial structure which could not possibly survive difficult times had been developed." ⁴⁶ The directors announced to the shareholders in 1927 that " on account of known capital adjustments and losses the assets will have to be written down by at least £11,000,000." ⁴⁷ This would reduce the Balance Sheet figure of assets to £14,000,000. Against this there stand " £7,000,000 of debenture stock, £2,000,000 of three-year notes, and nearly £5,300,000 due to banks and other creditors." ⁴⁸ In other words, the total value of the assets is fully mortgaged—" a position which is not promising for the holders of the £10,012,500 share capital." ⁴⁹ A receivership was averted in 1926 only by obtaining a moratorium from the holders of fixed-interest bearing securities, and the " *placing of a prior charge upon the company's assets in order to permit the borrowing of money for working capital.*" ⁵⁰ The Bank of England, which had already advanced £3,000,000 in short term advances to the company, against which it held as collateral £3,000,000 of debenture stock, agreed to ask for no reduction of the amount and to forgo interest on the debentures.

" Largely in consideration of the straitened circumstances of Armstrong's " ⁵¹ these two companies agreed in 1927 upon a partial fusion of interests. A new company called Vickers-Armstrong Ltd. was to be formed to acquire from the two companies a large portion of their assets, for which it paid by rendering to them its shares, " so that henceforth Vickers Ltd. and Sir Armstrong Whitworth Ltd. will to a considerable extent become mere Holding Companies, though, as certain of the assets of each company are excluded from the arrangement, each will continue to

⁴⁶ *Birmingham Post*, 29th November 1927.

⁴⁷ Quoted by *Manchester Guardian*, 19th November 1927.

⁴⁸ *Manchester Guardian*, 19th November 1927.

⁴⁹ *Ibid.*, 19th November 1927.

⁵⁰ *Times Review*, February 1927.

⁵¹ *Manchester Guardian*, 19th November 1927.

have interests of its own in which the new company is not concerned." ⁵² The arrangement was so made as to provide Armstrongs' with £600,000 in cash, but the directive power in the new combine rests with the directors of Vickers who have seven seats on the new board as against four held by Armstrong's. ⁵³ Sir Josiah Stamp hailed this reorganisation ⁵⁴ as an example of rationalisation, holding that the companies in the re-distribution of their properties have achieved the "separation of those that are functionally different and the joining or rationalising of those that are really most alike in their activities." We have already referred ⁵⁵ to a further step in the same direction which was taken by these two concerns in 1929 when they entered into an agreement with Messrs. Cammell Laird for the rationalisation of the manufacture of steel and of railway rolling-stock. Certainly, the post-War history of these firms illustrates the necessity for underlying technical soundness, good management, and conservative finance, if an amalgamation is to survive bad times.

Other concerns in the heavy industries find themselves in much the same situation. *The Economist* in 1926 published the following summary analysis of the financial results of nine prominent steel companies ⁵⁶ over a number of years. The list was reproduced by the Balfour Committee on Industry and Trade in its *Survey of Metal Industries*. ⁵⁷

⁵² *Manchester Guardian*, 19th November 1927.

⁵³ *Ibid.*

⁵⁴ In the *Manchester Guardian Commercial Annual Review*, January 1928.

⁵⁵ See page 63.

⁵⁶ Dorman Long & Company; Bolckow Vaughan & Company; Cargo Fleet Iron Company; South Durham Steel and Iron Company; Pease & Partners; Baldwins; Guest, Keen, & Nettlefold; Ebbw Vale Steel and Iron Company; and United Steel Companies.

⁵⁷ Committee on Industry and Trade, *Survey of Metal Industries*, 1928.

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TOTAL—NINE COMPANIES.

Year	Profit	Ordinary Dividend	Preference Dividend	Debenture Interest	To Reserve, etc.	Increase or Decrease in Carry Forward
	£	£	£	£	£	£
1913-14	2,010,343	800,405	221,884	257,261	643,943	+ 86,850
1914-20	5,317,432	3,072,788	544,411	436,245	960,030	+ 303,958
1920-21	3,890,966	1,915,142	696,052	535,345	497,524	+ 246,903
1921-22	1,459,231	592,328	581,796	843,210	Dr. 421,439	- 136,664
1922-23	2,574,701	704,071	563,763	989,176	Dr. 206,454	+ 524,145
1923-24	3,675,361	772,004	659,267	1,179,048	598,289	+ 466,753
1924-25	1,878,079	702,412	397,997	1,174,829	243,515	- 640,674
1925-26	786,013	647,948	347,330	1,224,865	Dr. 602,758	- 831,370
1926-27	989,454	647,948	362,872	1,228,356	Dr. 266,872	- 942,326

Note by the Committee: The figures of total profits of the nine companies in 1913-14 should be increased (according to the *Economist*) by about £500,000 to cover the chief constituent companies of the United Steel Company; Lysaghts, who were absorbed by Guest, Keen, and Nettlefold; and several other works which were independent in 1913, but have since been absorbed by one or other of the companies.

The figures show a remarkable increase in the burden of fixed-interest bearing securities, while ordinary dividends, unprecedentedly large in the boom years, were steadily declining. As the Balfour Committee pointed out,⁵⁸ the figures would be even more remarkable were the results of the prosperous Guest, Keen, & Nettlefold Company omitted from the table.

The Times Annual Review in February 1927 gave the following account of events in the previous year: "In July Baldwins Ltd. passed the dividend on its £250,000 of First (5½ per cent.) Preference shares, which had been in arrears since 1924, having made no distribution on the ordinary capital of £4,154,155 since 1921. In November it was announced that an advisory committee had been formed to enquire into the question of writing down the capital of the company so as to bring capital into closer relation with earning capacity. Another firm to find itself in difficulties was the Ebbw Vale Steel, Iron, and Coal Company, which was obliged to ask holders of £3,000,000

⁵⁸ *Survey of Metal Industries*, p. 44.

of 8 per cent. notes to agree to a modification of terms postponing repayment from 1st January 1928 to 1st January 1938. Another important capital reconstruction scheme was that put forward by Palmers Shipbuilding and Iron Company, which had for several years been unable to earn a dividend on its capital. The scheme involved the reduction of the Ordinary shares from £1 to 5s., the issuing of new Ordinary shares to the value of £918,080, and the cancellation of arrears on the £200,000 five per cent. cumulative preference shares in exchange for a non-cumulative dividend of $7\frac{1}{2}$ per cent." Similar reorganisations of capital and management have had to be undertaken in the motor industry, in shipping, in provisions, in coal, and indeed in most of the important industries in Great Britain.

At the present moment it is to the cotton industry that we must turn for the most outstanding example of the effects of excessive and optimistic speculation and recapitalisation. Professor Daniels and Mr. Jewkes, after an exhaustive enquiry into the competitive and financial situation in that industry, have shown clearly⁵⁹ that though the difficulties of cotton spinners are due largely to a growth of intensive foreign competition, they have been accentuated by the financial policy adopted during the post-War boom. An attempt may perhaps be made to summarise the writers' main conclusion concerning this financial policy. They show that the disorganised state of the equipment and building industries after the War made it difficult for new mills to be constructed to share in the unusually high profits which the industry was making during the boom. This restriction upon new entry stimulated the usual boom tendency to recapitalisation. Numbers of firms in the industry, therefore, either were refloated at a greatly increased capitalisation or increased their share capital by issues of new shares, usually bonus shares. By 31st July 1920, 46 per cent. of the spindles and

⁵⁹ Daniels and Jewkes, *The Post-War Depression in the Lancashire Cotton Industry*, Royal Statistical Society, January 1928.

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14 per cent. of the looms (usually looms in the possession either of firms engaged in both spinning and weaving, or of combines) had been financially reconstituted. Nearly all the joint-stock companies were reconstituted. The values placed upon assets in the recapitalisations varied from 2nd August 1919 to 5th June 1920 from £1400 to £2250 per 1000 spindles, and reached its highest point about the middle of April 1920 when an average value of £4160 was being placed upon every 1000 spindles. The prices paid for different concerns of course took into account their past earning capacity and the fixed-interest charges to which they had become subject in the past. "Yet it is true to say that the main single cause for the differences in the new values of refloated companies was the time when they were refloated."

The remarkable feature about these recapitalisations was the extent to which the speculators who engineered them provided the money which the new companies had to pay the vendors by the raising of loans of various kinds. The shares issued were usually only partly paid, and "ordinary shareholders were not called on to supply, on an average, much more than half the purchase price paid." Clearly what was aimed at was that the speculative interests should share between them the greater part of the excessive profits that were anticipated,⁶⁰ and that those who supplied the other half of the capital should receive comparatively low interest payments. A large part of the financing of this speculative movement was

⁶⁰ The following newspaper account is illuminating: "The examination of Mr. —, who at one time bought a number of cotton spinning concerns and refloated them, opened at the — Bankruptcy Court yesterday. The statement of affairs lodged by the debtor showed an estimated deficiency of £374,528. Debtor stated that the prices he paid for mills varied from 30s. to £3 a spindle. Some of the directors of the old companies received £1000 for loss of office. Most of the mills which he floated were over-subscribed. He was the chairman of six companies, and a director of twenty-two. He did not receive any promotion fees, but derived profits from the sale of shares. Fees received by him from 1918 to 1926 had ranged from £4,300 to £6,900 a year, dividends from £4,500 to £25,000, and loan interest from £1,100 to £2,400. His total income for the nine years was £119,206. He had paid for bank interest £61,000, and super-tax £21,000." 26th August 1928.

undertaken by the banks. When the boom broke the banks found themselves with their advances "frozen" (as the Bank of England found itself in the Armstrong-Whitworth case); and have since actually increased the overdrafts they have granted, apparently in the hope that world consumption for spun cotton may improve and enable their clients to repay without liquidation. During 1924 some repayment was made to the banks, but the slight trade improvement of that year did not last long enough to allow the industry to be appreciably relieved. The total reduction of fixed-interest capital by 171 refloated companies since 1920 amounts to about £3,000,000. Since, however, calls have been made upon shareholders to the extent of £6,000,000, their situation is evidently not improved.

The authors show that this overcapitalisation "although not entirely confined to the American spinning section, affected a much larger proportion of that than of any other section." Now it is remarkable that the American section of the industry is the most severely hit during the present depression. It is to be expected that the American section, producing the coarser grades of goods, would be subject in a greater degree to foreign competition than the Egyptian section which produces the finer qualities. "On the other hand, however, we are faced with the fact that the less favourable position in the American section has existed with higher margins in that section than in the Egyptian section of the industry. The above-mentioned 'margins' are those between the prices of raw cotton and yarn." From 1921 to 1926 "the American margins were, during the whole period, above the 1913 level, and almost continuously showed a greater percentage increase over 1913 than the Egyptian margins."

The heavy overhead charges which were piled upon so many of the mills in the American section during the boom hindered them from effectively lowering prices during the slump. The real burden of the fixed charges was made heavier by the post-War monetary deflation. The firms

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concerned attempted for years to maintain their existing capitalisation by a policy of restricting output and raising prices. To this end agreements were made for short-time working. These were doomed to failure in the present situation of the world market, and firms with no heavy bank or loan charges, as well as those with such burdensome charges that they were in imminent danger of bankruptcy, broke away in order to secure the advantage of full utilisation of their equipment. An attempt to form a cartel was abandoned for similar reasons. The heavily overcapitalised American section found itself, largely because of that overcapitalisation, in a much less favourable situation than the Egyptian. Many firms obtained from their creditors a moratorium, during the period of which interest charges were not to be paid but would accumulate.

It was clear that liquidation and reorganisation were essential. In 1928, under the auspices of the Yarn Association, proposals were put forward for the formation of a new combine, which has taken the title of the Lancashire Cotton Corporation. The scheme provided for a careful valuation of the physical assets of companies which wished to join the combine, and the basing of merger-prices upon this valuation. Five-and-a-half per cent. mortgage debenture stock was to be issued to the amount of half the value placed on tangible assets. The acceptance of such a proposal by banks which held mortgages on the whole of the tangible assets of some mills represented a considerable sacrifice on their part. The president of the Yarn Association declared that ". . . they would find that the banks would be only too glad to consider any mill joining. There was no alternative except carrying on and finding more money to be lost, or stopping the mills and putting in a receiver. With the exception of a few bad cases, the banks, he was satisfied, were only too wishful for the amalgamation to go forward. Naturally, they did not like the position. They would prefer their mortgage

debentures. . . . Mr. Tattersall added that it had taken him three months to get the bankers to accept this position : to get them to acknowledge that they had lost money and must write off some of their losses and be prepared to take Corporation debentures on the mills. The bankers wanted amalgamation, and Lancashire wanted it. . . . For under amalgamation they could produce more cheaply and hope to get back some of their trade, while the alternative was liquidation.”⁶¹

It subsequently transpired that the Bank of England itself was actively assisting the new corporation in its work. Evidently the directorate of the leading financial institution in the country, which had undoubtedly had a voice in the decision of Armstrong Whitworth to rationalise by amalgamation with Vickers, was no less favourable to rationalisation by amalgamation in the cotton industry.

Nine months after its formation the Lancashire Cotton Corporation was able to announce that it had examined between one hundred and ninety and two hundred concerns, embracing more than half of the spindles engaged on American cotton. Twenty-five companies had been refused inclusion as being units which could not be made efficient, and of the remainder, seventy-one companies, controlling 6,750,000 spindles and 20,000 looms had already accepted the offers made to them. The capitalisation of the corporation was to be raised to £2,000,000 and an issue of £1,500,000 of income debentures was to be made in order to provide the purchase consideration for the mills absorbed.⁶² Overhauling of mills and reorganisation of staffs were being rapidly undertaken ; and superintendents of power, weaving, and spinning were already at work on these tasks. Offices in Liverpool and Manchester were opened ; bulk purchases of cotton were being made ; and the selling departments were actively trading.⁶³

The promoters are optimistic as to the economies in

⁶¹ *Manchester Guardian*, 4th April 1928.

⁶² The share capitalisation on 8th March 1930 was £2,499,196.—*Economist*, same date.

⁶³ *Manchester Guardian*, 20th December 1929.

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management costs, in bulk buying, in central selling, in the concentration of spinning selected counts in selected mills, in uniform and standard costings.⁶⁴ But one must remember that the new concern contains a number of admittedly rather weak units, and starts life with half its assets mortgaged at a fairly high rate. In the light of the history of similar horizontal combines formed before liquidation had gone far enough in weeding out inefficiency, perhaps a certain scepticism may be justified. It is, however, too early yet to pass judgment. It may be true that new arrangements concerning working conditions will have to be made with the workers employed in the industry before rationalisation can go further. A sub-committee of the Committee of Civil Research has made an inquiry into the industry and has presented a report⁶⁵ in which it emphasises the necessity of co-operation between all sections if satisfactory reorganisation is to be carried through. Besides recommending the introduction of changes in technique, such as the use of short-stapled cotton, and the adoption of automatic looms, the Committee asserted that further amalgamation in the spinning, manufacturing, and marketing sections is essential if full advantage is to be taken of the possibilities of technical improvement. They are convinced that a deliberate co-ordination of the whole industry is required, and indicate that capital can be secured for a comprehensive scheme. Horizontal combines already exist in the finishing trades of the cotton industry. In the spinning section there exist the Cotton Corporation, mainly a horizontal combine of spinners, but also engaging in weaving and merchanting, and a horizontal combine of fine spinners, Egyptian Mills Ltd. In other industries horizontal combines have produced vertical. It will be interesting to see whether the next step taken in Lancashire will be the erection of a large integrated amalgamation.

Such disasters as have just been described are by no means a necessary result of combination. Examples as

⁶⁴ *Manchester Guardian*, 23rd March 1928. ⁶⁵ Published 5th July 1930.

interesting as those taken from the British cotton and engineering industries can be found of great undertakings whose directors have resisted the temptation to capitalise differential advantage or a prevailing spirit of optimism, and have steadily improved their position, and their efficiency, from whatever point of view regarded.

The Standard Oil Company, throughout its history, was regularly undercapitalised.⁶⁶ The International Harvester Company was moderately capitalised, and "cash dividends on the common stock have been paid in all but three of the twenty-three years since original incorporation in 1902."⁶⁷ Preference stock which was issued in 1907 has never failed to receive its guaranteed share of dividend. There is no funded debt; and the price of its common stock has not fluctuated unduly. The large meat-packing companies are in the same category. Swift & Co. is fairly representative of these companies. Its capital stock outstanding is \$150,000,000, all in ordinary shares. It has 5 per cent. bonds outstanding to the amount of \$74,753,500. It has been able "to pay dividends on its capital stock without interruption for the past thirty-eight years, the present rate being \$8 a share. As might be expected in view of this record, the stock has a wide distribution among individual investors, the number of stockholders at the present time being over 46,000, of whom more than one-third are employees of the company."⁶⁸ The fluctuations in the price of its shares have not been sharp, and they have usually sold at a figure somewhat above par.

It has been shown in a previous chapter that the United States Steel Corporation has since its formation steadily improved its productive efficiency. This company began its career with a capital saturated in water. On its preferred stock it paid at the end of its first year a dividend of 5½ per cent., and since then has maintained regularly an annual 7 per cent. dividend. During the first nine years of

⁶⁶ Jones, *op. cit.*, p. 273.

⁶⁷ Standard Statistics, January 1926.

⁶⁸ *Ibid.*

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its existence, it twice failed to pay any dividend upon its common stock, and over those nine years paid an average annual dividend of only 1.88 per cent.⁶⁹ Since then, however, its payments to shareholders have steadily increased. Over a period of 24½ years dividends on the common stock average 5.2 per cent.⁷⁰ The water was squeezed out of its capitalisation by a steadily practised reinvestment of profits in the business. Its total loan and share capital in 1901 was \$1,403,382,223, representing \$146.77 of capital per ton of steel ingot capacity. In that year charges payable on funded debt, mortgages, and preferred stock, were \$57,754,454. In 1925 these charges had been reduced to \$51,226,025; the total loan and share capital was \$1,378,636,897, and represented only \$60.65 of capital per ton of steel ingot capacity. During the Corporation's existence no less than \$899,658,618 of profits have been reinvested by the management in the business.⁷¹ In 1926 advantage was taken of this improved earning capacity to make a stock dividend, or as would be said in Great Britain, to issue bonus shares, to the nominal value of \$203,321,000. "Following the announcement the price rose to 160, at which price the old stock plus a proportionate amount of the new would yield about 6.1 per cent. on the investment, provided the 7 per cent. dividend is maintained. At the same time the stock was quoted for delivery after the new issue is distributed at about 117, at which a 7 per cent. dividend will yield approximately 6 per cent. Thus the two prices are in harmony and it is evident that buyers expect the 7 per cent. rate to be continued."⁷² Mr. J. P. Morgan senior's capitalisation at \$508,000,000 of the advantages of leadership in the United States steel industry and of the economies of integration have eventually been proved, by good management, to be not so unduly optimistic as contemporary observers thought.

The American automobile industry affords examples of even more extensive reinvestment of profits. Mr.

⁶⁹ Standard Statistics, March 1926.

⁷¹ National City Bank Monthly Letter, January 1927.

⁷⁰ *Ibid.*

⁷² *Ibid.*

Seltzer calculates that in the whole industry 73·24 per cent. of the net worth has been provided by such reinvestment.⁷³ From 31st July 1916 to 31st December 1917 the General Motors Corporation reinvested \$27,810,043 of profits in the automobile business. The incorporation of the Chevrolet Motor Co., which it controls, involved the issue of \$10,383,688 of stock for fees, discounts, promotion services, and goodwill; but reinvestment of profits has since eliminated this water.⁷⁴ When the Ford Motor Co. was incorporated "only \$28,000, in cash was actually received by the new company, and according to a booklet issued by the company in 1920, this was all the cash ever paid in on its capital stock."⁷⁵ The value of the concern, measured by a 7 per cent. capitalisation of its annual earnings, is to-day \$2,000,000,000.

Such reinvestments of profits by large businesses has become one of the most important sources of savings.⁷⁶ In spite of the danger which we have pointed out, chiefly by reference to the early history of American trusts, that issue of ordinary shares for promotion services may lead to a "milking" of a concern by the directorate, the general tendency would seem to be in the other direction. The Colwyn Committee on Taxation in Great Britain came to the conclusion that "the statistical evidence available does not show any sign of reserves having been sacrificed to dividends. It tends rather in the opposite direction; for it indicates that companies, regarded *en bloc*, have maintained their reserves even at the expense of dividends."⁷⁷ A reliable witness who appeared before the Committee estimated that of a total annual national saving of £500,000,000 about £194,000,000 was provided by companies' investments.

Such investment of surplus by companies is a further aspect of the financial incentive to combination. A com-

⁷³ Seltzer, *op. cit.*, p. 275. ⁷⁴ *Ibid.*, pp. 186-187. ⁷⁵ *Ibid.*, p. 60.

⁷⁶ Cp. Barker and Taussig, *American Corporations and their Executives*, in *Quarterly Journal of Economics*, Vol. 50.

⁷⁷ *Report of the Colwyn Committee on National Debt and Taxation*, (1927), p. 147.

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pany which has funds to invest naturally tends to invest them for the most part in its own industry, whose problems and conditions it best understands. It will aim to use these funds to consolidate its own position by absorbing competitors or ensuring supplies or markets. In this way combinations add to their size almost in snowball fashion. As we have seen in the case of Vickers and Armstrong-Whitworth, expansion of this kind may be reckless and ill-directed and lead to an overtaxing of strength; but other examples show that reinvestment wisely undertaken may increase strength and enhance efficiency.

The general conclusion of this and the preceding chapter is, then, that the desire for immediate pecuniary gain on the part of financial interests has been and still is a leading and often a dominant motive in the formation of combinations. These pecuniary motives frequently act to distort the character of a combination and to impair its prospects of success. They may lead to the amalgamation of units of little efficiency or of widely unrelated type, and to the burdening of a new undertaking with charges which seriously hamper its commercial and industrial efficiency. Financial failure may therefore be no indication whatever of technological unsoundness. That amalgamations are frequently recklessly capitalised is no argument against them *as such*. Nor is the existence of an optimistic capitalisation *necessarily* a sign of a structure which is technologically weak. "It is probably true that in a great many cases the possible economies do not play an important part in the original formation of the combination, but they are important in continuing its existence."⁷⁸ The success or failure of a combine ultimately will depend upon two factors—upon the degree to which it is a rationalised structure, whose parts fit successfully into one another in harmony, and upon the ability and judgment of those who control it. And of these managerial ability and far-sightedness is probably the more important.

⁷⁸ Thorp, *op. cit.*, p. 174.

PART FOUR
THE CONTROL OF INDUSTRY

CHAPTER TEN

THE EXTENSION OF FINANCIAL INFLUENCE

"Usury bringeth the wealth or treasure of a State into a few hands. For the usurer being at certainties and others at uncertainties, at the end of the game most of the money will be in the box."—FRANCIS BACON.

"America seems to be leading the world now, and seems likely to go on leading the world for some time, in the reconstruction of economic life upon this new scale, the scale of the great modern business combinations. It cannot do this, I hold, without producing, in addition to a vast encumbrance of merely wealthy common persons, a great number of energetic and capable directive men and women of a definable type, people who will ultimately be bored and irritated by existing political institutions and current ways of living, and who will set themselves, more and more intelligently and co-operatively, to the entire reconstruction of human affairs."—H. G. WELLS, *The World of William Clissold*, Vol. 2.

THE profits of financial manipulation must be invested in industry. Financial interests which have once assisted in the promotion of some great combination and have reaped thereby large gains naturally require little persuasion to use those gains to undertake still further promotions, with the prospect of still larger profits. Just as industrial undertakings tend to devote their surpluses to consolidating their position in their own industry, so are financial houses led to reinvest their profits in transactions similar to those in which they have made them. The firm of J. P. Morgan & Co., for example, having, as we have seen, greatly increased its wealth by organising the United States Steel Corporation, was not slow in using the resources thus obtained to build up other great combinations, in harvesting machinery or marine transport. Similarly, starting from the other end,

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the Rockefeller family, having obtained for itself the profits of monopoly in the oil industry, gradually expanded the range of its interests to include iron and steel, copper, transport, and banking. The entry of this power into banking stimulated the extension of financial influence over industry, until to-day that influence is dominant in many of the key industries of the United States. The steady fructification of widely distributed capital resources, checked by the exactions of the taxgatherer and by a tendency to continuous inflation of currency, might not in itself have resulted in such enhanced prestige for the money power. But the lust of economic empire, working with the grain of the natural development of the industrial structure, stimulated the great financiers to gigantic achievements.

Banking is a business which naturally lends itself to large-scale operation. Stability is essential to it, large size a direct advantage, and much of its administration is necessarily routine in character. In all leading industrial countries, therefore, it is not surprising to find that banking is dominated to an even larger extent than industry by large amalgamations and concentrations. Even in the United States, where branch banking is forbidden, the large New York banks have in the past easily attained leadership in their business, and competition has proceeded only within certain limits well defined by "banking ethics," by gentlemen's agreements, and by the existence of interlocking directorates. In that country, as in Germany, the more regular "commercial" banking business of making loans has often been combined with "industrial" or investment banking. The consolidation of railroads and the formation of trusts with the aid of the investment bankers made business too big for financing by independent local concerns. The great New York financial houses, such as J. P. Morgan & Co., thus came to perform every possible financial function for the industrial undertakings with which they were associated. They assisted to form them originally by promoting a combination, or

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reconstituted them after bankruptcy. Holding the common stock which they received for these services, they became directors of the new enterprises, and able to manufacture bonds and stocks. These they could sell to the clientele who patronised them in their original function of investment bankers. At the same time they controlled the banking firms which supplied the companies with short-term loans. "The investment banker through his controlling influence on the Board of Directors decides that the corporation shall issue and sell the securities, decides the price at which it shall sell them, and decides that it shall sell the securities to himself. The fact that there are other directors besides the banker on the Board does not in practice prevent this being the result. The banker, who holds the purse strings, becomes usually the dominant spirit. Through voting trusteeships, exclusive financial agencies, membership on executive or finance committees, or by mere directorships, J. P. Morgan & Co. and their associates hold such financial power in at least thirty-two transportation systems, public utility corporations, and industrial companies—companies with an aggregate capitalisation of \$17,273,000,000. Mainly for corporations so controlled, J. P. Morgan & Co. procured the public marketing in ten years of security issues aggregating \$1,950,000,000."¹ The bankers also widely extended their control over insurance companies, and trust companies, which had enormous funds available for investment. So valuable indeed was such control to them that they were willing to pay a very high price for it. "In 1910, Mr. Morgan, in conjunction with both Mr. Baker, his long-time associate, and Mr. Sullivan, head of the National City Bank purchased from Mr. Ryan and the Harriman estate \$51,000 par value of the stock of the Equitable Life Assurance Society, paying therefor what Mr. Ryan originally paid with interest at 5 per cent.—about \$3,000,000—the investment yielding less than one-eighth of one per cent. Mr. Sullivan and Mr. Baker each agreed to take a quarter

¹ Brandeis, *Breaking the Money Trust*.

interest in the purchase if requested to do so by Mr. Morgan. No such request has been made by him. No sufficient reason has been given for this transaction, nor does any suggest itself, unless it was the desire of these gentlemen to control the investment of the \$504,999,999 of assets of this company, or the disposition of the bank and trust company stocks which it held and was compelled by law to sell within a stated time." ² The Pujo Committee reported that in 1912 firm members or directors of J. P. Morgan & Co., the First National Bank of New York, the National City Bank of New York, the Bankers' Trust Company, and the Guaranty Trust Company held between them " 118 directorships in 34 banks and trust companies having total resources of \$2,679,000,000, and total deposits of \$1,938,000,000; 30 directorships in ten insurance companies having total assets of \$2,293,000,000; 105 directorships in 32 transportation systems having a total capitalisation of \$11,784,000,000, and a total mileage (excluding express and steamship lines) of 150,200 miles; 63 directorships in 24 producing and trading corporations having a total capitalisation of \$3,339,000,000; 25 directorships in 12 public utility corporations having a total capitalisation of \$2,150,000,000; in all 341 directorships in 12 corporations having aggregate resources or capitalisation of \$22,245,000,000." ³

Such facts as these are well known and there is no need to prolong an account of them. It is well recognised by all investigators that in the United States financial interests which had built up their power mainly by the sale of the securities of railway companies and by reorganising and consolidating these companies when they went bankrupt, were responsible for the carrying through of many of the largest mergers and amalgamations in that country. The Pujo Committee reported in 1913 to the House of Representatives that " it is not necessary that a group of men shall

² *Report on Concentration of Control of Money and Credit*, House of Representatives, 62nd Congress, Report No. 1593. (*Pujo Report*.)

³ *Pujo Report*, p. 89.

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directly control the small savings in the banks, nor the scattered resources of the country, in order to monopolise the great financial transactions or to be able to dictate the credits that shall be extended (to) or withheld from the more important and conspicuous business enterprises. This is substantially what has been accomplished and fairly represents the existing condition." That committee, like others which have reported on American industry,⁴ has been accused of political bias against the interests whose affairs it examined. But the accuracy of the conclusion we have just quoted is fully substantiated by the sworn evidence which the Committee heard. The growing influence of finance-capital, as it has been called, upon the direction of industry can hardly be denied. It is well known that the large industrial banks have been behind the formation of many of Germany's most important cartels and combines. Even in England, where our text-books tell us that the banks have always religiously abstained from granting long-term loans to industry, we have seen the Bank of England with £3,000,000 locked up for an indefinite period in Armstrong-Whitworth, and the joint-stock banks with loans to an unspecified extent "frozen" in the Lancashire cotton industry. It is hardly conceivable that the directorate of the banks (already largely recruited from among the directors of Issue Houses and of large industrial and insurance undertakings) will have no influence upon the policy to be adopted by such concerns—whose number is by no means confined to the engineering or the cotton industry. The various investment trusts, whose number and importance is steadily increasing, though so far they are very far from being so influential as the investment bankers in America, must also be taken into account in estimating the significance of finance-capital.

But though lists of the enterprises which banks or financial houses control or in which they are interested may be very impressive, they do not necessarily advance

⁴ *E.g.* the Federal Trade Commission in its Report on the Meat Industry in 1919.

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very far our understanding of industrial tendencies. The fact of concentration of control over industry can hardly be denied. What is important is to determine whether such concentration is still proceeding and above all to estimate what its effect may be upon the character of industrial management.

Financier-control of industry in its early days was of the buccaneer type. Mr. J. P. Morgan, senior, "the dean of the congregation of corporation finance,"⁵ was a man to be feared, and one of whom his associates could say: "I stood in a great deal of awe, perhaps a greater amount of awe of Mr. Morgan than any other man I have ever met. . . . I think the same reason actuated me that probably actuated the others. We did not want to contend with Mr. Morgan and probably thought he was right, although they had misgivings."⁶ Financiers such as Vanderbilt, Jay Gould, Stillman, Harriman, Hill, J. D. Rockefeller, resembled him in resourcefulness, in disregard for legal niceties, and in determination to build up for themselves impregnable dominion. They supplanted in the control of industry those early pioneers who had carried through the first application in America of large-scale methods to production and distribution. Such men had taken risks and ventured their all. They were the original industrial entrepreneurs, inventors, practical engineers, or stock-raisers; men such as Cyrus Hall McCormick, who declared in 1845 that "Business is not inconsistent with Christianity; but the latter ought to be a help to the former, giving a confidence and resignation, after using all proper means."⁷ Their place was taken by capitalists of the type of J. D. Rockefeller, of whom it was written: "Mr. Rockefeller never speculates. He deals only in those things which other people have proved sure,"⁸ or Andrew Carnegie, who "took no real interest

⁵ Veblen, *Absentee Ownership*, p. 341.

⁶ Evidence of Charles Mellen before the Interstate Commerce Commission; Lauck, *Intercorporate Relations*, p. 93.

⁷ Casson, *Life of Cyrus Hall McCormick*.

⁸ Tarbell, *op. cit.*, pp. 2, 254.

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in a new idea until its practicability and its future success had been well demonstrated by others.”⁹ The new controllers of great enterprises, though ruthless in their methods, were cautious in the extreme concerning the type of enterprise they would undertake. They were ready to capitalise, but they were not ready to sacrifice money in fostering the new improvements and inventions. They in their turn have been succeeded by a new generation. If one may be pardoned the journalese, the velvet glove has taken the place of the mailed fist. It required rugged energy to build up the great original consolidations: now that they have become firmly established, a new technique of the application of science to management is required to carry them on. The new men are no longer ruthless, they are gentlemanly and work almost in anonymity behind the scenes.¹⁰ But they are still as cautious as their predecessors. The interest of the finance-capitalist, whether for his own advantage, or as the guardian of his clients' investments, tends to be in stability rather than in enterprise.

As an illustration of these tendencies we may refer briefly to the history of the American automobile industry, one of the newest American industries, but one which recapitulates the history of American business in general. The men who founded it were engineers and business men of the adventurous or pioneering type. “The risks of manufacture, in the automobile industry, were readily assumed by men with entrepreneurial abilities; but few capitalists were found willing to venture their funds. There seems to have existed sufficient organising and managerial talent, but not mobility of capital in the traditional sense . . . that of readily flowing for direct investment towards new enterprises which promise sub-

⁹ Moody, *Masters of Capital*, p. 44.

¹⁰ Cp. Clemen, *op. cit.*, p. 169; Moody, *Masters of Capital*, p. 151: “With the arrival of the new and younger school of financiers, a less spectacular season set in for Wall Street. Money power increased; intercorporate relationships were maintained; but few further steps were taken in elaborating or developing the system.”

stantially higher returns than the general run of businesses." ¹¹ That was the condition of the industry in its early days, and Mr. Epstein's generalisation is abundantly proved by the historical evidence which he and Mr. Seltzer have collected. But in later years, when the industry was no longer speculative, though still making handsome profits, and when its future prosperity was assured, the great financiers began to show interest in it. In 1910 a financial syndicate, whose chief members were Messrs. Lee Higginson, J. and W. Seligman & Co., and the Central Trust Co. of New York, undertook the funding of the indebtedness of the General Motors Co. of New Jersey; and appointed three of their representatives on a Voting Trust of five members, which was to control the concern. "At the lowest market value during 1911 the preferred stock bonus given the bankers had a value of \$3,851,054." ¹² During the five years that this control by financiers lasted, the company was prosperous, but its methods were exceedingly cautious and industrial opportunities were not seized.¹³ In 1915 control was taken again by Durant, its original founder, with the aid of Du Pont interests. In 1917 the General Motors Corporation of Delaware took over as an operating company the concerns carried on by the former New Jersey company as a Holding Company. During the post-War boom General Motors was very prosperous, but in 1920 it had recourse to outside financiers. An issue of 3,287,803 shares of no-par value was underwritten by J. P. Morgan & Co. and the (British) Explosive Trades Ltd., who appointed respectively six representatives and one upon the board of directors. This was the first of the automobile companies to seek the aid of the financiers; and we have already commented upon the other noteworthy example—that of the control by Messrs. Dillon Read of Dodge Bros. The Ford Motor Company, in contrast to these undertakings, has remained independent. During the slump of 1921 it was thought

¹¹ Epstein, *op. cit.*, p. 250.

¹² Seltzer, *op. cit.*, p. 161.

¹³ *Ibid.*, p. 169.

that this firm, too, must have recourse to the bankers ; but drastic measures were taken. The number of employees per car per day was reduced from fifteen to nine ; overhead costs from \$146 to \$93 per car ; and the cycle of manufacture from twenty-two to fourteen days. In 1921 the Ford Motor Company was making large profits, while General Motors and other companies had deficits.

Financier-control is exercised over companies of a variety of different forms. But, generally speaking, the older method of the outright absorption of separate companies by acquisition of their physical assets, has given way to the superior convenience of the Holding Company. This expression "is intended to describe the company whose function is to hold the shares or stock of one or more concerns with the intention of controlling their operation."¹⁴ It is, of course, not a new device, but was introduced long ago in the United States to evade the provisions of the anti-trust laws. The United States Steel Corporation, for example, is still one of the greatest Holding Companies in the world. This form of organisation, besides fitting in with the legal framework of American business, offers certain advantages which explain its prevalence and its popularity in financial circles. It gives certainty and effectiveness of control without undesirable publicity or undue cost. Further, it facilitates the "unscrambling" of a combination, should the concern have taken over more than it can adequately administer and supervise, or should it wish to rid itself of an attached unit which upsets that balance of parts which makes for harmonious working.

The Holding Company, so long as the companies controlled remain separate legal entities, is entitled to disclose in its balance-sheet only the value of the shares it holds, and not the land, buildings, and property of its subsidiaries. For, legally speaking, it owns the share-capital, not the property, of such subsidiaries. Directorates frequently take advantage of this legal

¹⁴ Garnsey, *Holding Companies and their Published Accounts*, p. 1.

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position. "With some companies it can certainly be said that the legal balance-sheet does not show the true position of the Holding Company, and gives little or no information of the consolidation as a whole."¹⁶ It is possible to conceal the profits and losses of subsidiaries, what assets they hold, and what liabilities they have incurred. In Great Britain many Holding Companies¹⁶ have adopted the practice of converting their subsidiaries, once control has been acquired, into private companies, which are under no obligation to publish accounts or balance-sheets. Sir Gilbert Garnsey thus sums up the present position in this country: ". . . the legal balance-sheet enables the directors to prevent the disclosure of vital information to competitors regarding their interest in subsidiary undertakings. Further, it admits of the equalisation of the income of the parent company from one period to another by the retention of undistributed profits in the accounts of the subsidiaries. There is no doubt that the question of disclosure to competitors is of considerable importance and is often the deciding factor against any change in the form of the published accounts. Shareholders, as a rule, are quick to appreciate the dangers attending a too full statement of the affairs of their company and rely to an almost unlimited extent upon the advice tendered to them by their board. On the other hand, cases are not unknown where directors, looking for an excuse, seize upon this to furnish their shareholders with as little information as possible."¹⁷ The conclusion needs no emphasis that the control of a directorate is greatly strengthened by this legal position. The willingness of shareholders to follow the directors' lead is notorious; it constitutes such a directorate a self-perpetuating oligarchy, without, as a rule, any necessity for the possession of a majority-holding of voting stock to consolidate its position.

¹⁶ Garnsey, *op. cit.*, p. 20.

¹⁶ E.g. Vickers and Armstrong-Whitworth; *vide Labour and Capital in Engineering* (Labour Research Dept.), pp. 17 and 25.

¹⁷ Garnsey, *op. cit.*, p. 18.

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The Holding Company form offers to the financier the cheapest method yet devised for extending his control of industry. The Attorney-General of Ohio twenty years ago thus described its advantages: "This is the most effective, the most invidious, and the cheapest of all combinations in restraint of trade. It is the most effective because while agreements, and especially unlawful ones, may easily be broken, a transfer of the stock puts the bargain beyond the power of any conspirator to escape. It is the most invidious because, while it conceals all it fears no exposure. It is the cheapest because it requires less money to buy a controlling interest in the stock of the competing companies than it does to buy their property, and yet the promoters have the use of the investment of all the minority holders in all the corporations brought under their control. In fact it generally requires no money at all, for the stock in the subsidiary companies is paid for in the stock of the Holding Company."¹⁸ Methods of control foreshadowed in that speech have become highly developed in later years.

The purchase of a controlling interest in the share capital of a company is not always an easy matter, and even when such purchase has been made it is often difficult to shape the policy of the subsidiary to fit in with that of the Holding Company.¹⁹ But if these obstacles can be overcome the process of extension of control is comparatively simple. By piling Holding Companies one on top of another a very small original lay-out of capital can be made to direct a very wide range of industrial activity. Let us assume that a 51 per cent. holding of voting stock is necessary to control a company (and we shall show that much less is usually sufficient). Then £51,000 can buy control of a company whose voting stock is valued at £100,000. The stock of this company may be used to buy control of a company whose voting stock is

¹⁸ Quoted by Ripley, *Main Street to Wall Street*, in *Atlantic Monthly*, January 1926.

¹⁹ Simons, *Holding Companies*, p. 24.

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worth, say, £190,000, and this again to control a capitalisation of £390,000. The original £51,000 can be used to obtain control of assets worth £390,000, provided investors can be persuaded to buy the shares of the intermediate Holding Companies. And this without taking into account the large amount of non-voting share-capital which will typically be associated with such ordinary shares. Such pyramidal structures have been found particularly advantageous in the field of American public utilities, but have also been formed elsewhere. The Kansas Gas and Electric Co., for example, with an investment of \$25,000,000, the greater part of which was supplied by the public in return for non-voting preferred shares, is controlled by the American Power and Light Co., which owns all the common stock. This company too, has a large issue of preferred shares, but is controlled by the Electric Bond and Share Securities Corporation, whose common stock was owned in 1924 entirely by the shareholders of the General Electric Company, although the latter was careful to arrange that "there are no directors common to the two companies."²⁰ The General Electric Company, associated in similar manner with companies manufacturing electrical supplies, with distributors of electric power, and finance corporations which sell to the public the stocks of such undertakings, has a leadership in the electrical industry which extends to all parts of the world.²¹

The extension of Holding Company control does not, however, necessarily always involve the ownership by the Holding Company of 51 per cent. of voting stock. It is well known that the advice of a directorate is usually followed with very little protest by security holders, especially so long as the company concerned is paying satisfactory dividends. An American industrial leader, speaking of Holding Companies, described how easy it is to obtain consent to the proposals of those in control.

²⁰ Standard Statistics, 23rd April 1926.

²¹ See *Combines and Trusts in the Electrical Industry*, *passim*.

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"All the stockholders act like a flock of sheep. In the main they follow the lead of the directors, and if the details of carrying the plan through are so arranged that the stock in the new company has an apparent money value greater than the stock of the old company for which it is offered, the exchange, once started, takes place generally."²² In such circumstances, possession of a minority holding may be quite sufficient to give control of an undertaking. Moreover, it follows that the wider the ownership of the securities be spread, the smaller will be the amount required to secure control. If 90 per cent. of the securities be owned, for example, by 30,000 individual investors, none of whom has a holding of more than, say, 1 per cent., an individual owning 10 per cent of the securities can confidently reckon upon having effective control, save in circumstances so unusual that a substantial proportion of the 30,000 will be led to join together in some kind of association for common action. The greater the number of individual shareholders, and the wider their geographical spread, the easier does the problem of control become for finance-capital.

Rockefeller, Vanderbilt, Harriman, Hill and their contemporaries struggled against one another for majority holdings of the securities of the enterprises in which they were interested. But their successors have seen an easier and a safer way. The original holdings of the great families have become diffused, through taxation and through inheritance by an increasing number of descendants, among a wider public. The financier has set out to sell the securities of public companies, no longer merely to a small clientele of wealthy persons, but far and wide, to the lower middle classes and even to the working classes, all over the United States.

The Federal Trade Commission has issued questions to 367 typical companies with the following results.²³ In all

²² Quoted by Ripley, *Main Street to Wall Street*, p: 100.

²³ *F. T. C. Report on National Wealth and Income*, Senate Resolution, 67th Congress, Session 4.

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the companies concerned the average holding per stockholder was \$6,969 of common stock and \$5,211 of preferred. The distribution varied in different industries. "Nearly one-third of all the stockholders reported were holders of not more than \$500 worth of stock (common and preferred) each. This proportion of small holders to total holders ranged, however, from 11.7 for electric railroad companies to 53.8 per cent. for petroleum mining companies." Of the total common stockholders (1,074,851)²⁴ individuals made up 90 per cent., trustees 3.4 per cent., brokers 1.7 per cent., other corporations 1.8 per cent., non-profit institutions 2 per cent., and foreigners 1.4 per cent. For preference holdings the figures were roughly the same. But the proportion of the total par value of common stock represented by holdings of individuals was 64.9 per cent., while that for trustee holdings was 10.4 per cent., for broker holdings 11.9 per cent., for companies 10.0 per cent., for non-profit institutions 0.9 per cent., for foreigners 1.5 per cent. The distribution of preference holdings was similar. Among the 64.9 per cent. of stock held by individuals must be reckoned the holdings of individual wealthy financiers. Besides these the holdings of brokers, of companies (Holding Companies) and of trustees (banks and trust companies) must be reckoned as under the control of finance-capital. When so much of the holdings of individuals are so widely spread as the report shows it is clear that the "inside" controllers have no very difficult task to maintain their sway. The mere broker holdings alone are often sufficient for their purpose. "Inside control in practice often relies upon the voting rights attaching to floating stock in the market—that is to say, stock which is passing so rapidly from hand to hand that, for convenience sake, it remains often for many years registered in the name of banking or brokerage houses. And, in the case of non-dividend-paying corporations, the proportion

²⁴ American corporations had in 1923 a capitalisation of \$70,000,000,000, and 14,400,000 stockholders. In that year the number of stockholders in light and power companies increased by 25,000—Ripley, *On with Railway Consolidations*, in *The World's Work*, May 1926.

of such floating stock may be so great as, in and of itself, to carry control." ²⁵ The wide extension of stock ownership among all classes in the United States has been hailed as the democratisation of industry. But when it is realised that though the average holding of all stockholders was \$7,000 each, yet one-third of all these holders had only \$500 of stock each, and when it is further borne in mind that diffusion of joint-stock ownership gives the opportunity for concentration of financier-control, such optimistic generalisations are seen to be baseless. It is of little value to point out that there are 44,905 stockholders of the Great Northern Railroad, or 40,000 of Standard Oil of New Jersey, or 145,000 in the Pennsylvania Railroad, ²⁶ if the vast majority of such holders have no voice in their control, and would not use it if they had.

Yet, even in a situation so favourable to the continuation of their power, some financial interests have attempted in the United States to make their control permanent by a further extension of the practice of limiting the voting rights of certain classes of shares. In the past it has often been the practice to limit the voting rights of preference shareholders. Complete non-voting preferred stock is still only a small proportion of the total stock in the United States, but there is much preferred stock having only contingent voting rights—that is to say, which is given a voice in the control of the company only in certain emergencies. ²⁷ Preference shares, in the modern American flotation, represent typically, as we have seen, the tangible assets of their companies, and the common stock the capitalised goodwill or differential advantage, or potential earnings of management. The latest advance in the extension of control has been an attempt actually to limit the voting rights of large numbers of common stockholders. Common stocks have been split into two classes. Class A has only contingent voting rights. Class B, very small in

²⁵ Ripley, *Main Street to Wall Street*, p. 103.

²⁶ Flynn, *Who Owns America?* in *Harper's Magazine*, May 1926.

²⁷ Stevens, *Stockholders' Voting Rights and the Centralisation of Voting Control*, in *Quarterly Journal of Economics*, Vol. 40.

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number, and with a majority holding in the hands of the promoters, has full control of the company's affairs. We have already given the example of Dodge Bros., which was one of the most notorious of these recent flotations. Other instances are afforded by American Tobacco, Liggett and Myers, R. J. Reynolds, McCrory Stores, Pan American Petroleum, etc., among whom the percentage of voting common stock to the total issued varies from 12.5 per cent. to 88.0 per cent. But there are "only a comparatively few industrial common shares which are strictly non-voting."²⁸ An agitation, opened by Professor W. Z. Ripley,²⁹ in the *Atlantic Monthly*, against this practice met with considerable success. A committee of the Investment Bankers' Association of America reported against it,³⁰ and the New York Stock Exchange announced its intention not to list non-voting common stock in future.³¹ Moreover, the Interstate Commerce Commission, charged with the duty of promoting railway consolidation, refused to give approval to a Nickel Plate railway merger plan on the ground that it contained proposals for the issue of such stock.³² But though banking opinion evidently considers that such plans go too far, the fundamental fact remains. It is this. Ownership is becoming increasingly divorced from management. The control of business, increasingly large-scale in its character, is definitely in the hands of a specialised minority. That seems to be the logical outcome of the advantages of large-scale enterprise on the one hand, and joint-stock ownership on the other. It remains to be seen what effect this development may have upon the way industry is to be managed and directed.

²⁸ Stevens, *Stockholders' Voting Rights and the Centralisation of Voting Control*, in *Quarterly Journal of Economics*, Vol. 40.

²⁹ Ripley, *Main Street to Wall Street*.

³⁰ *New York Times*, 31st May 1926.

³¹ *Ibid.*, 24th June 1926.

³² *Ibid.*, 3rd April 1926.

CHAPTER ELEVEN

FINANCE-CAPITAL ASSUMES INDUSTRIAL RESPONSIBILITY

THE first finance-capitalists would seem to have had interests opposed to those of industrialists, at least in the short period. Their concern was to make the profits of reorganisation or of stock manipulation, and then to leave derelict the industries which they had entered. But, as we have attempted to show, the necessity of reinvesting these profits left them with no option but eventually to become the controllers of well-established industry, which it paid better to maintain in good condition than to loot. Finance-capital was bound to become saddled with industrial responsibility. The financiers' own interests and that of their clients demanded it. "The outcome has been that the banking houses which have engaged in this enterprise have come in for an effectual controlling interest in the corporations whose financial affairs they administer. And it is this outcome that has proved to be the enduring and decisive factor in the new business situation created by this recourse to mergers and recapitalisations under the auspices of the investment bankers."³³ It seemed in the early years of this century that the interests of such men lay rather in bringing about catastrophes than in encouraging the smooth and regular development of industrial technique. Their greatest gains seemed to arise from the alternation of boom and slump. In some spheres of industry, and in countries where the concentration of financial control has not proceeded so far as in the United States, that may still be true. The temptations to opportunism are numerous. The immediate gain of manipulation may be more attrac-

³³ Veblen, *Absentee Ownership*, p. 343. Cp: Marshall, *Industry and Trade*, p. 541.

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tive than a far-sighted attention to general industrial well-being. Directors, through the control of subsidiary companies of which particulars are never published, may use their power to enrich themselves rather than the shareholders to whom they are nominally responsible. But in well-established enterprises of vast influence, such as the General Electric Co., in America, or the railway companies in Great Britain, whose bankruptcy would bring wholesale ruin in its train, and a shock to credit the political and social reactions of which can only be guessed at, responsibility is so great as not to be lightly undertaken. Such enterprises are vast systems of administration, rather than simple industrial undertakings ; and in their enlightened management the interests of the whole community are involved.

The accumulation of power in the hands of outstanding finance-capitalists has allowed to emerge certain " industrial aggregates or blocks " which in Germany have been given the name of " Concerns." " The interests which are thus grouped come within the control of one or a few single personalities who, because of the diversified nature of their influence, are rather magnates than leaders." ⁸⁴ Thus Herr Hugo Stinnes, like the firm of J. P. Morgan & Co., in the United States, held substantial interests, giving as a rule effective control where necessary, in many industries, from iron, coal, and steel to hotels, automobiles, and margarine. Such " Concerns " spread so widely the range of their influence that they come into contact with others and may seem to form an international network. The " Concern " dominated by the American firm E. I. Du Pont de Nemours & Co. Inc., may be taken as an example. In spite of the dissolution in 1912, by court injunction, of some of its properties, it still controls companies which produce nitrate and nitro-glycerin ; manufacture explosives, artificial silk, cellophane wrapping material, paints, varnishes, dyes, motion picture film, and alcohol ; and operate machine shops and foundries, real estate, hotels, and a theatre. In addition it held in 1926 about 26 per cent. of the common

⁸⁴ Macgregor, *Rationalisation*, p. 11.

stock of the General Motors Corporation, through which it comes into contact with Nobel Industries Ltd., and hence with Imperial Chemical Industries. It has agreements for interchange of patents and processes with the German chemical and explosives industry, and has some holdings of securities in that industry. Especially through General Motors, it is closely in touch with the Morgan interests, and J. P. Morgan & Co. act as its financial agents.³⁵

The speculation naturally arises whether such "Concerns," having authority and responsibility so widely spread, may not act as the agents of a higher integration, not of industry in one particular line from raw material to finished product, but of industry as a whole. May they not devise administrative schemes for the world-wide fitting into one another of the operations of whole businesses, just as an integrated business at present fits together in harmony the operations of mine, furnace, casting shop, foundry, mill, machine-shop, and assembly-line? There are perhaps signs, in the formation of international cartels and the extensive spreading of the interests of great "Concerns," of the smallest beginnings of such a movement. But there are not lacking more prominent signs of a contrary nature—an intensification of national self-consciousness and the building higher of tariff walls. So wide a field of enquiry cannot be included within our present scope. It is sufficient, perhaps, to point out that any such extension of administrative regulation of business activity can only be successful if it is founded upon industrial ability. "These great extensions of control are to be related to the impulse to use the powers of management and direction at full capacity."³⁶ Frequently, the ambition of the individual is greater than his executive capacity. Not the great "Concern" only, but the smaller integrated business, may fail through over-reaching itself, through outgrowing its strength and taking on too wide a ramification of interests without sufficient ability

³⁵ Standard Statistics, February 1926.

³⁶ Macgregor, *Rationalisation*, p. 12.

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adequately to supervise them. Moreover, even when the ability is present it is mortal. Not only has a technique of administration adequate to the complexity of its tasks to be elaborated, but a system of succession to power must be devised, before the full potentialities of integration can be realised. It is possible that the grouping of "Concerns" is likely to continue; but so far "they do not appear to contribute to the solution of an economic problem, or to create a force of leadership for any permanent purpose of direction."⁸⁷ The J. P. Morgans or the Stinnes may continue their activities. But the required synthesis of the economic system can only be built up steadily from the bottom. Beneath the class of the financial *entrepreneur*, holding positions on the directorates of twenty or thirty large industrial undertakings, must be developed a highly trained class of executive organisers responsible for the detailed administrative work of managing such organisations. Experiments may be made with the higher integration, but it must wait for its full accomplishment until the lesser has been achieved. Moreover, industrial development is still going forward, and there is work of pioneering still to be done. As we have seen, this is a task of which finance-capital fights shy. It is only when an industry has settled down that it steps in. A final integration of industries through finance would therefore seem to be impossible. "Irrepressible new technological advances are for ever running out new ramifications of industry, which are for ever requiring further attention at the hands of these captains of ownership. So that the work of taking things over is an endless task."⁸⁸ Prophets like the author of *The World of William Clissold* may attempt to foresee the future structure of industry, and even to persuade men to shape it in accordance with their vision. But the economist, with his eye on the reality before him, is more interested in the immediate present. He is anxious to discover how in fact the great businesses of the present are

⁸⁷ Macgregor, *Rationalisation*, p. 11.

⁸⁸ Veblen, *Absentee Ownership*, p. 232.

administered without attempting to forecast methods which may be adopted in even greater businesses in the future.

We have already noticed the contrast between the Ford Motor Company, founded and still controlled by an engineer who has remained independent of finance-capital, and the General Motors Corporation, whose history has been one of successive waves of stock manipulation, and which is still closely connected with financial interests. In order to illustrate the importance of effective executive management, it may be interesting to pursue that comparison farther. We have already shown that in the slump of 1921 Mr. Ford, rather than seek the aid of bankers, accomplished with triumphant success a further technological revolution in his great undertaking. It is significant to compare this with the policy adopted at the same time by financier-controlled General Motors. In September 1921 it moved its executive offices from New York to Detroit, the centre of the territory in which the most important of its plants are situated. By improved systems of internal accounting, a closer control was established over expenditure and stocks. Greater co-ordination and centralisation of the separate plants controlled were instituted. Moreover, a leaf was taken from Mr. Ford's book: the integration of industrial operation was widely extended, though, as we have shown, that process has not yet been carried so far as in the rival company's scheme. Not only, however, were changes effected in operating and managerial method; after a short time had elapsed, the system of control itself was altered. "During the year 1923 Directors of General Motors Corporation decided that it would be to the best interest of their stockholders if the principal managing executives were substantial stockholders in the corporation. At a special meeting . . . on 26th November 1923, a plan to accomplish that result was approved." ³⁹ The details of the plan are somewhat complicated and need not be reproduced here. It is

³⁹ Standard Statistics, 24th February 1926.

sufficient to point out that though financial interests (Morgan, Du Pont, Nobel Industries, and Canadian Explosives—which is a Du Pont undertaking) had in 1925 twelve representatives on the board of directors, the executive managers had eighteen representatives.

The actual industrial structures of the Ford Motor Company and General Motors differ considerably. The former is a one-man (or at least a one-family) business, though registered as a company. Centralisation is the essence of its system. The vast majority of all its manufacturing operations are carried on at the immense River Rouge plant in Detroit. General Motors, on the other hand, though largely an operating and not a holding company, continues to operate as separate divisions what were once independent organisations controlled by separate companies. "For the sake of efficiency," said its president in 1924, "we deliberately preferred to be a collection of small or moderate-sized units, well co-ordinated, rather than one large consolidated business."⁴⁰ Each constituent unit is given a budget allowance, and the efficiency of one unit is compared with that of another. Cash reserves are pooled, and Interdivisional Relations Committees are appointed to secure co-ordination. This difference from the Ford undertaking is a difference in administrative method, and may be explained partly by historical, partly by administrative considerations. The two businesses grew up differently, the one by steady expansion under unified control from small beginnings, the other by a fusion of separate units, separately built up. As for administrative considerations, it is well known that in most administrations there are two alternatives. The administrator has always, to some extent, to choose whether he will prefer the efficiency and discipline of centralisation or the flexibility and contentment of decentralisation. Mr. Ford has chosen centralisation and has the satisfaction of keeping everything under his own supervision; General Motors has preferred decentralisa-

⁴⁰ Quoted by Seltzer, *op. cit.*, p. 122.

tion, and is able to check waste by comparing the results of separate but similar units. Mr. Ford is not forced to keep such an elaborate internal cost-accounting machine, but General Motors knows, with its numerous small units, that it can easily and less wastefully use only part of its plant at a time when demand may be declining. There is economy in unity and economy in diversity. But what is common to both organisations—and this is the point we wish to make—is that it is found to be most economical to leave executive control in the hands of a trained and specialised class with a definite function.

We have endeavoured to make it clear in these pages that joint-stock organisation has brought about a separation between the passive capitalist and the financial entrepreneur, with whom supervisory control of business increasingly rests.⁴¹ But there is a still further division to which we would draw attention. The financier—as in the case of General Motors—is more and more, especially as his interests become widely extended, devoting himself to the function of general financial supervision and direction. He is leaving the task of detailed executive management to a class of industrial administrators which is rapidly becoming differentiated⁴²—and with whom, more than with financier or politician, may rest the future of industrial enterprise. That very diffusion of security ownership which, we have already pointed out, increases the possible extent of financial control, also works to magnify managerial importance.

Not only are the securities of great companies more and more widely distributed in the United States, but the size of individual holdings seems to be steadily diminishing. "In the New York Central, where William K. Vanderbilt once owned almost nine-tenths of all the shares, the Vanderbilt family now possesses about 6 per cent. The dominant figure is George F. Baker. His holdings are but 57,530 out of 3,048,327 shares."⁴³ In the Great

⁴¹ Cp. Dobb, *op. cit.*, p. 51. ⁴² Cp. Marshall, *Principles*, p. 302.

⁴³ Flynn, *op. cit.*, p. 757.

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Northern the twenty largest stockholders hold only a little more than 10 per cent. of the stock, and the president is not among them.⁴⁴ But the most significant development has taken place in the electrical industry. The American Telephone and Telegraph Company, dominating the telephone industry all over the United States, was owned in 1926 by 362,179 stockholders, holding an average of twenty-five shares each.⁴⁵ At the head of this gigantic undertaking, capitalised at \$1,500,000,000, and paying an annual dividend at the rate of 9 per cent., is Mr. Walter S. Gifford, who, until a few years ago, was its chief statistician. But an even more remarkable case is that of the General Electric Company. "On January 15th 1925 only one stockholder had more than 1 per cent. of the voting stock. This was the General Electric Employees Securities Corporation."⁴⁶ This latter corporation, besides its investments in General Electric securities, has large investments in various other electric public utility undertakings. Both the General Electric and the American Telephone and Telegraph have banker-representatives on their boards, and no doubt are still supervised by these financial interests. But it is evident that in these well-established companies the need for continuity of control and for building up a specialised class of executive managers is well realised. So long as the earnings of such companies are well maintained their effective direction will be left by the financial interests in the hands of industrial administrators; and the position and sense of security and power of the latter are undoubtedly fortified by the diminishing size of individual holdings in their enterprises. From Great Britain we might take the instance of Sir Josiah Stamp, who was called in to head the executive management of the L.M.S. Railway, and has since actually become Chairman of the Board of Directors. The control of the original industrial entrepreneur gave way in the early years of this century to the control of the finance-

⁴⁴ *Flynn, op. cit.*, p. 757. ⁴⁵ Standard Statistics, 9th March 1926.

⁴⁶ Standard Statistics, 23rd April 1926.

capitalist. But the control of the latter seems in our own time likely to be superseded, for all practical purposes, by the control of management. Financial supervision will, no doubt, still remain. The financial incentive will still bring about the formation of great industrial consolidations, even in situations where technological considerations alone would not justify consolidation. Skilled and highly-trained management alone can make such undertakings successful; and as the interests of financiers become more and more diverse, they are forced to devolve many of their responsibilities on management. To the problems of management, then, we must turn our attention, for they are fundamental in the modern process of rationalisation.

PART FIVE
MANAGEMENT AND ADMINISTRATION

CHAPTER TWELVE

CHARACTER AND CONTINUITY

THE giant combination, as we have attempted to show, need not necessarily, in existing conditions, be more efficient in every particular than its smaller competitors in order to survive. The differential advantages of size, goodwill, financier backing, and market sentiment will help it to maintain itself. Moreover, such combinations will continue to be brought into being, even without much prospect of being able to reap the economies of large-scale operation, as the result of the working of a number of forces which we have described and have grouped under the inclusive name of the "financial motive." Nevertheless, if the consolidation is, in the long run, to survive, the whole of our argument and the whole of the history of the combination movement go to show that it must fulfil either one or both of two conditions. It must hold an impregnable monopoly, or it must have been able to enlist in its service administrative ability of the highest order. Every observer of the movement confirms this conclusion. Professor Dewing found ¹ that of the trusts whose history he considered, those which survived possessed one or both of these advantages. Mr. Fitzgerald, at the end of his recent examination of industrial combination in England, declares that "if the trust is to be even as efficient as its rivals, it must have directors of very superior capacity, although this need may not of course be so apparent if the outside firms themselves are inefficient or if the trust holds a monopoly."² Professor Eliot Jones was of a similar opinion.³ The late Mr.

¹ Dewing, *Promotions*, p. 565.

² Fitzgerald, *op. cit.*, p. 188.

³ Jones, *op. cit.*, p. 530 *et seq.*

Lavington, in a recent article,⁴ showed that without highly developed managerial ability the advantages of division of labour and the specialisation of industrial function would make for a lateral development rather than for integration. Other authorities might be cited, but little demonstration is needed to establish the validity of a conclusion which the whole history of recent development supports.

Integration, in particular, is a method of industrial combination whose justification depends upon considerations of an administrative nature. The interest of an integrated concern lies in its structure. It is a system of organisation. Obviously, therefore, the chief limit upon its extent, upon the range of its activities, is human. The costliness of the scheme of supervision which it inaugurates, the effectiveness of the centralisation of authority and devolution of responsibility for which it arranges, and the ability of its executive staff are the keys to its success. As the growth in size of industrial undertakings has proceeded, the owner has gradually been separated from control. Equally, the entrepreneur, with whom rests ultimate financial authority and responsibility, has been separated from executive management. It is impossible for him, even if his range of interests be not already widely scattered over a large number of varied holdings, to acquaint himself with the administrative detail of a modern large-scale industrial organisation. He is dependent upon the management. If the enterprise is to be prosperous, the character of that management must be of the right type. Provision must be made for preserving its continuity, and men of the highest ability must be recruited for its service and assured of advancement to responsible positions.

The new type of industrial manager would seem to be emerging. We have already mentioned Mr. Walter S. Gifford, a Harvard graduate, who obtained a post as a clerk in the office of the Western Electric Company at Chicago, and became chief statistician and eventually, at

⁴ Lavington, *Integration*.

the age of forty, President of the American Telephone and Telegraph Company. Mr. Gifford has himself described the qualities required from the holders of such positions as his own. "The business leaders of the past were the product of their times and conditions. Probably no other type of men could have done what they did—create in so short a time an unrivalled system of industrial production, equal to the unparalleled demands of a rapidly growing nation. The day of such pioneering is over. Times have changed and new conditions have called a new type of men to lead the new kind of business organisation . . . Naturally, with this more stabilised condition, men of a new kind are needed. Their task is less to carve out a place for their business than it is to carry forward a highly organised undertaking already established. They must conserve what has been built and steadily add to it. These tasks call primarily for such qualities as the civic sense, a broad human understanding, administrative ability, sound judgment based on analysis of facts, as well as courage, initiative and leadership . . . They cannot decide questions merely on the basis of immediate advantage, because their company is going to be in business long after they are dead, and decisions must rest upon the long-time advantage and not the advantage of the moment."⁵ "Administrative problems are foreseen long in advance; they are studied with care and with a knowledge of facts; expert advice is sought upon every aspect of them . . . The American Telephone and Telegraph Company, for example, works consistently upon a twenty-year plan of future developments, with the first five years of the twenty definitely budgeted ahead." If the list of qualities Mr. Gifford enumerates is the indispensable minimum to the leadership of modern business, we may well wonder how industry manages to survive upon its present scale! But the importance of this description of the work of the modern executive manager lies, of course, in its concluding

⁵ Gifford, *The Changing Character of Big Business*, in *The World's Work*, June 1926.

sentences. He is concerned with planning ahead, with business forecasting, with the use of trade statistics, and cost accounting, and thereby with the maintenance of industrial stability. There is no room in such enterprises for acting upon intuition, or sudden inspiration or "hunches." Power of decision is required, but it must be decision based upon the careful gathering of a mass of statistical data and their satisfactory interpretation.⁶ A similar career to that of Mr. Gifford has been followed by Mr. Thomas E. Wilson. Beginning life as a railway clerk, he became in 1913 President of Morris & Co., the big meat-packing firm. Eventually, he had to give way to the grandsons of Nelson Morris, the founder of the firm. But in 1916 another meat-packing business, Sulzberger, Sons & Co., was reorganised by New York financiers, who placed Mr. Wilson in control as its President.⁷ To-day he is President of the Packers' Institute, an organisation which seeks to promote that application of scientific methods to business which alone can maintain industrial undertakings built upon the modern scale. It has assisted the formation all over the country of local meat councils, to effect contact between the packers and meat retailers, and "to provide better merchandising, increased consumption . . . more cordial trade relations" and propaganda. Mr. Wilson thus describes its aims: "In my opinion, the Institute ultimately should become an organisation which shall be a combined trade association, industrial museum, research institute, and educational institution."⁸

Professor Taussig and Mr. Barker published in 1925 the results of an interesting inquiry⁹ into the present situation of the executive officers of American companies. They received 400 answers to a questionnaire which they sent out to "manufacturing concerns producing staple goods

⁶ Compare Moody, *Railroad Builders*, p. 119: ". . . in recent years the efficient railroad head has come more and more to be the practical railroad man who has risen from the ranks, who has no important personal financial interest in the property but who is paid an adequate salary to operate a system in a purely businesslike way."

⁷ Account taken from Clemen, *op. cit.*, p. 169.

⁸ Clemen, *op. cit.*, p. 170.

⁹ Barker and Taussig, *op. cit.*

under free competition." These showed that in the very largest companies such officers as a rule own none, or only a fractional proportion, of the capital stock. But as one descends the scale, the proportion of executive holdings grows higher. In firms with a capital of from \$250,000 to \$1,500,000 "about half of all the capital in the businesses is owned by executives," although, of course, there are many exceptions to the general rule. In the very small firms the proportion of executive holdings again drops slightly, and "perhaps the most surprising single fact brought out in the course of the inquiry is the extent to which the smallest corporations are under 'absentee ownership'." They divide the companies examined into four classes, according to the size of their capitalisations, and find that the expenses of management vary among them as follows. In the first class, they are .0042 per cent. of invested capital; in the second, .0272 per cent.; in the third, .0234 per cent. for the larger, and .0312 for the smaller companies; and in the fourth class, .0608 per cent. It may be that the capitalisation of the larger concerns contains a good deal of "water." The authors, however, point out that "if the capital of all the great concerns liable to suspicion were cut in half—if their rate of earnings were thus doubled—the general average would still be less than in the second class." They find that in the largest companies both earnings and dividends are less in proportion to capitalisation than in the smaller, but that they are much more regular. In general, the executive officers are paid a fixed salary, and "including all cases, the whole number reporting extra compensation for management was but 13 per cent."

Such results confirm the general impression that in large-scale undertakings to-day executive management is largely left to a specialised class of men, paid a fixed salary, often very high, and having no capital stake in the prosperity of the companies whose affairs they administer. It lies in their power, through mistaken policy in buying or selling or in dealing with the labour-force employed,

greatly to impair that prosperity without, at least in the short period, seriously affecting the safe tenure of their position. Their responsibility is, therefore, considerable. When asked whether the introduction of the corporate form of administration had made any change for the better or worse in the efficiency of their management, the firms questioned were unanimous in reporting no decrease, and very few were of the opinion that efficiency had increased. These replies were made, of course, by the persons concerned—the managing executives themselves—and cannot therefore be conclusive. We must attempt to carry further our discussion of the conditions of effective management under the new regime if we are to appreciate its potentialities.

The fundamental problem of management in great combinations arises from the fact that after a certain time has elapsed those who are at the head of the organisation lack training of the kind that was enjoyed by the men who built it up. The heads of each of the smaller firms which were absorbed had had full experience of both the commercial and the industrial sides of the business in all its aspects: they were not confined to knowledge of one department alone. But “large combinations . . . by lessening the opportunities for training in the *entrepreneur* function, tend to prevent the level of business ability from rising as high as it might otherwise do.”¹⁰ There is a danger that the well-established large-scale undertaking, holding the leadership in its industry, steady, reliable, comparatively permanent, towards whose higher ranks the ascent is slow, may not attract men of initiative and daring.¹¹ Stability is not always synonymous with progress. “Live” managerial ability may be almost too prominent in the new industries, whereas it might be of

¹⁰ Pigou, *Economics of Welfare*, p. 185.

¹¹ “. . . improvement in the methods and products of a partially standardised industry goes together with a certain decline in the place held in that industry by the high faculties of initiative: they are apt to be overshadowed by the more commonplace faculties of ordinary administration and commercial skill; combined with large resources held perhaps in joint-stock ownership.”—Marshall, *Industry and Trade*, p. 243.

greatest value in the old.¹² Already certain events seem to show that, even though competition still prevails so widely over industry in general, in certain branches this difficulty is being felt. For not only does the large-scale undertaking require ability equal to that of the original entrepreneur who built it up, it frequently has need of an even superior management to administer its growing complexity. Thus in British banking we have seen Mr. Reginald McKenna called in, in British railways Sir Josiah Stamp; and in other businesses recently new men from outside have been placed at the head of affairs. The leadership of the great undertaking may constitute a check upon the entry into its market of new competitors, and this in itself will tend to restrict the supply of that entrepreneurial talent without which the combination itself cannot survive.¹³

Efficiency demands adequate control and supervision by the head of any organisation. But the tendency of the administrator, of the commanding type of mind, is to desire to hold every string in his own hands. Such a centralised administrative scheme looks well on paper, and appears to afford guarantees of order and discipline. But human nature is weak. It responds best to the vital personal touch and does not love the impersonalism of bureaucracy. Thousands of pens have described the sluggishness induced by routine, "red-tape" administration; and there is no need to elaborate the story here. It is important, however, to point out that the large-scale business almost invariably suffers from these defects.¹⁴ It

¹² Cp. Epstein, *op. cit.*, p. 129: "But in new industries no actuarial computation of risks is possible; and in the automobile industry the risks seemed to most outside investors too great to be undertaken. Thus the lure of profits did not result in any considerable flow of productive resources into the industry. But managerial and organizing ability did readily gravitate towards this new industry."

¹³ Cp. Dobb, *op. cit.*, p. 174.

¹⁴ "Things become matters of routine which should not be thus petrified; emergencies are at the mercy of routiners; and there is danger of developing the attitude which avoids assuming responsibility and spends most of its time and energy in 'passing the buck,' or in staving off the efforts of others to pass it. The finest fruit of this is the bureaucrat whose chief ambition is to become a safe channel for passing reports upward and instructions downward, unmodified by any act of his."—Clark, *Overhead Costs*, p. 123.

is *de rigueur* in some quarters to imply that they are to be found only in the undertakings of public authorities. But no one who has studied the workings of a large business at close quarters can possibly suppose that such an assertion is true.¹⁵ Public enterprises operate in a glare of publicity, subject to the criticism of every citizen, and so far they have not been encouraged by ratepayers or taxpayers to maintain an elaborate advertising or propaganda service wherewith to reply to attacks made upon them. The private enterprise, on the other hand, is happily free from such publicity of criticism, and if it holds a position comparatively free from attack by way of competition, may maintain for a long period an administrative apparatus in the last degree out-of-date.

“An aversion to change is a well-known characteristic of all large administrations; and this is likely to be particularly true of a trust, the very economies of which are in the main those of systematisation and standardisation.”¹⁶ If the large combination, through the sluggishness of its administrative mechanism, fails to keep abreast of the times and avail itself of every latest device and invention, either it will be undermined by the operations of competitors, or, if it be in a semi-monopolist position, it will be depriving the community of benefits which are its right. Mr. Justice Brandeis, before he reached his present position, said: “These great organisations are constitutionally unprogressive. They will not take on the big thing. Take the gas companies of this country; they would not touch the electric light. Take the telegraph company, the Western Union Telegraph Company; they would not touch the telephone. Neither the telephone company nor the telegraph company would touch wireless telegraphy . . . it was necessary in each one of those instances, in order to promote those great and revolutionising inventions, to take entirely new capital.”¹⁷

¹⁵ Cp. Fitzgerald, *op. cit.*, on inefficient administration in the British soap combine, p. 196.

¹⁶ Jones, *op. cit.*, p. 538; cp. Marshall, *Industry and Trade*, p. 324.

¹⁷ Quoted by Vaughan, *op. cit.*, p. 211.

Similarly, "the American Telephone and Telegraph Company, it is said, obtained the patents on the automatic telephone after its installation in several cities, so that it would not displace telephone equipment of the old type in which millions of dollars were invested."¹⁸ Such an action was probably wise enough, and is an instance of elimination of the wastes of competition. But it is clear that if the company did not gradually replace old equipment by the superior automatic kind, it would be guilty of an act of anti-social administration. If in such a great undertaking the inventions of employees are taken over without remuneration sufficient to act as an incentive to further invention,¹⁹ its organisation would lay itself open to the charge of sluggishness and failure to make the best use of its human material. The standardisation, which, as we hope to show, is one of the greatest economies such undertakings can expect to effect may be introduced at too early a stage. "Even in the course of the Great War," says Professor Pigou, "when large output was of overwhelming importance, it would have been madness to standardise the production of aeroplanes; the opening for discovery and for the development of better types was so wide."²⁰ Concerns which are not prepared to take due advantage of changes in technique will be harmful to social progress. They will either be driven out of business by energetic and resourceful competitors, or be taken over by some public authority for the general good. It is essential, therefore, for the great undertaking, if it hopes to survive, that it provide itself with administrative ability of the highest order. It must somehow recruit for its executive posts men of originality and adaptability and not such as will be entirely absorbed by the routine performance of an allotted task.

Not only must the great undertaking pay close attention to the character of its managerial personnel, it must attempt to provide continuity of management. Freedom

¹⁸ Vaughan, *op. cit.*, p. 70.

¹⁹ Cp. Vaughan, *op. cit.*, p. 202.

²⁰ Pigou, *op. cit.*, p. 187.

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of entrance and the possibility of rising are two of the main tests of the efficiency of an economic as of a social organisation. Now one of the greatest evils resulting from the movement whose development we have attempted to sketch is a tendency to bar the career to talent. The power and prestige of wealth secure many positions to persons whose natural endowments do not specially fit them to hold them. It is difficult to believe that it is as easy as it was in the active days of John D. Rockefeller, senior, to become by means of parsimony, severe application to work, and natural ability, and from small beginnings, the director of one of the world's greatest industries. The problem of mobility between social classes, however, is one which is too big to be dealt with here. We are concerned only with one aspect of it—the recruitment from the field which present social conditions make available of a personnel satisfactorily equipped in ability and education ; and its passing upward, through the different ranks of the organisation, to executive authority.

Nepotism and the method of promotion by seniority are the two chief impediments preventing natural ability from rising as high as it might in great business organisations. The first is an evil from which presumably we shall never be free : it is always easy for us to convince ourselves that our friends or those recommended by our friends are abler persons than men in whom we are personally less interested. But though a certain amount of favouritism may be expected to persist, the grosser forms of nepotism can undoubtedly be eliminated. It is well known, for example, that over large groups of positions in the British Civil Service “influence,” whether family or political, is not so potent in securing appointment or promotion as it used to be. In this respect the large-scale business might well imitate with advantage the efficiency of the Civil Service. The system of competitive examination, whose advantages are sometimes doubtful enough in the Civil Service, is perhaps even less applicable to promotion in industrial undertakings. But even among them

it is not so inappropriate as it might seem to those inexperienced in its use who do not understand how satisfactory a test of ability and character it can be made in skilled hands. Bodies such as the various associations of accountants, engineers, and secretaries in Great Britain have long been engaged in regulating their professions by means of examinations. More recently organisations such as the Institute of Bankers or the Institute of Transport have adopted a similar policy. The latter body caters—over a large part of its membership—for just that type of executive manager with whose problems we are here particularly concerned. The British railways are now owned by large stable corporations whose importance and comparative permanence are recognised by the State in various ways, whose earnings are assured, and for whom the days of pioneering development are at an end. The economies which they can best make are economies resulting from improved administration—the standardisation of equipment, the institution of centralised “train control,” the intelligent use and comparison of statistics so as to obtain a better utilisation of rolling stock, and so on. The development of adaptability and a sense of responsibility in their higher personnel and above all of a thorough understanding of their key industry and its relation to others, are therefore essential to the railway companies. Yet in the past nepotism and promotion by seniority have been widely prevalent in their organisations. Posts of importance have been reserved for the relatives and friends of directors, and the energetic young man has seen with despair that his only chance of advancement lies in stepping into dead men’s shoes. One wonders sometimes whether railway directors, engaged in negotiations with Mr. J. H. Thomas, for example, have ever reflected that a better designed system of promotion might have secured such abilities for the service of a railway company instead of the Colonial Office or Unity House. The examinations conducted by the Institute of Transport, as they develop, and if due advantage is taken of them, may serve to

solve this problem. One does not mean, of course, that promotion should depend only upon success in examinations, however expertly conducted ; but such successes might serve as indicators to draw attention to the men whose zeal and natural gifts mark them as having at least some of the qualities required for higher responsibility.

In spite of the reputation for corruption which her politicians have deservedly attained, America would seem to be more fortunate than Great Britain in respect of the encouragement of administrative ability in business. Despite a phenomenally rapid growth in wealth that country has contrived so far to maintain a greater amount of social egalitarianism than exists in Great Britain. Stabilisation may in time induce the stratification of classes, but at present one is not so conscious of class distinction in the United States as in Great Britain. It would no doubt be somewhat more difficult for a middle-class or working-class American to obtain an invitation to a reception by Mrs. Rockefeller McCormick in Chicago than it would be for an Englishman in a similar station to visit a garden party at Buckingham Palace. But in general, in the streets, in the universities, in the cinemas, at luncheon counters, distinctions between classes in manners, dress, and speech are not so apparent in Chicago as in Birmingham. It follows that promotion in American business is not so likely to depend as it is in Great Britain upon having been to the right school and upon speaking with the right accent. That does not mean that great American businesses are entirely free from the evils we have been discussing. Promotion by seniority is prevalent in American railway companies, which have developed rigidity in succession. But the system is beginning to be broken in New York banking, where the large undertakings tend to go to the smaller banks, spread all over the country, for their leading men. In the firm of J. P. Morgan & Co., which is a partnership, the head of the organisation chooses his partners himself, taking them from any of the multifarious businesses with which the

firm is associated, and giving them a large share in the fortunes of the firm, though retaining dominance for himself. In such a firm the system of promotion adopted by Andrew Undershaft in *Major Barbara* is no doubt the most effective. But in undertakings which have a large administrative machine dependence upon unaided personal selection is not so satisfactory. Some check upon personal favouritism must be introduced. It is for each concern to devise that system which will best suit its individual situation and character.

Having solved the problems of manager-promotion, however, the great consolidation has still a further difficulty to face. Will it be able to secure for itself the best services that its managers can render? A knowledge that zeal will be rewarded by advancement will undoubtedly be an incentive to such men to give of their best. But it is doubtful whether it will accomplish everything. One of the early trust-promoters in the United States pointed this out to the Industrial Commission. "One of the fundamental difficulties," he said, "of the management of these corporations lies in the fact that the managers have a smaller percentage of interest in the operations that they are conducting under the plan of an industrial combination than they had when it was an individual property or when they had a large interest in a small corporation. That is fundamental. There is no way in which that condition can be changed."²¹ It is in order to induce the desirable concentration of interest in the welfare of the concern that large-scale undertakings have adopted methods of comparative costing. We have seen, for example, General Motors preferring a plan of separate units to outright consolidation. The object, partly at least, is to set those units upon their mettle by comparing one with the other. Full statistics of the costs and performance of each department or each unit in a combine are collected and prepared; and the efficiency of their executive heads is measured by a comparison of such figures, with due

²¹ Flint's evidence, quoted by Jones, *op. cit.*, p. 533.

allowance for circumstances beyond control and for the extent to which comparison can fairly be made.

A further method introduced with the object of securing whole-hearted managerial co-operation is that of management profit-sharing. Such profit-sharing is different in principle from that applied to the ordinary labour-force. The latter appears to the present writer on many grounds undesirable. But the arguments against it are not applicable where the higher management is concerned. The management in the great modern company with whose evolution we are concerned is to all intents and purposes a self-perpetuating oligarchy. The owners of the concern take less and less interest in its administration as they are further and further removed from it by death and inheritance and by a wide diffusion of stock ownership. At the same time the undertaking increasingly provides for its own expansion by that reinvestment of surplus to which we have previously drawn attention. It is often as well, therefore, to establish the identity of interest of the management with the company, and if possible to provide for its continuity, through some scheme of profit-sharing and co-partnership.

The efficiency of the managers of such an undertaking has a direct effect, which can be immediately seen and appreciated, upon its prosperity. At the same time their output is very difficult to measure, and systems of bonus upon output are in their case difficult to apply, or, when applied, may be provocative of friction. The receipt of a flat salary may have a certain routine effect, dulling initiative and readiness to effect changes. Where satisfactory schemes of management profit-sharing have been adopted they would seem to have proved an effective stimulus to effort and to the elimination of waste, to have secured the co-operation of the management, and to have improved continuity.²² None of the schemes of management profit-sharing which have been introduced in the United States has been abandoned.²³

Of such schemes the most interesting is that adopted by

²² Gay, *Profit Sharing*, *passim*.

²³ *Ibid.*, p. 172.

the Dennison Manufacturing Company. This concern, engaged very successfully in the manufacture of "novelties" and fancy goods, has recognised in a remarkable fashion the tendency to separation between ownership and management. It has inaugurated a plan of profit-sharing and co-partnership which appears to provide most effectively for the growing importance of management, for the securing of co-operation and stimulating endeavour, and for perpetuating the concern without reliance upon financial interests. The plan is confined to the more responsible of the managerial staff, to those earning more than \$1,200 a year who have had at least five years' service. "The participants number 250 out of a total of approximately 3000 employees, and may be said to be those who occupy positions largely managerial or discretionary in nature, including officials, heads of departments, superintendents, buyers, branch managers, foremen, and the older travelling salesmen."²⁴ The plan is contained in the articles of incorporation of the company. Briefly, it provides for the assumption by the owners of the concern of eight per cent. cumulative preferred stock. In addition, industrial partnership stock is issued annually to the participating executive officers. After the payment of dividend on the preferred, and of up to twenty per cent., if earned, on the industrial partnership stock, profits are to be reinvested in the business. Against this reinvestment new industrial partnership stock is to be issued, and distributed among the participants in proportion to their salaries. "The industrial partnership stock has full voting power on a basis of equality with the first preferred until \$1,000,000 shall have been issued, when the first preferred stock becomes non-voting. The sole voting power is then vested in the industrial partnership stock."²⁵ Recently this condition has been fulfilled. The industrial partnership stock, and therefore the management, as a group, now control the affairs of the company. So long as they continue to operate successfully and pay the dividend on the

²⁴ Gay, *Profit Sharing*, p. 120.

²⁵ *Ibid.*, p. 123.

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preferred stock, they will remain in control. Only if they fail over a period of four years to pay all cumulative dividends in full, will control revert entirely to the holders of the preferred stock. Provision is made whereby if any participant leaves the company's employ or dies his partnership stock will become second preferred stock, or be bought by the company for cash. A fund is set aside for this purpose, and in order to buy in first preferred stock from time to time. There can be no new issue of partnership stock unless in that year a dividend at the rate of five per cent. shall have been paid upon all stock outstanding. "In any event all earnings above the specified fixed charges, including dividends on the preferred stock, go to the participants,"²⁶ either in the form of stock or cash.

Such a plan seems to be well worthy of study. It provides for the business man who contemplates retirement from active direction of his concern a satisfactory way of effecting such retirement without losing touch with the business he has built up and without selling out to financiers who may buy only with the intention of speculating. His heirs may continue to enjoy the fruits of his endeavours but if they wish to take part in the responsible management of the undertaking can do so only after having served satisfactorily in the lower managerial ranks. At the same time the managers themselves are given an active personal interest in the success of the enterprise, with a knowledge that their experienced advice will be heeded and that, since they continue to be employees with security of tenure and paid their usual salary, they are undertaking no undue risk. Doubtless defects may show themselves in working, and perhaps this plan would be difficult to adapt to an unsheltered industry. But, in general, it would seem that the organisation which it envisages is such as it would be desirable to see prevailing in many types of business.

²⁶ Gay, *op. cit.*, p. 123.

CHAPTER THIRTEEN

ADMINISTRATION

THE term Business Administration is now regularly being used to describe the attitude which must be adopted by the new type of management of which we have been speaking. The words imply that the day-to-day direction of business enterprises of the modern large-scale type may be approached as a scientific problem with a definite body of exact information as a basis for action, and with an equipment of well understood principle to take the place of whim or "inspiration."²⁷ "In general, it is in the work of direction, rather than in the physical work of production, that the largest gains of subdivision of labour come after fairly large size has already been reached."²⁸ It is only by careful planning in all directions that the large-scale undertaking may reap its greatest economy—the elimination of waste. The administrator in business is faced with many of the problems which confront the administrator in government. Mankind has had abundant experience of the difficulties of co-ordination of human effort; and the science of politics has ready to hand a body of principle and information which business may usefully turn to account.

The administration must devise that scheme of supervision which is most satisfactory for its particular undertaking. It must endeavour to effect the closest possible contact between the responsible head and the men in

²⁷ "Administration is the function of industry concerned with the determination of the corporate policy, co-ordination of production, finance, and distribution, the settlement of the compass of the organisation, and the ultimate control of the executive."—Urwick, *Meaning of Rationalisation*, p. 115.

²⁸ Clark, *Overhead Costs*, p. 123.

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charge of actual industrial operation. If it is the Ford Motor Company with a productive plant strongly concentrated in one spot, it will maintain a centralised organisation in Detroit at the centre of gravity of its great enterprise. If it is the General Motors Corporation, with an equipment more widely scattered, it will move its executive office from far-away New York to be on the spot in Detroit, but it will maintain a decentralised organisation in order to promote harmony and efficiency between its different manufacturing units. If it be a railway company it will decentralise, under *divisional* officers, authority over all traffic movement, which can best be administered by the man on the spot ; but legal, commercial, and civil engineering work will be centralised, under *departmental* heads, at the chief office.²⁹ In general, businesses will aim at a specialisation of function among different departments, and will aim at the integration of their work by the supreme executives through the aid of statistics. For a time after an amalgamation has taken place it will be best to proceed slowly with these developments, and to continue to allow a good deal of autonomy to units hitherto separate. This policy, though immediately it may appear wasteful, will probably in the long run prove wise. For at first executives who have formerly been rivals will not easily adjust themselves, especially the older among them, to being partners. Each set will prefer its own methods of work and will not co-operate zealously in any standardisation of method which may be imposed by central authority. This is one of the phenomena which explain why the expected economies of grouping have not been fully obtained by the British railways. But the disappearance of such friction is only a matter of time, and—if the situation be rightly handled at the outset—of a short time. It is clear, from British railway experience, that after the amalgamation of former rivals, it may prove wise to instal at the head of affairs an administrator

²⁹ Roughly speaking, the above would seem to be the tendency on British railways to-day.

of the new type. He need not possess detailed practical knowledge of the working of every department of the undertaking. What he must have is the ability to reconcile and reassure, to call forth loyalty and willing co-operation ; and the vision to design an administrative scheme suitable to the new conditions. He must have studied administration as a science.

The elimination of waste has received much attention in recent years from business managers. But up to the present the chief emphasis has been laid upon the wastes of labour. The efficiency engineer, inspired by the doctrines of Taylor and others, has achieved much. There is doubtless still room for improvement. Under the guidance of such bodies as the Institute for Industrial Psychology and the Industrial Fatigue Research Board, it may be found that some of the systems introduced in the past for increasing output have not been so valuable as has been thought, and better may be devised. But surely it is time that more attention was devoted to the wastes of management. In Great Britain one reflects sometimes that the attention of certain persons who continually advocate longer working hours for other people might better be directed to the evils of the long week-end than to those of the seven-hour day. Even in the United States, where the business man has little idea of how to employ his leisure with satisfaction to himself, and therefore works harder than his counterpart in Great Britain, a committee of the Federated American Engineering Societies, which examined industrial waste with the encouragement of Mr. Hoover, reported that "over 50 per cent. of the responsibility for these wastes can be placed at the door of management and less than 25 per cent. at the door of labour, while the amount chargeable to outside contacts is least of all." ³⁰

A combination should have an advantage over its competitors in the economic utilisation of technical skill

³⁰ Quoted, from *Waste in Industry*, by Laidler, *How America Lives*, p. 38.

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of all kinds. It should be able to maintain the best-equipped laboratories and undertake the most expensive research. The professional inventor is a product of the combination movement.³¹ Combinations will not justify their existence unless they make the fullest possible use of him. Similarly, the great organisation should take advantage of the benefits to be derived from the work of the statistician and the actuary. Not internal cost-accounting alone, but the intelligent use of trade-statistics are inadequately appreciated by business men, particularly in Great Britain. Scientific management should be made to mean more than the perfection of devices to elicit greater output from the wage-workers.

Research is playing an increasingly important part in business to-day. The advantages of "pure" scientific research into the technical problems of industry are obvious, and have been widely recognised. Chemists, physicists, metallurgists, often under the guidance of appropriate institutes, whose membership is open to suitably qualified persons from a great variety of firms and trades, are at work in great numbers. By degrees, too, the scientific investigation of industrial psychology, of problems of fatigue, vocational selection, and "unrest," is receiving greater attention. There is no need to stress the importance of enquiries of this kind. That task may be left to the specialist technicians and scientists concerned.

Economists, however, are anxious to draw attention to other kinds of research which are not so generally applied in Great Britain. There is first of all research into the economic and administrative problems of the internal conduct of a business.³² The statistician and the cost accountant, in the new large-scale businesses which we have been describing, will be constantly addressing themselves to the problem of co-ordinating effort and eliminating waste. To this end, expenditures and receipts in every department will be estimated in advance, and figures of

³¹ Cp. Vaughan, *op. cit.*, p. 249.

³² Cp. Urwick, *Meaning of Rationalisation*, p. 85.

actual results will be brought forward at short intervals. By this method of "budgetary control," as it is called, waste can be checked before it has gone very far, and policy can be planned with an exact and detailed knowledge of costs at every stage. The business research department will also approach on scientific lines the study of the markets of its particular business. The market can be analysed into groups according to the range of products bought by each group and according to the susceptibility of each group to various kinds of advertising. The total budget for advertising must be divided according to scientific calculation among the different types of publicity available.³³ Finally, modern large-scale enterprises attempt to adjust supply to demand by the method of business forecasting. To foretell the movements of prices, output of raw materials, unemployment, and the like is, of course, a very difficult task. Economic science, however careful, cannot make such forecasts very accurate. But every business has to make forecasts somehow; and it is surely better to use what science is available rather than to rely upon guesses which have no substantial foundation. So great may be the losses of huge concerns due to inaccurate forecasting that they at least are bound to draw up their plans with the aid of a research staff trained in economics. As those staffs grow more numerous and more skilled in their work, the results of their enquiries will become more valuable and more reliable.

Standardisation is one of the chief economies of large-scale operation, and we may cite the advances in this direction which have been made by American business as examples of what scientific method can achieve when applied to production. "Definite grades have been established for the basic raw materials like wheat, cotton, wool, lumber, coal, and iron, where style and appearance are not important, and where the commodity is evaluated by physical and mechanical tests. As the raw material emerges into the field of finished products, however, it

³³ Cp. Urwick, *op. cit.*, p. 88.

breaks up into many brands differentiated from each other by the intangible and æsthetic qualities of shape, colour, and design." Nevertheless, "while the psychic satisfaction derived by the consumer in the enjoyment of something different from the ordinary staple has contributed to create and support the multiplication of brands, the chief driving power has been excessive competition among manufacturers."⁸⁴ Under the guidance chiefly of the United States Department of Commerce and the United States Chamber of Commerce, American trade associations have been encouraged to eliminate competition to the extent of introducing standardisation. The Federated American Engineering Societies and the American Engineering Standards Committee have also co-operated. The recognised varieties of paving bricks have been reduced from 60 to 4. In metal laths, the number of varieties of flat laths was reduced from 80 to 10, of $\frac{3}{8}$ " laths from 80 to 7. The number of outside house paints has been reduced to a maximum of 24. The varieties of malleable chain have been reduced by 40 per cent., of range boilers by 90 per cent.; hospital bed lengths, by 97 per cent.; black-board slates, by 90 per cent.; milk bottles, by 82 per cent.; asphalt (grades), by 90 per cent.; mattresses, by 95 per cent.; paint brushes, by 71 per cent.; dining-car chinaware, by 84 per cent.; etc.⁸⁵ Similar savings have been effected through standardisation of materials and methods and through simplified practice in numbers of different industries, and are in consideration in as many more. Even in the automobile industry where competition is still so keen, the National Automobile Chamber of Commerce and the Society of Automotive Engineers have, by research, made possible much standardisation. "No attempt is made to standardise the design of the larger

⁸⁴ Hoyt, *op. cit.*

⁸⁵ Information taken from various publications of the U.S. Department of Commerce and the U.S. Chamber of Commerce. Two pages of Part I of the Report of the British Committee on Industry and Trade are devoted to a summary of standardisation economies achieved in the U.S.A.—*Factors in Industrial and Commercial Efficiency*, pp. 302 and 303.

components of the various makes of automobiles, but, in materials, and in a large number of small, hidden parts, a large degree of standardisation, as among the different manufacturers has been effected." ³⁶ The Society of Automotive Engineers has insisted on parts being supplied according to standard specifications which it has prepared. ³⁷ Though standardisation of taste may be deplorable in many instances nobody can well object on æsthetic or social grounds to its introduction in such commodities as those just mentioned.

The large-scale undertaking throughout the whole of its organisation can benefit by the adoption of standardisation, and can easily bear the expense of introducing it. Through its leadership in its industry it can aid the general adoption of simplified and economical practices. National simplification of practice by reducing the number of types and sizes increases plant capacity, eliminates waste of material, improves steadiness of production (for stocks can be maintained without fear of their becoming out-of-date), and simplifies selling. Under each of these heads it reduces overhead costs. ³⁸

The work of the British Engineering Standards Association promises to be of as great value as that of the American agencies we have enumerated. This Association was formed by co-operation between the Institution of Civil Engineers, the Institution of Mechanical Engineers, the Institute of Naval Architects, the Iron and Steel Institute, and the Institution of Electrical Engineers, and includes in addition representatives of the Institution of Automobile Engineers, the Federation of British Industries, the Department of Scientific and Industrial Research, the National Physical Laboratory, and the Board of Trade. "It acts generally at the specific request of an authoritative body, such as a representative trade organisation, a technical society, or a Government department." ³⁹ It has

³⁶ Seltzer, *op. cit.*, 29.

³⁷ Epstein, *op. cit.*, 187-188.

³⁸ Cp. Committee on Industry and Trade, pp. 292-293.

³⁹ *Ibid.*, p. 289.

the great advantages of complete impartiality as between firms and trades and therefore of being able to secure co-operation between producers and consumers. "There are some 420 committees, sub-committees, and panel committees, many of them standing committees, representative of different branches of industry, engaged in the work of the Association; and over 2000 engineers and business men throughout the country give their time and experience to this work without fee or recompense."⁴⁰ Co-operation with the Government⁴¹ ensures that the specifications decided upon shall be widely used in Government service. "Nearly 60,000 copies of British standard specifications were sold during 1925, and 20,000 were distributed for the Air Ministry."⁴² A small part of the expenses is met from sales and the remainder by subscriptions from the British and Indian Governments and from trade organisations. With Government and trade aid, local committees have been established abroad and the specifications have been translated into foreign languages. None can aid this valuable work more successfully than the great industrial combinations. It is greatly to be hoped, however, that the Association, or the Government, will take a leaf from the American book and give its services and methods far greater publicity than they have yet received. The nation-wide adoption of useful standardisation and simplification could be rapidly advanced by a bold central initiative.

Another recent industrial movement of great value has been the setting up in certain areas of Management Research Groups. These exist to discuss problems of statistical and costing methods and other matters common to the new management. There is even in existence, at Geneva, an International Management Institute, whose periodical publications serve in some measure to co-ordinate the studies of the separate groups. Such activities will be of great value in promoting a professional spirit and the

⁴⁰ Cp. Committee on Industry and Trade, p. 291.

⁴¹ Cp. Marshall, *Industry and Trade*, pp. 225-227.

⁴² Committee on Industry and Trade, p. 291.

adoption of professional standards among business administrators. The new associations will flourish if the directors of firms will only recognise how important to themselves it is that their executives should discuss freely and openly with other members of their profession problems which are common to their trade as a whole. Before this can happen the pettifogging caution which seeks to preserve silly little "secrets" must be destroyed.⁴³ The very growth of these new bodies is a proof of our contention that a changed attitude on the part of management is required. Economic forces seem to be making for the adoption of this professional attitude.⁴⁴ If that is so, we may expect to see a gradual change come over the behaviour of business as a whole. Competition in efficiency may tend to replace cheap-jack huckstering methods, and commercial success may less easily result from falsehood and adulteration.

⁴³ Cp. Urwick, *op. cit.*, p. 146.

⁴⁴ Cp. Marshall, *Industry and Trade*, p. 326.

CHAPTER FOURTEEN

STABILISATION

So far we have discussed only the internal economies which an able management may be expected to achieve in a large-scale undertaking. But the peculiar need for extraordinary ability which exists in the great modern industrial combinations arises from the influence they are able to exert upon the whole economic life of the community. Not only are such organisations so large that none but the most able can support the burden of their administration, but their responsibilities and their potentialities are so great that they may be expected to attract to themselves, if they set about it rightly, just that type of man whose services they require. It is the supreme direction of policy rather than the detailed administration of method which is of the greatest importance in such concerns. Those at their head must be, in Mr. Gifford's phrase, not captains of industry, but statesmen of industry.⁴⁵ Organisations of great size, embracing a wide variety of interests, controlling plants situated in all parts of a country, employing large numbers of men and women, can through the general policy they adopt affect not only their industrial neighbours, but the whole social body.

In this respect the integrated undertakings stand out as the most important, and the justification of their formation and continuance may come to rest upon precisely this aspect of their structure. Can they in a way not equally open to industrial combinations of other types hope to improve the smooth working of the economic machine as a whole? They came into existence, as we have shown, mainly as an attempt to do away with the maladjustments

⁴⁵ Gifford, *op. cit.*, p. 166.

still remaining after other forms of combination had been tried.⁴⁶ Business men sought freedom from the uncertainty of trade fluctuations, and financiers and investors hoped for a stable return upon the capital they supplied.⁴⁷ They aimed to achieve an adjustment of demand to supply which the pecuniary mechanism had failed to bring about. Is it not possible that if several of these concerns were successful in effecting this adjustment for themselves they would considerably increase thereby the harmony of economic organisation as a whole ?

The monopolist as such is not likely, it is true, to concern himself very greatly with maintaining stability.⁴⁸ It will be possible for him to throw the losses of instability back upon the producers from whom he buys or forward upon the consumers to whom he sells. In the meat industry, for example, "if the power to 'make the market' is exercised through combination, price fluctuations which are ruinous to producers may be, with a fair degree of regularity, turned into profits for those who control."⁴⁹ The horizontal combination, aiming at monopoly, is not therefore likely to be a guarantor of stability, even though within the concern it may make a better adjustment of output to consumption and maintain a more even level of activity in its establishments. Even less may be expected from pools and cartels, which are notoriously unstable organisations.⁵⁰ But the integrated undertaking is differently situated. It is not, as a rule, a monopolist, and there is nothing in its position and make-up to press it to become one. Moreover, producing as it does its raw materials for itself, frequently also selling its products direct to the ultimate consumer, it has a

⁴⁶ Cp. Meade, *Genesis of U.S. Steel*: "The outcome of the present investigation is that the primary advantages sought in the formation of the U.S. Steel Corporation were the avoidance of competition and the guarantee of permanent stability and harmony in the steel trade of the Middle West."

⁴⁷ Cp. Dewing, *Promotions*, p. 525. ⁴⁸ Cp. Lavington, *Monopoly*.

⁴⁹ Virtue, *op. cit.*, p. 655.

⁵⁰ Cp. Lavington, *Monopoly and Business Stability in Economica*, June 1926.

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direct incentive as well as an ability to adjust supply to demand.

It has been well established by every enquirer into the phenomena of the trade-cycle that one of the root problems involved is that of the adjustment of the production of raw materials and the products of the basic industries to changes in the demand of consumers for final products. "It has been observed that in a period of expansion (revival and prosperity) the increase in rates of production-consumption of consumers' goods in their several stages of elaboration and refinement, is progressively greater in each stage going backward to raw material production. That is to say, while the rate of final consumption, as measured by retail trade, increases, that of production of finished goods increases still more; that of production of semi-finished goods increases even more; and that of production of non-agricultural raw materials increases most of all. Moreover, in a period of contraction (crisis and depression) it has been observed that the decrease in rates of production of consumers' goods in these several stages is progressively greater going backward to raw materials; the rate of production of raw materials decreases most, while the rate of final consumption decreases least."⁵¹ Basic

⁵¹ Frank, *Business Cycles*, in *Quarterly Journal of Economics*, Vol. 37.

The following figures given by the Balfour Committee in its *Survey of Metal Industries* * show how during boom years iron and steel prices rose faster, and during slump years fell faster, than the general level of prices :

Year.	(Average prices of 1913, 100.)		Iron and Steel Index as Percentage of General Index.
	Index of Iron and Steel Prices.	General Index of Wholesale Prices.	
1920	357·8	307·3	116·4
1921	209·9	197·2	106·4
1922	136·8	158·8	86·2
1923	147·2	158·9	92·6
1924	142·9	166·2	86·0
1925	126·0	159·1	79·2
1926	123·5	148·1	83·4
1927	119·9	141·4	84·8

* *Survey of Metal Industries*, p. 42.

materials and their production, which the integrated undertakings seek to control, are therefore of the utmost importance. Professor Wiedenfeld points out that "the steady movement of coal and iron prices must from the economic point of view be interpreted in connection with the fixing of railway tariffs and the systematic adjustment of the bank rate. These lie at the foundations of industrial life. Just as every country has for a long time been at pains to remove the rate of interest and transport costs from the arbitrary conditions of the open market into the sphere of the controllable, from the secrecy of the individual contract into publicity of established general rates, so, too, as regards the prices of the most important raw materials, a steady systematic movement is preferable, from the point of view of general economic interests, to the chaos of the world market."⁵² The absolute price charged by the controllers of such raw materials is relatively unimportant. It is in its fluctuations that its greatest influence lies. "The idea of 'high' prices is not solely mathematical. The stability of prices is often more important."⁵³ Unregulated competition at every stage of the process tends to bring about that real overcapitalisation which lies at the root of recurring economic crises of over-production.⁵⁴ Combinations, and particularly integrated combinations, were formed largely with the idea of so regulating competition as to minimise these wasteful fluctuations. Those combinations which control the production of basic materials surely have a great power in their hands. Stability in the price of these materials is perhaps as important as stability in the price of gold. Great attention is being paid to-day to the latter. The managers of great undertakings who paid due attention to the former might accomplish a real service. "Stabilisation of the price of raw material would diminish the speculative risks to which the manufacturer is now exposed, and would leave him free to concentrate on

⁵² Wiedenfeld, *Kartels and Combines*, League of Nations, 1927.

⁵³ Levy, *Monopolies, Trusts, and Cartels*, p. 324.

⁵⁴ Cp. Liefmann, *Monopoly or Competition*.

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the real business of manufacture and to compete in a useful and fruitful way in the reduction of costs and the increase of efficiency." ⁵⁵

It is no doubt true that a mere securing of stability through industrial policy would not be a satisfactory solution of the problems of the trade cycle. It would not necessarily provide for a steady expansion of production and a rising standard of living. Stability might spell stagnation. In order to stimulate progress a wise use of banking policy would be necessary ; and many economists have claimed that a deliberate control of the expansion and contraction of credit could eliminate at least some of the evils of a fluctuating price-level. But that does not mean that the two policies are mutually exclusive. It is conceivable that when business as a whole is better understood by business men, the banker who has financial responsibility may collaborate in the effort to achieve a higher integration of industries, with the executive officer to whom he has entrusted industrial responsibility. The adoption of a policy designed to check booms may be more difficult for an industrial undertaking than it is for a bank.⁵⁶ But difficulty may prove rather an incentive than a check to the higher management. Broadly speaking, regulation of output by the industrialist, coupled with regulation of the general level of prices by the banker might bring us nearer to that steady expansion, without alternations of boom and slump, which is so much desired.

Of the great integrated undertakings to which, in the preceding chapters, we have particularly drawn attention, the United States Steel Corporation furnishes the best example of the possibility of regulation through industrial policy. That corporation is engaged in the industry which, perhaps more than any other, being concerned in the production of basic materials and being markedly subject

⁵⁵ Lloyd, *Stabilisation*.

⁵⁶ "It is . . . unlikely that any industry will have the same degree of combination for this purpose which the great banks have ; and the relation of such a policy to their own costs is more complicated than it is in the case of money."—Macgregor, *Rationalisation*, p. 15.

to increasing returns, has indulged during booms in rapid and unco-ordinated expansion. Its formation, as we have seen, was due in large part to a desire to minimise fluctuations. In its subsequent policy it would seem to have achieved that desire with fair success. We have already given an account of the improvement that has taken place in its industrial equipment and of the regularity of the dividends which have been received by its shareholders. The United States District Court of New Jersey gave a noteworthy judgment concerning its activity: ". . . we may say we have found in this record no proof by any witness showing any instance in which the Steel Corporation or its subsidiary companies has set either an arbitrary, exorbitant, unfair, or controlling price on any one of its numerous products."⁵⁷ It found, moreover, that ". . . the strong trend of the steel business at the close of the last century was toward driving competitors out of business by cutting prices, and . . . the business policy inaugurated by the Steel Corporation, and in which policy its competitors subsequently followed, has resulted in the ten years of its existence: First, in a more general division of business between all competitors in the steel business than under the older system; second, in tending to minimise the shutting down of its own and its competitors' plants in times of depression; third, it has made steel products non-speculative, and has therefore benefited all dependent iron and steel manufacturers by enabling them to have a steady non-speculative supply of those basic steel products on which their plants depend for operation."⁵⁸ Even those judges whose opinion differed from the majority of their colleagues, because they held that price stabilisation should not be achieved without definite legal sanction, did not deny the fact of stabilisation.⁵⁹

Dr. Berglund, writing in 1923, came to a similar conclusion. He found that the formation of the Corporation was not followed by any decided rise in the prices of its

⁵⁷ *Federal Reporter*, Vol. 223, p. 81.

⁵⁸ *Ibid.*, p. 96.

⁵⁹ *Ibid.*, p. 172.

products, but rather that they did not rise so fast as the general level of prices. Though it never possessed a monopoly, its leadership in the industry led other producers to follow the Corporation's prices. "During peace-time the resulting unity of action was sufficiently effective to reduce materially the violent fluctuations of the period before the organisation of the Corporation."⁶⁰ He found again that in order to maintain these stable price conditions the Corporation had had to pay careful attention to the regulation of its output. It was, of course, far from being able to prevent fluctuations in the industrial activity of the country as a whole, but as the result of its policy depressions had not been so long drawn out as in the past. "In years when demand has been considerably slackened, adjustments in output have been immediate and drastic, but have apparently been followed by prompt recovery. It is in connection with the industrial effects of this immediate adaptation to market needs, particularly when prices tend to sag, that the policy of price stabilisation can be advocated as a means of promoting industrial stabilisation. In so far as this policy avoids prolonged periods of trade depression, with its inevitable and widespread diffusion of unemployment it can be said to be conducive to industrial stability."⁶¹

We have seen that the policy of the Ford Motor Company, which has deliberately practised integration for the sake of the freedom it gives from market fluctuations,⁶² has steadily aimed at the reduction of the length of its cycle of production. This gives it an ability to adjust production to demand at the shortest possible notice. It is hardly conceivable that this company need be, for any length of time, overstocked during a depression. The same is true, *mutatis mutandis*, of other integrated undertak-

⁶⁰ Berglund, *U.S. Steel and Prices*, p. 48, in *Quarterly Journal of Economics*, Vol. 38.

⁶¹ Berglund, *U.S. Steel and Stabilisation*, in *Quarterly Journal of Economics*, Vol. 38. This is the reverse side of the picture painted by the U.S. Comptroller of the Currency in 1920—see p. 97.

⁶² In its internal cost-accounting this company takes no account of market prices.

ings. The whole of the processes of production are under centralised control and co-ordinated to the production of the finished product, in a manner which eliminates within the organisation those maladjustments which, in the economic body as a whole, produce the trade cycle.

The existing industrial framework, then, is composed of a large number of horizontal combinations and associations, varying in strength, and, cutting across them, a smaller number, gradually increasing, of closely-knit vertical structures whose very constitution leads them to aim at stabilisation.⁶¹ If at any point they attempt to throw the burden of fluctuations, rather than shoulder them, upon producers of raw materials or consumers of their finished products, they will be met by the opposition of a horizontal organisation. Such vertical combinations seem, therefore, to have a definite function to perform in the process of rationalisation. They are, of necessity, of very great size, and depend for their existence, more than any other such undertakings, upon management of a very high order. For these reasons they would seem to be the highest form of industrial structure yet evolved, a form whose potentialities are as yet only inadequately appreciated. The opportunity to administer them will surely prove attractive to ambition and to genius.

⁶¹ We have already pointed out that the small-scale concerns still continue to operate in very large numbers. The small man will not easily consent to disappear. "He is saved by the fact that although machinery may have been applied to what used to be the greater part of a process of production; yet the remainder is still done in the old way . . . the scope for the elasticity, for the initiative, and for the watchful care about details in which the smaller producer excels, may have been enlarged in one direction as much as it has been contracted in another" (Marshall, *Industry and Trade*, pp. 244-48). The large undertakings, however, will always possess leadership.

CHAPTER FIFTEEN

CONCLUSION—SOCIAL CONTROL

IN recent years there has been a growing appreciation of the profound influence which social and political institutions may have upon the development of economic forms. This influence which was understood well enough by Adam Smith, was lost sight of or misrepresented by his successors in their concentration upon *laissez-faire*. But to-day it is better realised that social control need not necessarily imply direct entry by the State into the operation of business. Other associations besides the State are engaged in controlling the growth and the practices of business, and the fruit of their activities is to be seen on every hand. The tendency of enlightened opinion appears to be to hold that these associations and the State together can exert a beneficent directive influence upon the evolution of business forms and methods, so that national welfare may be increased. It is not proposed to enter here into an exhaustive discussion of the problems and technique of social control; but only to say a few words by way of conclusion concerning the possibility of mitigating the evils or benefiting from the advantages of the movement we have discussed in the previous chapters. Neither social nor economic institutions are static or finally cast in their present form. The one will react upon the other, and a well-designed social control will see that they react so as to promote the general well-being of the community.

Over a wide area of economic activity direct operation by the State will undoubtedly continue to prevail. Control by the State of public utilities through limitation of profits and supervision of accounts and administration, is also,

where it has been imposed, probably irrevocable.⁶⁴ Through taxation, again, the State greatly affects the distribution of wealth among individuals and classes, and in consequence the direction taken by saving: it is probable that in the future its action in this respect will more and more be guided by scientific principles. Through control over rates of interest the State and the great banks affect the general ebb and flow of trade, and influence the policy of industry. But these and other such agencies of social control we do not propose to discuss. We have throughout assumed the network of relations created by them as a background to our enquiry.

In general, opinion has recently increasingly favoured the elimination by all means of the wastes of competition. The growth of such an opinion is slow and is hampered by the propaganda (its origin often well concealed) of vested interests. But the steady advance in public favour of the creation of combinations shows that older ideas, valuable in their time, of the desirability of unregulated free competition, are dying a natural death. Perhaps the most spectacular example of the wastes of such competition comes from the oil industry. "Oil production under the competitive system is of necessity conducted on the principle of robbery, the aim of each producer being to drain the largest possible underground area in the shortest length of time, before the oil is secured by a competitor."⁶⁵ As a result, oil and gas are prodigally wasted upon a magnificent scale. Little examination suffices to convince that with the elimination of competition a more scientific and economical system could be introduced—" . . . after a pool had been discovered the location and spacing of wells would be a matter of careful study with special attention to surface structure as indicative of the position and arrangement of underground oil, gas, and water. Local geographical conditions would be the prevailing factors."⁶⁶

⁶⁴ Cp. Clark, *Social Control*, p. 440.

⁶⁵ Stocking, *The Oil Industry and the Competitive System*, p. 140.

⁶⁶ *Ibid.*, p. 141.

Though that is an outstanding instance, in large numbers of other industries equally clear proof of the economy of large-scale production and the limitation of competition can be found. As we have seen, numerous combinations and great undertakings have been brought into existence whose chief object has been to obtain the advantages of such economies. It is, then, one of our main conclusions that social control should be so designed as to allow the fullest freedom for, if not to encourage, the formation of organisations which can thus prevent waste.

There is of course a danger of monopoly or semi-monopoly to be faced. Here, however, we conclude that the policy of prohibition of all combination which may tend to monopoly, by continuing the wastes of competition and adding thereto the wastes of litigation, fails to achieve the most desirable social result. In a case of outright monopoly it would be best—and this has to a great extent been done, where natural monopolies are concerned, in both the United States and Great Britain—to impose direct State supervision and limitation of profits, if not actual public ownership. Each case should be decided on its merits. There remain numerous large combinations which, though not complete monopolists, enjoy a differential advantage bringing them a revenue classifiable as a form of rent. In general it is probably unwise to attempt too close a State control of these. We can be by no means sure that their importance will not decline, or that private initiative has yet developed them to the fullest possible efficiency. The most suitable method of social control would seem to be to tax the surpluses they earn from differential advantage, in order to stimulate them to that efficiency which might prevail under free competition, without, however, incurring the wastes of the latter system. Whether the tax should be levied upon the undertaking direct or upon its shareholders as individuals is a matter for public finance to decide.

In the determination of the actual policy of control over monopoly, the experience of the United States, which has

in the past indulged in a large amount of State interference, will afford a useful guide. The famous Sherman Law,⁶⁷ prohibiting combination in restraint of trade, was passed in 1890, but for a long time had little effect. It was used in the majority of cases, for many years, against labour associations; and when directed against business combinations the suits brought by the United States Governments were prosecuted with little enthusiasm. The failure of the action against the American Sugar Refining Co. in 1895 led to a rapid growth of consolidations in the succeeding years. With the accession to power of President Roosevelt, elected on a programme of "busting the trusts," legal action became more vigorous, and during his regime there were forty-four prosecutions. The courts set out to dissolve various combinations found guilty of offences against the Sherman Law. At the time it seemed that these dissolutions were ineffective in changing the real position of the concerns involved. But the passage of time has shown that they have had more influence than contemporaries expected. The decision in 1904 of the Northern Securities case, though it dissolved the holding company concerned, left complete control of the two subsidiary companies in the hands of the financier, Hill; and therefore seemed to be ineffectual. But it is important to realise that Hill was mortal, and that his holdings must gradually be diffused by death, taxation, and inheritance, whereas the Northern Securities Co. had been designed to be immortal.⁶⁸ Similarly, when the court ordered the dissolution of the Standard Oil Co. of New Jersey (a holding company formed after the dissolution, under the laws of Ohio, of the former "voting trust"), it was clear that the monopoly power of the controllers of Standard Oil had not been affected. The stock of subsidiary companies

⁶⁷ The law declares illegal "every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce," and enacts that "every person (including corporations and associations) who shall monopolize or attempt to monopolize, or combine or conspire with any other person or persons to monopolize any part of the trade or commerce among the several States," shall be punished.

⁶⁸ Cp. Walker, *History of the Sherman Law of the U.S.A.*, p. 196.

was transferred to the stockholders of the New Jersey company, so that they now held control directly instead of indirectly. But the effectiveness of their control was not thereby minimised.⁶⁹ Nevertheless, by 1923 it began to be seen that the action of the court had not been entirely in vain. Little by little, as the influence of shareholders declined, and their numbers increased, and as the power of management grew, the various legally separate Standard Oil companies began more and more to compete with one another. Separate units, no longer content with their allotted place in the great Standard chain of production, transport, and refining, began to integrate on their own account.⁷⁰ Mr. Stocking, after a full enquiry, came to the conclusion that "to-day it seems not unlikely that the interdependence of the various Standard companies is approaching an end."⁷¹ Their recent differences of policy concerning trade in Russian oil go to confirm that conclusion.

But the most noteworthy of the great anti-combination suits was that against the United States Steel Corporation. Here, though it was evident that the Corporation had engaged with others in price-fixing agreements and restraint of competition, it was not dissolved. It was forbidden to enter into further agreements of such a kind; but as the Corporation was not in itself a monopolist the Government's suit against it failed. The three judges of the Supreme Court who dissented from the majority decision held that the financier's hope of monopoly gains, rather than the industrialist's need for integration, explained the formation of the Corporation.⁷² It had been formed in order to monopolise, and since it had engaged in monopolist practices should be dissolved. They asserted energetically that the majority decision "does violence to the policy which the law was intended to enforce . . . and neces-

⁶⁹ Cp. Committee on Industry and Trade, p. 105; Stocking, *op. cit.*, p. 54; Tarbell, *op. cit.*; Jones, *op. cit.*, etc.

⁷⁰ Stocking, *op. cit.*, p. 111. Cp. Hendrick, *Age of Big Business*, p. 54.

⁷¹ *Ibid.*, p. 114.

⁷² *Supreme Court Reporter*, Vol. 251, p. 459.

sarily results in a practical nullification of the Act itself.”⁷³ In further criticism they said: “It is affirmed that to grant the Government’s request for a remand to the district court for a decree of dissolution would not result in a change in the conditions of the steel trade. Such is not the theory of the Sherman Act. That Act was framed in the belief that attempted or accomplished monopolisation, or combinations which suppress free competition, were hurtful to the public interest, and that a restoration of competitive conditions would benefit the public.”⁷⁴ There is no doubt that the Steel decision was generally regarded as a departure from the previous interpretation of the law. The savings of large-scale operation, especially through integration, had been used by the court as a justification for allowing a great combination to continue. Though outright monopoly, as in the Standard Oil case, would be forbidden, industrial leadership, when accompanied by efficiency, would not be attacked; “so that the degree of competition attainable in the presence of the large corporation has come to be the test of the corporation’s contribution to public welfare, and therefore of its legality.”⁷⁵ The earlier attempt to maintain a mid-nineteenth century state of free competition was abandoned. Instead, combinations were to be judged by their contributions to general economic welfare.

The Clayton Act of 1914 was unsuccessful in its effort to limit the powers of holding companies, but by establishing the Federal Trade Commission it took a further step in the right direction. That commission has not always succeeded in its task of preventing unfair competitive practices; but it has assisted further the publication of information about business. In general, the present situation in the United States is that there is no obstacle to the further extension of combination, providing it does not become monopolist, and the courts and the legislatures

⁷³ *Supreme Court Reporter*, Vol. 251, p. 463.

⁷⁴ *Ibid.*, p. 465.

⁷⁵ Dewing, *Promotions*, p. 568.

are continually shedding light on the operations of commercial and industrial undertakings. Mr. A. F. Myers, Special Assistant to the United States Attorney General, recently said: "You cannot pick up a paper without reading of some merger in business; and unless it would appear that the merger would result in a restraint of trade within the decision of the Steel case, or unless it is brought about by stock acquisition which results in elimination of competition between two companies within the meaning of Section 7 of the Clayton Act, there is not now any legislation covering the situation."⁷⁶ In short, the horizontal combination, which from the necessity of its economic position is led to aim at monopoly, will be hampered by the law and prevented from realising its ultimate aims; but there will be ample room for the vertical combine—so long as it does not attempt at any stage to exert monopoly power—to perfect its organisation and reap its economies.⁷⁷

The most important recent Supreme Court decisions have been those concerning Trade Associations. Many of the Associations have encouraged the standardisation of products and of trade practices, and, going a step further, have endeavoured to secure the adoption of uniform cost-accounting systems. The question then arises whether the dissemination of such information, tending as it does towards uniformity in price, may not be a violation of the anti-trust laws. The court, following the "rule of reason" in the interpretation of the Sherman Law which began to be applied in 1910, has taken into account the general economic effect of the practices of the Trade Associations rather than any question of restraint of trade. In the *Maple Flooring Case* it pronounced judgment as follows:

"It is not, we think, open to question that the dis-

⁷⁶ Quoted by Chase, *Industrial Combination*, p. 142.

⁷⁷ This conclusion is, we think, borne out by the case of the meat-packers, who were ordered to desist from a wide horizontal combination at the retail grocery stage, but might continue to maintain their vertical chain, so long as at no stage did it seem to interfere with general free competition at that stage. They might protect *themselves* against the evils of competition, but not involve others in the evils of monopoly.

semination of pertinent information concerning any trade or business tends to stabilise that trade or business and to produce uniformity of price and trade practice. Exchange of price quotations of market commodities tends to produce uniformity of prices in the markets of the world. Knowledge of the supplies of available merchandise tends to prevent over-production and to avoid the economic disturbances produced by business crises resulting from over-production. But that natural effect of the acquisition of wider and more scientific knowledge of business conditions on the minds of the individuals engaged in commerce, and its consequent effect in stabilising production and price, can hardly be deemed a restraint of commerce, or, if so, it cannot, we think, be said to be an unreasonable restraint or in any respect unlawful.

“ It is the consensus of opinion of economists and of many of the most important agencies of government that the public interest is served by the gathering and dissemination in the widest possible manner of information with respect to the production and distribution, cost and prices, in actual sales of market commodities, because the making available of such information tends to stabilise trade and industry, and to produce fairer price levels and to avoid the waste which inevitably attends the unintelligent conduct of economic enterprise.” ⁷⁸

Briefly, the prevailing attitude, reflected in these decisions, has been that there are economies of uniform and simplified practice which, though of demonstrable economic and social benefit, necessitate a certain amount of combination for their successful attainment. Combination within these limits will therefore be allowed by the Courts. It is evidently felt that publicity and the general diffusion of information are not in themselves undesirable. Trade Associations openly distributing statistics are to be preferred to the secret agreements and intangible alliances which fear of the law unfortunately provoked in the past.

⁷⁸ *Trade Associations and Business Combinations*, American Academy of Political Science Proceedings, January 1926.

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The Webb-Pomerene Act of 1918, which exempts from the operation of the Sherman and Clayton laws associations engaged in export trade, is a further example of the changed attitude of American opinion to the problem of combination in general.

We must not omit mention of two noteworthy events of 1926, to one of which we have already drawn attention. The Interstate Commerce Commission after considering a proposal for unity of control over the Chesapeake and Ohio, the Hocking Valley, the Erie, the Père Marquette, and the Nickel Plate railway systems, rejected it on remarkable grounds. "Viewing the groupings presented in this application strictly from a transportation standpoint," it said, "we find that the proposed acquisitions of control are in the public interest."⁷⁹ Nevertheless the Commission refused to accept the scheme it proposed because it involved financial provisions which it regarded as unsatisfactory (concentration of voting control in the hands of financiers, and unfair terms for certain stockholders). "We therefore find that the considerations, terms, and conditions of the proposed acquisitions of control are not just and reasonable. Aside from the transportation aspect, the proposed acquisitions of control, upon the considerations, terms, and conditions proposed, have not been shown to be in the public interest." This decision was in part a direct outcome of an address (following the same lines as those pursued in his article, *From Main Street to Wall Street*, from which we have already quoted) delivered by Professor W. Z. Ripley before the Academy of Political Science. The arguments of that address were incorporated by counsel for a group of Chesapeake and Ohio stockholders in the brief with which he opposed the merger.⁸⁰

At the beginning of January 1926, William B. Ward and interests associated with him announced the formation of a

⁷⁹ Text of I.C.C. decision printed in full in *New York Times*, 3rd March 1926.

⁸⁰ *New York Nation*, 17th March 1926.

large baking combine to be known as the Ward Food Products Corporation, and to have a capitalisation of 10,000,000 no-par value 7 per cent. cumulative preference shares, and 10,000,000 no-par value ordinary shares. This was to be not only a business undertaking, but a philanthropic enterprise. "Many a day," said Mr. Ward, "I've seen my father sit in his big leather chair in this house and gaze at that old white house, and tell me that what a business takes out of a community it should put back."⁸¹ Therefore in the articles of incorporation "whenever the full dividend upon the preferred stock has been paid, it is provided the Board of Directors should set aside out of the surplus or net profits such sums as to it may seem proper to be used for the advancement of the right of every child to be born well, to grow to maturity physically and mentally fit for American citizenship, and generally for the advancement of the health and welfare of the American people, and dividends upon the common stock may then be declared out of the remainder of surplus or net profits."⁸² The Department of Justice, however, showed little respect for the memory of Mr. Ward's father; but immediately sought a court injunction to stay the formation of the combine. It alleged that the corporation, if allowed to acquire control of the various baking, milling, and dairy concerns named in the proposals would eliminate all competition between the "other corporate defendants, the largest, best organised, and best equipped wholesale baking concerns in this country, and create a virtual monopoly of the wholesale baking business in the United States."⁸³ The result was that a consent decree was entered. The Ward Food Products Corporation surrendered its charter, and the other six companies concerned were divided into three groups, no one of which was to hold stock or acquire assets in any of the others or their subsidiaries. Three large competing, semi-integrated under-

⁸¹ *New York Times*, 1st February 1926.

⁸² *Ibid.*, 2nd February 1926.

⁸³ Government's suit, *New York Times*, 8th February 1926.

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takings therefore hold the leadership in this industry. Absolute monopoly is forbidden ; but the law will permit the obtaining of the economies of large-scale operation.

While it is true that the Sherman and Clayton laws have not been so successful as their authors hoped, yet it must be recognised that it is not now the practice to form combinations obviously liable to prosecution. No longer do the " trusts " attempt to crush out every possible competitor by a ruthless price-war as J. D. Rockefeller attempted to stifle the competitors of Standard Oil.⁸⁴ A new generation has succeeded to the leadership of the great American businesses, which has abandoned the lawless and piratical methods of its ancestors, and has adopted the slogan " Live and let live." The founder of the Standard Oil Trust perfected, if he did not invent, the ingenious device of maintaining a secret control over nominally independent firms, which were ostensibly competing with his concern.⁸⁵ Nowadays, the leading producer in any industry, secure in its domination of a large portion of the market, prefers to allow prices to be set by the costs of production of the less powerful marginal firms, rather than undertake the expense of a price-war in order to secure monopoly gains which economic forces, not to speak of the law, might not allow it to enjoy for long.

The great baking companies adopt this " live and let live " policy, whereby prices are set by the less efficient producers, and the large undertakings retain a surplus of earnings on their differential advantage in leadership and productive efficiency. These earnings might well be secured for the community by well-directed taxation ; but were the law to insist on dissolving the large businesses on the ground that their size and leadership constitute (as they undoubtedly do) a " restraint of trade," then nobody at all would obtain the economies of large-scale production.

We conclude that such an attitude as the law now takes

⁸⁴ Tarbell, *op. cit.*, II, pp. 30-61, 87-110, 220-224, etc.

⁸⁵ *Ibid.*, I, pp. 154-60, 178-188 ; II, 30-61. Cp. also *Meat Report*, Part 3, pp. 139-145, for similar practices by meat-packers.

in America is one generally to be approved. Above all, publicity of every kind concerning the workings of business should be insisted on,⁸⁶ and more satisfactory regulations than yet exist either in the United States or in Great Britain should be laid down to govern the operations of high finance. The British business man is not yet sufficiently convinced of the desirability of pooling knowledge. He seeks to guard his "trade secrets" in a manner which is frequently childish, and for little reason. His distrust for "theory" and his preference for the "practical man" are so strong that he fails often to keep pace with an American competitor who will not hesitate to make full use of the statistician, the psychologist, the research scientist, the economist. An Economic Advisory Council has recently been set up to advise the Prime Minister and the Cabinet. One of the most useful services it could perform would be to collect and make available for industry the abundant valuable information which now lies scattered in the reports and publications of the various Government departments.⁸⁷

Our whole argument goes to show that, though the perfection of the joint-stock form of ownership has provided an exceedingly flexible instrument for the co-ordination and rationalisation of industrial effort, yet one of the greatest obstacles to harmonious economic development is the temptation of the financier to engage in manipulations, yielding him pecuniary gain, but impairing future technological efficiency. Great responsibility rests, we have shown, upon the financial undertaker, and wide discretion must be afforded him if he is to be allowed to continue his work. But he should not be allowed to forget too easily that when shaping the new industrial structure he is dealing with other people's property. Some additional

⁸⁶ In 1919 the British Committee on Trusts recommended that the Board of Trade should make an annual report to Parliament of the nature, extent, and development of industrial combinations. (*Committee on Trusts*, 1919, p. 11.) Neither this nor a similar recommendation by the Food Council in 1925 has been put into effect.

⁸⁷ Cp. Urwick, *op. cit.*, p. 141.

power of control might perhaps be afforded to the shareholder, as Mr. Stevens has suggested.⁸⁸ Proportional Representation, or cumulative voting, might be introduced into the election of directorates, and holders of fixed-interest bearing securities might have their contingency-voting-rights increased so as to give them a greater voice in the direction, as soon as earnings fall below an agreed proportion. There seems to be no reason why elections of directors should not be conducted by postal ballot, instead of by the antiquated machinery of "general" meetings (attended by a very small minority able to leave their other business) and proxies often given in ignorance. Legislative standardisation of company accounts might reasonably be made more detailed. Regulations concerning company flotation and the sale of securities might be made more stringent. Numerous other legislative improvements of existing institutions may be made, such perhaps as the compulsory appointment of one or more Government-selected directors upon the boards of great undertakings. Into such details we do not propose here to enter. They are ultimately matters for political decision.

In the present situation of British industry there is a more urgent problem even than that of checking the abuses of the joint-stock system. That is the problem of putting rationalisation into effect rapidly. We have said enough to show that this cannot be done without the aid of finance. The whole of recent industrial history has shown again and again that though finance may have plunged industry into difficulties it is only finance which can extricate it. This is true not only of American railroads before the War; it has been proved true in the British steel and cotton industries during the last few years. The power of finance must be exerted to break down the inertia and conservatism which stands in the way of drastic reorganisation.

Now the history of Great Britain has been so markedly a history of commerce and not a history of industry that the development of financial institutions has been different

⁸⁸ Stevens, *Voting Rights*.

from that in other countries. The joint-stock banks, with a comparatively small proportion of capital to liabilities, have plumed themselves upon the liquidity of their reserves, and have conducted, so far as they could, a policy of strictly commercial, or short-term, lending. Industry, in so far as it has not been able to raise funds for long-term investment by means of family saving or the reinvestment of profits, has appealed to the private investor direct, or with the aid of small *ad hoc* promoting and underwriting syndicates. The only institutions corresponding to the investment banks of the United States or the "D" banks of Germany are the City of London Issue Houses, whose devotion to foreign investment seems to be inspired by a conviction that no man may make a profit in his own country. They have taken practically no part in industrial financing.

Events have wrought a change in this situation, though not as yet a great one. The long depression has reduced many industries—especially those which are overcapitalised—to such a plight that they have been quite unable to pay off bank loans and charges. In consequence the banks have found themselves with their advances "frozen." In many cases, they have accepted debenture stock as collateral for advances. These advances the firms concerned are in no position to repay. The result is that there is almost no difference between the status of the bank and that of an ordinary debenture stockholder. In such a situation it becomes ridiculous to speak of English banking practice to-day as if it were radically different from that of the Continent and the United States.

Debenture stockholders, if their principal be not repaid at the stipulated date or if interest be not paid to them as promised, may either liquidate the defaulting undertaking or take control and reorganise it. It seems as if the British joint-stock banks must choose one of these alternatives. Effective decision has been long enough postponed.

It seems fairly clear that there will be no general resort

to liquidation. Such a policy at the present time would produce a business and financial crisis; and even after such a crisis had passed, reorganisation would still be necessary. The banks are able to compel reorganisation now; and it is hard to see how they can avoid doing so. Thereby industry may be quickly placed in a position to meet at least some of its indebtedness. The Bank of England has led the way. It assisted reorganisation in the engineering industry; it actively encouraged it in the cotton industry. Recently it has taken shares in the United Dominions Trust, which has been established to finance the instalment purchase of machinery and other capital goods. To co-ordinate such activities it has formed a Securities Management Trust. It is hardly probable that the other banks will look on passively and allow the Bank of England a monopoly in this field.

The Chairmen of the joint-stock banks have all ⁸⁹ protested that it is no part of the business of banks to take an active part in industry. Business men must draw up schemes of rationalisation and then approach the banks with a request for credits. This attitude seems to ignore altogether the urgency of reorganisation. Nobody supposes that the local bank manager could actively direct the businesses whose accounts he holds. But what other agency than the large banks could better bring together, if they wished, the heads of wastefully competing businesses, and persuade them to draw up and adopt drastic plans of reconstruction? If need be, a hint or two might be dropped that it is difficult to continue for ever to extend credits to firms which show no disposition to help themselves.

History shows quite clearly that financial assistance is absolutely necessary in reorganisation, not to devise the technological details of the plan, but to bring rivals together, to provide working capital, and eventually to

⁸⁹ Except Mr McKenna, who, as a member of the Macmillan Committee on Banking, was unable to deal with general policy in his 1930 speech.

sell the reorganised business to the public. The German rationalisation of 1925 and 1926 could not possibly have been effected without the active participation, and often instigation, of the great banks. No British rationalisation can be undertaken in 1930 to 1935 without similar aid. If the joint-stock banks will not accept the initiative industry will have nowhere to look for aid save to the type of financial agency which is already largely responsible for its present plight. The banks during the years since the war have certainly proved that they can be relied upon by their shareholders. Were they to undertake the financial part of the task of rationalisation, the confidence of the public would be secured, and there would be some guarantee against the snatching of quick financial profits. The banks themselves need not elaborate the industrial schemes which they would press their debtors to accept. But what they could do would be to ensure that those schemes were drawn up by men of vision, by men of the new type of industrial administrator. Let them point out to the reorganised concerns which they assist to produce that to carry a deadweight of incompetent, even though titled, directors will scarcely be in the interest of the bank's clients with whom they intend to place the new issue. Then let them see that first-class industrial administrators are placed in charge of the new undertakings.

In the United States, commercial banks, corresponding to the British joint-stock banks, have found it desirable to set up "security companies" for investment purposes. In Germany, the great industrial banks are said to have been developing recently along English lines, while still playing a leading part in industrial organisation and issue business.⁹⁰ British banks will, it seems, have to adopt the methods of their foreign counterparts. Said Mr. W. L. Hichens, Chairman of Messrs. Cammell Laird, in a recent speech: "Unless the Bank of England and the big joint-stock banks are prepared to undertake this necessary work

⁹⁰ *Economist*, 1st March 1930.

I believe the Government will sooner or later be obliged to intervene and provide help." ⁹¹ If the bankers were to leave to Government a task which they are so well fitted to perform themselves, then they must not be surprised if Government were to show an inclination to undertake other tasks which have hitherto been left to the banks.

Evidently, it is considerations of this character which have prompted the recent formation of the Bankers' Industrial Development Company. This has been brought into being with the co-operation of the Bank of England and most of the leading financial institutions of the City of London. It has a nominal capital of £6,000,000 and will act as an adviser to industrial leaders. Any industry which is in difficulties may present to it a scheme of reorganisation. The Development Company will investigate such a scheme and if necessary suggest amendments. When the scheme is approved the Company will secure from its members and backers the funds necessary to carry through the reorganisation.

Finally, we would point out that a wise social control will accomplish its greatest and most lasting results by proper provision for the education of managerial leaders of the right type. Research, and the application of research, scientific and economic, rather than entrepreur-ing, is the chief requirement of modern business. It should be realised that, for the education of the executive personnel of great undertakings, entry into the business at an early age is not satisfactory. Training of the mind and character in such an institution as a university, until manhood is reached, affords, on the whole, the best results. For the first few years after his entry into industry a man so educated may occupy a comparatively subordinate position. It is when this period of practical experience is completed that the previous university education begins to have effect. The trained mind of the man who is intellectually interested in his work, and has some conception of its place and function in the economic body,

⁹¹ *Economist*, 15th February 1930.

will lead him eventually, suitably equipped, to the higher responsibilities of administration. State and university should co-operate in this recruitment and education ; and business carried on by men so prepared may gradually assume the character of a profession. It is probably true that far too many of the best brains in Great Britain are, because of social institutions, lost to industry and attracted to the Bar or the Civil Service. The latter profession, by means of its highly perfected and graded system of examination, is able to select its personnel without regard to the social class from which it comes nor to the family or financial influence which it can command. For each grade of the Service there is an appropriate grade in the educational ladder. A similar system could be devised, without great difficulty, for industry. The men are there ; the institutions exist which can train them. All that is required is that the teachers to whom the training is entrusted shall be given by industry such full and free information as will enable them to make their instruction thoroughly realistic. The teacher and the research worker must be trusted as the accountant and the solicitor are trusted if the community wishes to use the best possible methods of training. The nation which steadily encourages the adoption of professional standards of conduct by the responsible managers of its great undertakings will have done much to improve public welfare. The managers who endeavour to popularise such standards may succeed in persuading the community to allow them to continue in the exercise of their heavy responsibilities. They will be wise in their generation. For they are on trial.

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